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ADVANCED GaAs PROCESS MODELING

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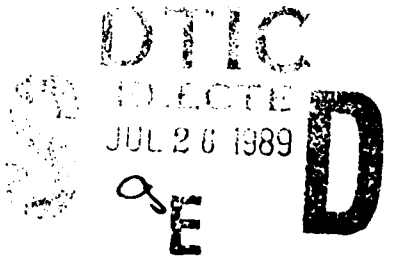

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

(U) The objective of the program was to develop physical models for substrate and process defects and variations which affect the electrical parameters of MESFET structures fabricated on this material by direct ion implantation processes. Verification of these models was to be carried out where possible by fabrication of specially designed device structures capable of providing statistically significant data. In order to remove, as much as possible, unwanted process variations all device processing was carried out under a subcontract with the Rockwell MRDC GaAs pilot line facility. The primary successes of the program include: 1) development of a physical model to explain the effect of dislocations on the fluctuations in threshold voltage observed experimentally, 2) development of analytical Pearson IV models for the profiles of the technologically significant ions Si, Se, and Be in 100 oriented GaAs for specific tilt and rotation angles of the substrates with respect to the implant beam, 3) development of a one dimensional device and process simulator which allows exploration of the effect of certain process variables on the significant MESFET electrical parameters.

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APPENDIX

TRIM CALCULATIONS OF THE IMPORTANT IMPLANTATION PARAMETERS FOR IONS IN GaAs

Page No.

§1. TRIM Calculations of Ion Implantation into GaAs

I. INTRODUCTION

This appendix tabulates ion-implant distributions for a series of technologically useful ions implanted into GaAs and associated materials used in the fabrication of GaAs integrated circuits. The results were obtained using the code TRIM85 (Transport of Ions in Matter), developed by Biersack, Ziegler, and collaborators.[1-2] These tables replace the LSS tables of Gibbons et.al.[3] with calculations based on modern electronic and nuclear stopping powers. Also, we provide moments of damage distributions, lateral straggling, total lattice vacancy production, and backscattering yields.

This introduction describes the code and methods used to obtain Tables I through III, and discusses some of the results.

II. The TRIM Monte-Carlo code

TRIM is a three-dimensional Monte-Carlo ion-implant simulation code. Each incident ion and selectively each target-atom recoil created in collisions with either the primary or a secondary ion is followed through the lattice until it comes to rest. The code assumes implantation into amorphous materials. A collision is determined by moving the ion (or recoil) one lattice spacing. Then an impact parameter is randomly selected, and if less than some critical value, the scattering from either a Ga or As target atom is calculated using the potentials of Wilson et.al.[4] From this collision, the energy loss and the new ion direction is determined, and the ion is moved the next lattice spacing. During the free flight, the energy lost to electronic excitation is determined using the electronic stopping powers of Ziegler et.al.[2] (ZBL) according to the ion's velocity. Once the ion comes to rest, its position is recorded, so that after many ion trajectories, a distribution can be constructed. Also, if the energy transfer to the target atom in the ion-target collision is greater than the displacement energy E_d, then the trajectory of the recoil and all subsequent recoils generated in target-target collisions are also followed until they come to rest.

While the Monte-Carlo approach describes the physical process of ion transport in matter more accurately than any other method (e.g. LSS or Boltzmann transport[5]), its accuracy is severely limited by statistical considerations. Many ion trajectories must by followed before an accurate distribution is obtained. The distribution is determined by counting the number of ions in a bin of a certain depth interval Δx. If one runs 10^4 ions and has 50 bins, the maximum number of ions in any one bin is of the order of 1000. Statistical fluctuations in this number close to 3% (square-root 1000) can be expected. In two-dimensional space, with 50x20 bins, one can expect at most 50 ions per bin, giving statistical fluctuations near 14%. These are the minimum statistical fluctuations; at the ends of the distribution, a smaller number of ions are present, so the statistical fluctuations can approach 100%.

Averaging is needed to smooth over the statistical fluctuations. The method we have adopted is to fit the calculated distributions to Pearson-I functions.[6] Any Pearson-type distribution is uniquely determined by the first four moments obtained by summing the distributions

$$\langle x^n \rangle = \int_0^\infty dx\ x^n\ f(x) = \Sigma_i\ x_i^n\ C_i\ /\ \Sigma_i\ C_i \qquad (1)$$

where C_i is the number of ions stopped in the interval x_i to $x_i+\Delta x$, x being the depth. From these moments the normalized moments are defined as

$$R_p = \langle x \rangle,\ \ \Delta R_p = [\langle x^2 \rangle - \langle x \rangle^2]^{1/2},$$
$$\gamma = \frac{\langle x^3 \rangle - \langle x \rangle^3}{\Delta R_p^3},\ \beta = \frac{\langle x^4 \rangle - \langle x \rangle^4}{\Delta R_p^4}, \qquad (2)$$

Also, assuming that the lateral distribution is Gaussian, with the origin at y=0, the lateral straggling parameter is defined as

$$\Delta R_\ell^2(x) = \Sigma_j\ C_{ij}(x_i, y_j)\ y_j^2\ /\ C_i, \qquad (3)$$

where $C_i = \Sigma_j C_{ij}$.

TRIM also counts the total path length that each ion travels, so that the average path R and ΔR are also calculated.

These moments are reported in Tables I, II, and III for 19 ions. The ions were chosen according to their technological significance.

III. Ion Distributions

Figure 1 compares calculated TRIM-distributions with Pearson-I fits. The Pearson-I function for negative γ values is a backward-skewed, nearly triangular function. Although it fits the numerical distributions excellently at low depth, it cuts off steeply at large depths, so that the tails on the numerical distributions are not predicted well on a log scale. The fit is worse for distributions with low γ (<-0.3) values, which are seen for the low-Z ions at high energies. For the high-Z ions, the fits are very good.

Figure 2 shows the moments tabulated in Table I as functions of the ion energy, and Figure 3 shows the R_p values versus the ion atomic number. The first and second moments are all monotonically increasing functions of the ion energy. For most of the ions, the electronic stopping varies linearly with the ion velocity, except for H, which has a peak at 100-keV. This peak is reflected in the moments of the H distributions which behave differently from all other moments. In obtaining these moments, distributions were calculated at nine different ion energies from 10 to 400 keV, then were interpolated on a log(ion energy)-log(moment) or log-linear scales. The γ and β values, which are the least accurately determined moments, were fit to a quadratic function of the log of the ion energy then interpolated. The H values were not fit, owing to their non-monotonic behavior.

The safe thickness in Fig.2 or stopped ion position in Table I is defined as the point where the ion distribution falls to 10^{-4} times the peak height. For distributions with γ>-0.3, the Pearson-I function calculates this point accurately, but for γ<-0.3, where the Pearson-I cuts off too quickly, the stopping thickness was detemined roughly from the numerical distributions, and consequently show unphysical fluctuations with ion energy.

The average ion path R is always greater than the projected range R_p, which is shortenned by transverse motion. For the low-Z ions, dominated by electronic stopping, ΔR is very small. ΔR is a measure of fluctuations in the energy loss. Few low-Z ions lose energy in nuclear collisions, where the largest fluctuations in energy loss occur.

Note in Fig.3, the R_p values fall off smoothly as a function of ion atomic number, except near Z=10.

TRIM does not simulate the channeling that occurs when ions are implanted into a crystalline material like GaAs. Although the wafers are usually tilted to avoid directly implanting into channels, given the many collisions suffered by the ion before it comes to rest, there is a chance that in any one collision, scattering down a channel can occur. In a channel, ion-atom collisions are avoided, and the electronic stopping may be reduced, due to lower electron densities, hence the ions come to rest at larger depths than would occur in an amorphous material, which TRIM simulates. Figure 4 compares TRIM profiles for Be and Si ions with Pearson-IV fits to SIMS (secondary-ion-mass spectrometry) profiles. Deeper profiles are seen, though the relative distributions are predicted reasonably well with TRIM. One may use the TRIM R_p values to scale measured Be, Si, and Se SIMS profiles to other atomic numbers.

IV. Vacancies, interstitials, and replacements

In the process of slowing down, the ions collide with many target atoms. If the energy transfer is larger than the displacement energy, E_d=26eV in the present calculations, a vacancy is created. If the ion energy is less than E_d after transfer and the target recoil's energy is greater than E_d, the ion replaces a Ga or As atom on a lattice site. Otherwise, the ion usually comes to rest as an interstitial. Once a recoil target atom is created, it too can undergo collisions with other target atoms, creating more vacancies, and eventually coming to rest as either a replacement or an interstitial.

Since E_d~25 eV, a 250keV ion can make as many as 10^4 vacancies. However, the vacancy creation process is not that efficient. The ion also loses energy by ejecting electrons and creating phonons. Typically, only as many as 3000 vacancies/ion are created by <400 keV ions (Table II).

In GaAs, the number of Ga vacancies, As vacancies, Ga interstitials, and As interstitials are all approximately equal. When ion or target replacement collisions occur, both the number of vacancies and the number of interstitials are reduced. Boltzmann transport codes allow one to calculate the stoichiometric upset that can occur due to the fact that the Ga and As atoms have different masses and electronic stopping powers, therefore one can travel further away from the initial site than the other. This is difficult to calculate with TRIM, due to statistical limitations. For 10^4 ions making up to 2000 vacancies per ion in 50 depth intervals, one can expect up to 400,000 vacancies per bin, with statistical fluctuations of the order of 0.15%. Therefore, to see a difference between Ga vacancies and interstials, the relative concentrations must be greater than 0.15%. These are observable in calculations with a great number of ions. However, the stoichiometric upset is then the difference between the Ga vacancies-minus-interstitials and the As difference, which is even smaller than 0.15%. We have therefore not obtained a statistically meaningful stoichiometric upset in the present calculations, which typically track only about 1000 ions where the recoils are followed.

In Table III, we have printed the sum of the Ga+As vacancies in column 7. In column 3, we give the ratio of ions that end up as interstitials to all ions as a function of depth. Low-Z ions have insufficient mass to displace a target, then end up on a lattice site, so all ions end up as interstitials. A significant fraction of the heavy ions end up as replacements.

V. Damage

There are two possible measures of damage: Ga and As vacancy production and the energy deposited in nuclear collisions. Both distributions are given in Table III, and are very similiar within a constant multiplier (Fig.5).

The damage energy is defined as the energy lost in collisions. Not all collisions result in displaced atoms; if the energy transfer is less than E_d, the energy goes into phonon production, which in TRIM is counted as damage energy. Also given in Table III is the energy deposited ionizing electrons, which is flatter function of depth, as shown in Fig.6.

In GaAs IC technology, damage implants are often done to create high-resistivity regions to isolate devices from one another. Various workers have derived damage profiles by measuring conductivity loss (D'Avanso for proton damage[7]) or by measuring trap formation (Tell et.al.[8] for Be in InGaAs). Figure 7 compares damage profiles with TRIM calculations. The curves have been normalized to the same peak height. The damage peak is generally at a lower depth than the peak of the ion profile. For protons, the measured distribution falls between the TRIM calculations of the damage and ion distributions. The calculations for Be in InGaAs are in reasonable agreement, though the damage distribution at low energies has a tail, which is undoubtedly due to channeling.

There is a controversy in the GaAs IC industry about the relative effectiveness of protons, B and O damage implant isolation. Much of this controversy concerns the behavior of these implants after annealing (if any) is done. From the point of view of the effectiveness of these ions to create vacancies, clearly the heavier ions make many more vacancies per ion, hence smaller doses are required. The distributions tend to have similiar shapes, when the implant energies are chosen to match the damage R_p values. Figure 8 shows normalized distributions for 50-keV protons (R_p=275nm), 75 keV He (R_p=292nm), 200 keV B (321nm), and 300 keV O (300nm). In addition to being normalized on the y scale, the depth scales were normalized, so that each distribution has an identical R_p=300nm. The relative profiles are nearly identical, except the proton profile falls off slightly faster than the heavy-ion profiles.

The damage profiles can also be described by Pearson-I functions, as shown in Fig.9. Like the ion distributions, they cut off at large depths too sharply, so that the tails of the TRIM profiles are not well described for γ<-0.3.

Figure 10 shows the moments of the vacancy distributions versus ion energy, and Fig. 11 shows the total number of vacancies created as a function of the ion energy, which is a relative measure of the magnitude of the damage per ion.

The total energy deposited in the lattice in collisions and in ejecting electrons are shown in Fig.12. While the ionization energy increases steeply with the ion energy, the damage energy increases less steeply, due to the fact that the nuclear stopping decreases with ion energy. Note that for protons, the entire ion energy is lost to ionization, but for heavy ions, the entire energy loss is to damage.

VI. Lateral straggling

The lateral straggling for heavy ions like Si in GaAs is adequately described by a Gaussian function, as shown in Fig.13. In this figure, over 80000 ion trajectories were calculated in order to achieve good statistics in the lateral distributions in 20 depth intervals. In this case, the lateral straggling tends to be small near the surface, then is flat for most depths. It does fall off at large depths, because ions that penetrate to very large depths must travel in the straightest

possible path, hence can have little lateral straggling.

Figure 14 shows the lateral straggling as a function of depth for Be, Si, and Se ions in GaAs. Note that the Be lateral straggling is a decreasing function of depth for most of the range, the Si is nearly constant with depth, and the Se lateral straggling parameters increase with depth.

VII. Backscattering Yield

Backscattering results in a loss of ion dose, and smaller carrier concentrations for donor or acceptor implants. The backscattering yield is largest for the low-Z ions, approaching 20% for 10-keV He implants (Fig.15). For the heavier ions it decreases until finally, when the ion atomic number is greater than the target it nearly vanishes. In binary collisions with M_1 (the ion) $>M_2$ (the target mass), it must vanish. However, in implants, the ion can be turned around in a series of sequential encounters, so there is a non-vanishing probability of backscattering at all masses.

It is difficult to estimate what the effect of channeling might be on the backscattering yield. In bombarding a crystal, there is always the probability that an ion will scatter from the first ion in the row. However, deep in the crystal, it tends to avoid nuclear collisions, and certainly avoids the low-impact parameter collisions that result in large-angle scattering. Also, if the ion manages to penetrate effectively deeper depths due to channeling, there is a reduced probabilty for it to leave the crystal if it does backscatter. Therefore the TRIM backscattering yields are likely to be overestimated.

VIII. Computation times and maximum depths

In running TRIM on a CRAY XMP, we had to decide on a maximum depth and a maximum computation time before starting the trajectories. The maximum depth was determined by running the PRAL (projected range algorithm) code first, and assuming a Gaussian profile (since PRAL calculates only the first two moments), the maximum depth was chosen where the Gaussian falls off to 0.0001 times the peak value. Then the value was rounded up to a "nice" number (multiple of 1,1.5,2,3,5 etc.), such that the grid values are reasonable. Unfortunately, for the backward skewed, low-Z, high-energy profiles, this maximum depth was grossly overestimated, therefore in some of the parts of Table III many depths have no data.

Future computations may benefit from the tables of stopped ion depth (Table I) and computation times (Table II). Two computation times are given: one where recoils are followed, one where they are not. For the low-Z ions, the two times are nearly identical, but for the high-Z ions the times are much different. Low-Z ions make few vacancies to follow, but penetrate to large depths, so many collisions must be calculated. High-Z ions make many vacancies to follow, so that the times following recoils are large, but the times not following vacancies are small.

A practical computing limit of about 40min per profile (determined by the CRAY's queing priorities) forced us to practice a split calculation scheme. For a minimum of either 1000 ions, the number needed to make 10^6 vacancies, or a lessor number determined by the computation time, we followed every recoil. For the remaining ions, up to 10^4 altogether (sometimes less, according to the computuation time), recoils were not followed. The vacancy production statistics were entirely determined by this smaller number of ions. While for the heavier ions, a great number of vacancies are made, which should give good statistics, in any depth interval, if the ions do not penetrate there, vacancies are not made there (except for the ones created by target recoils), therefore the vacancy depth distributions, and especially the lateral vacancy

straggling parameters are least accurately determined.

We did not attempt to vectorize TRIM, therefore the computation times shown in Fig. 16 can probably be scaled to other computers.

IX. Ion mass scaling

In every case, we ran the ion mass with the dominant abundance. For C, we also ran the C^{13} mass. Scaling of the profiles for other ion masses is determined by two competing factors. The ion electron stopping powers vary linearly with the ion velocity for heavy ions. Ions with the same energy but with larger masses, have smaller velocities, therefore smaller electron stopping powers, and consequently should have larger moments of the distribution, if electron stopping is dominant. Nuclear stopping depends on the product of the scattering cross section and energy transfer, which is proportional to

$$E_m = 4M_1M_2/(M_1+M_2)^2 E_{ion}, \quad (5)$$

M_1 and M_2 being the ion and target masses, and E_{ion} is the ion energy. At very low velocities, the scattering cross section is determined largely by atomic potentials. Therefore ions with larger mass, but masses with $M_1 << M_2$, should have larger nuclear stopping powers, and consequently if stopping is dominated by nuclear collisions, the distributions should have smaller moments. In reality, both nuclear and electron stopping are present, and the two factors partially cancel. For ^{13}C, the electronic stopping should be up to 4% smaller, and the nuclear up to 8% larger than ^{12}C, hence the Rp values should be 4% larger or 8% smaller if dominated by electronic or nuclear stopping. The resulting R_p values, shown in Fig. 17, are between 1% smaller and 2% larger. The larger values are at the higher energies where electronic stopping is dominant.

For heavier ions, the difference in R_p values for different masses becomes negligibly small. For Si^{29}/Si^{28}, the electronic stopping is only 1.7% different and the nuclear, only 1.6%. PRAL predicts less than a 0.1% difference in the R_p values between the two masses.

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Fig. 8a. Absolute damage energy distributions.
b. Normalized damage distributions.

Fig. 9a. Damage profiles for H in GaAs.
b. Damage profiles for H in GaAs.
c. Damage distributions, B in GaAs.
d. Damage distributions, B in GaAs.
e. Damage distributions, Si in GaAs.
f. Damage distributions, Si in GaAs.

Fig. 10a. R_P for vacancy distribution versus ion energy.
b. ΔR_P for the vacancy distribution versus ion energy.
c. γ for the vacancy distribution versus ion energy.
d. β for the vacancy distribution versus ion energy.
e. Sigma lateral for the vacancy distribution versus ion energy.

Fig. 11 Number of vacancies created per ion.

Fig.12a. Energy lost to ionization processes.
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Fig. 13a. Lateral concentration distributions for four depths.
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Fig.14a. Lateral straggle versus depth.
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Fig. 15 Fraction of ions backscattered versus ion energy.

Fig. 16a Computation time (following recoils) versus ion energy.
b. Computation time (not following recoils) versus ion energy.

Fig. 17 Ratio of R_P for ^{13}C ions to ^{12}C ions.

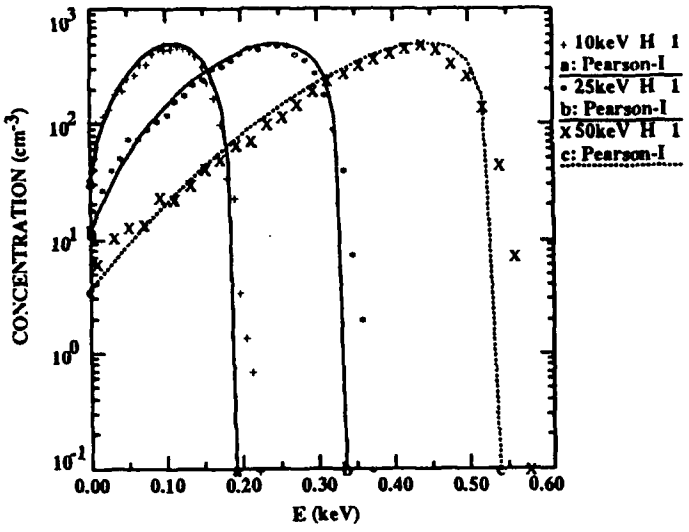


Fig.1a. H in GaAs

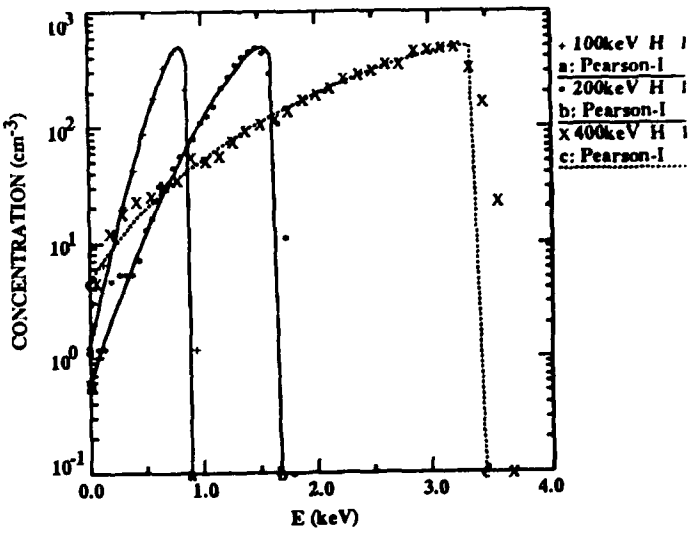


Fig.1b. H in GaAs

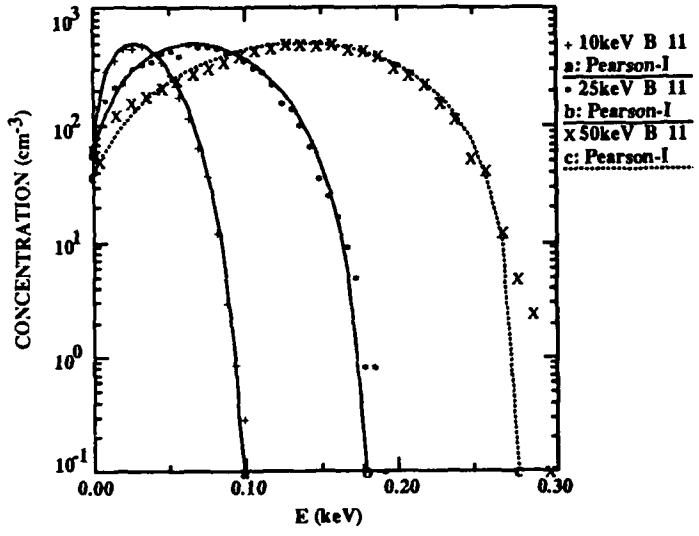


Fig.1c. B in GaAs

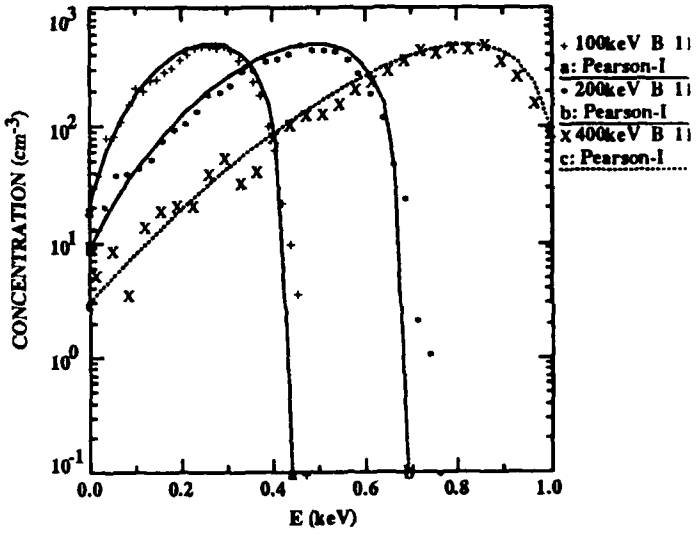


Fig.1d. B in GaAs

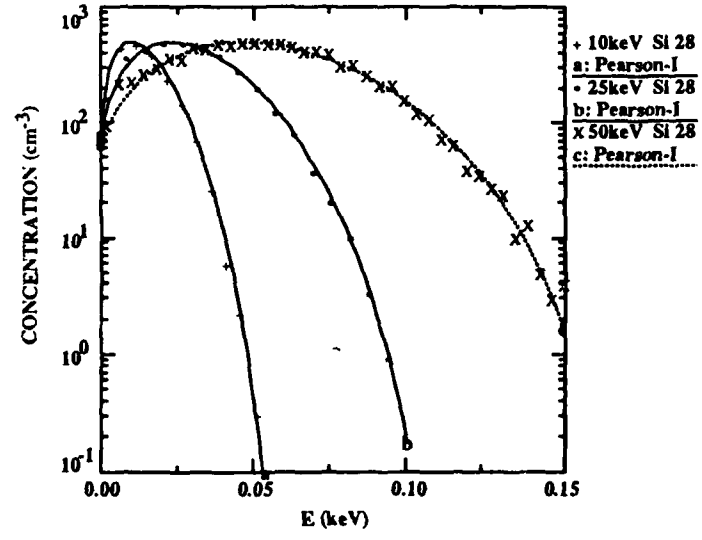


Fig.1e. Si in GaAs

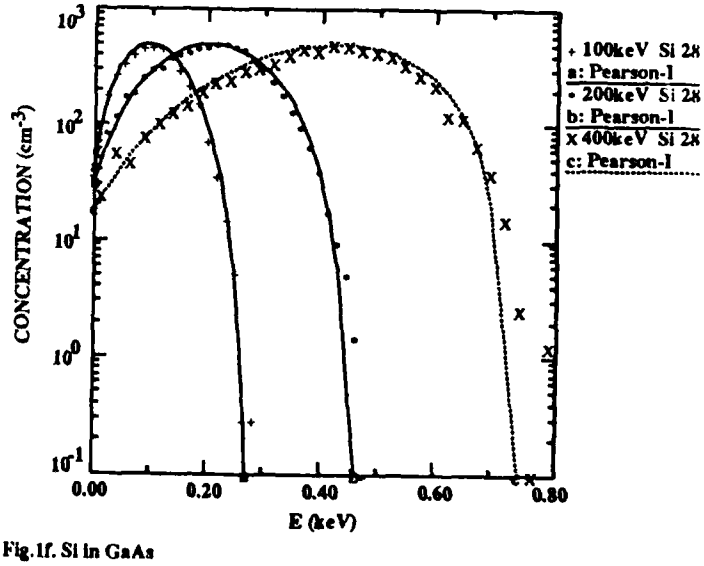


Fig.1f. Si in GaAs

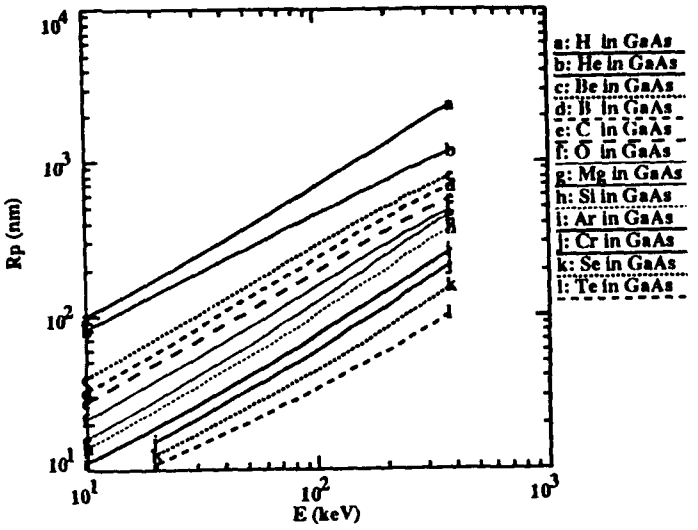


Fig.2a. Rp versus ion energy

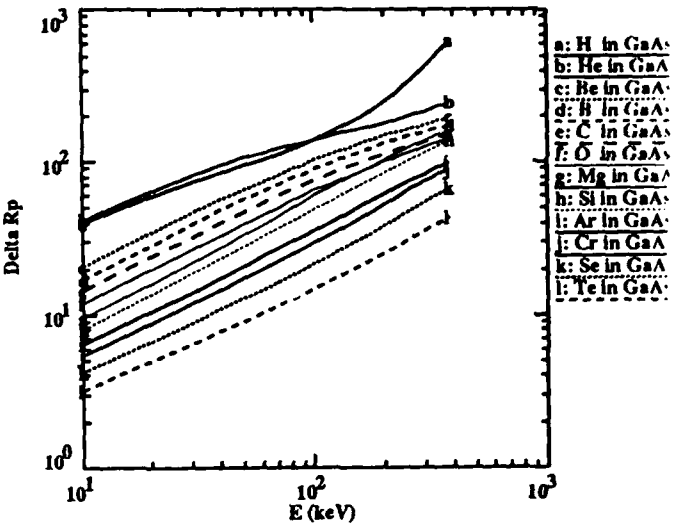


Fig.2b. Delta Rp versus ion energy

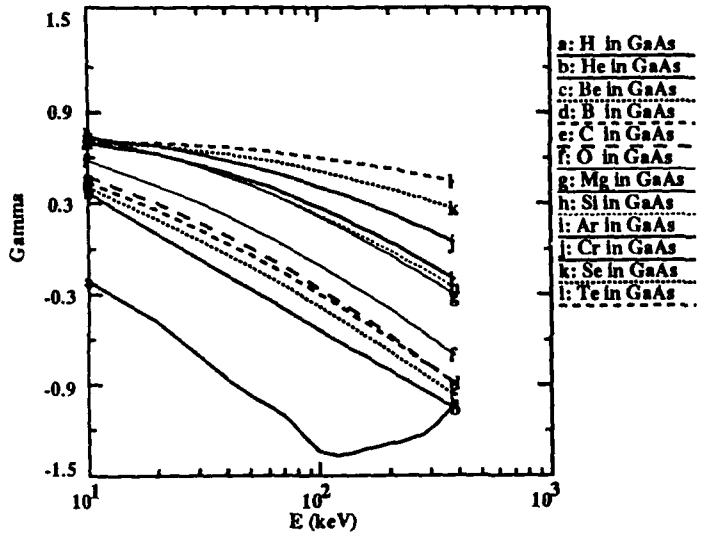


Fig.2c. Gamma (third moment) versus ion energy

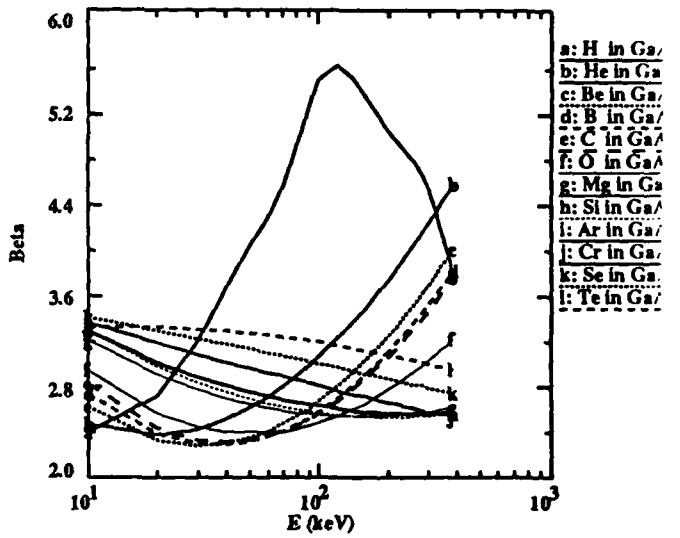


Fig.2d. Beta (fourth moment) versus ion energy

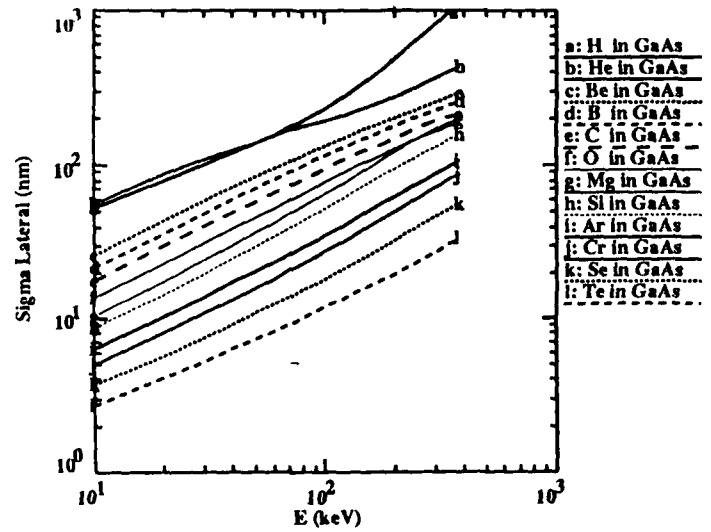


Fig.2e. Average lateral straggle versus ion energy

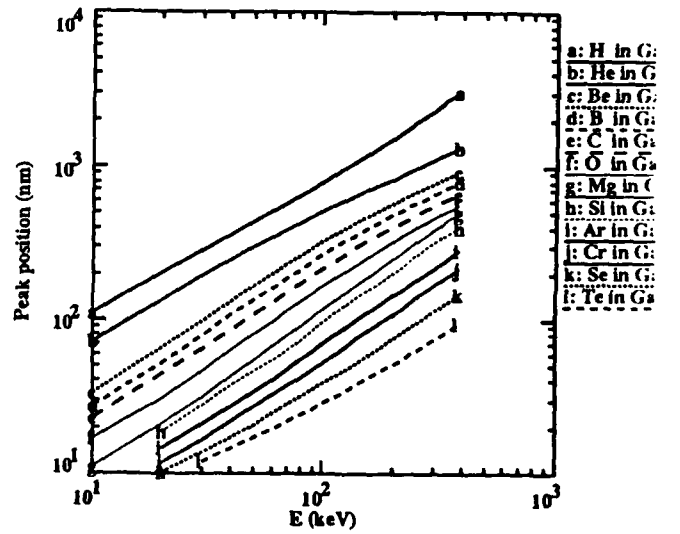


Fig.2f. Peak position versus ion energy

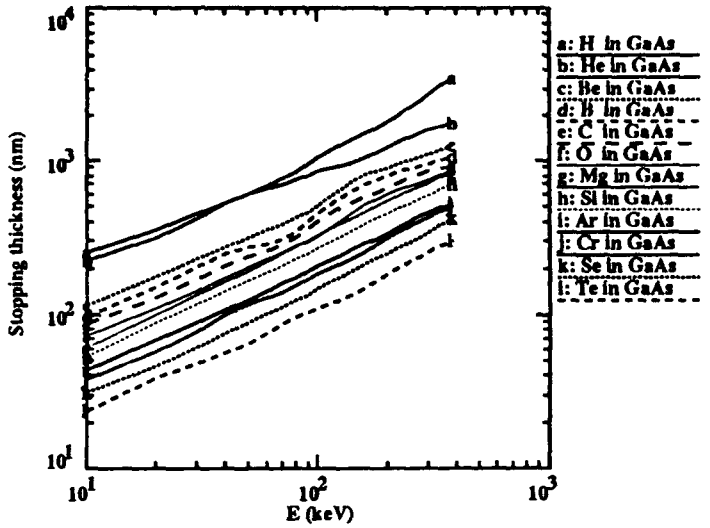


Fig.2g. Safe thickness for stopping ions versus energy

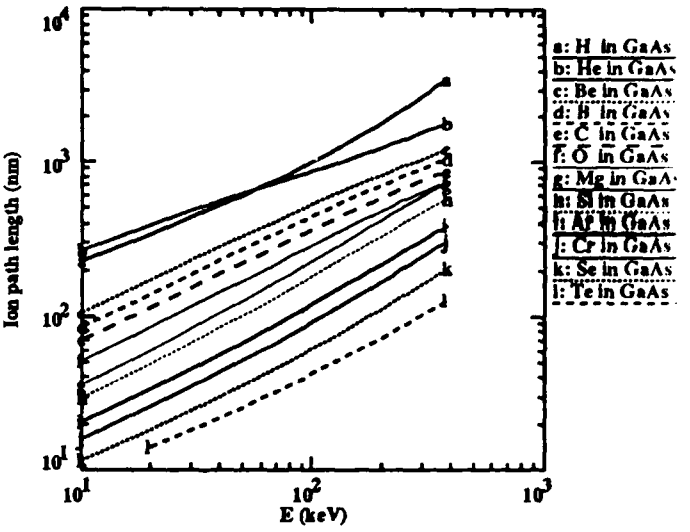


Fig.2h. Ion path length versus energy

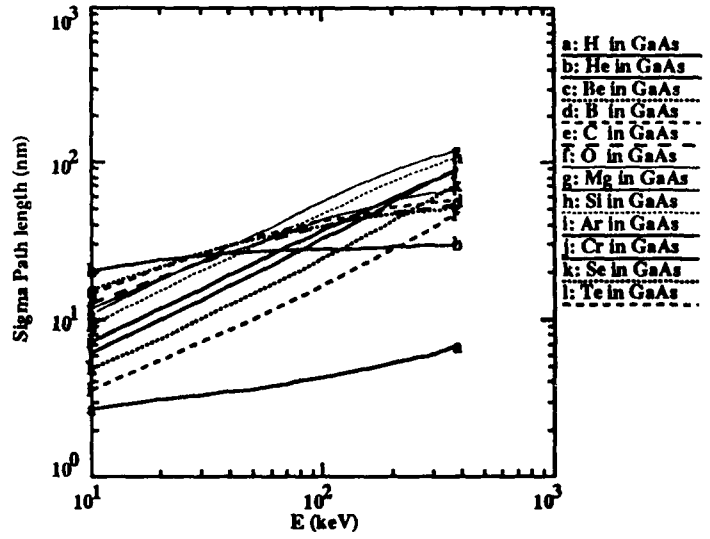


Fig.2i. Straggle in path length versus energy

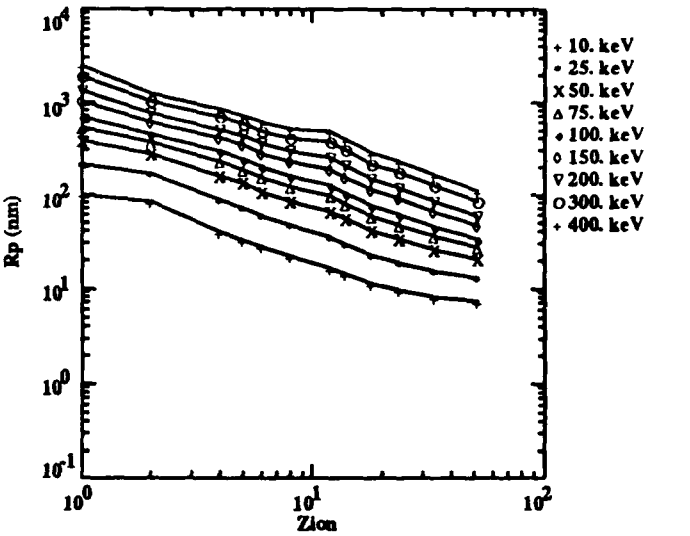


Fig.3. Rp versus ion atomic number

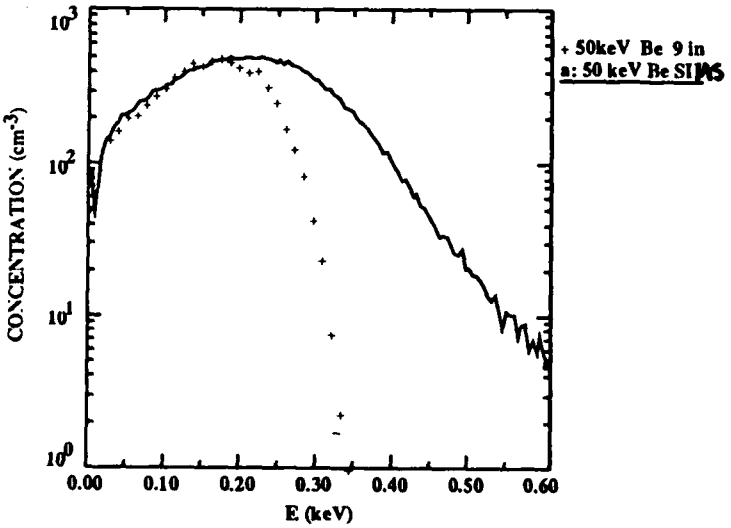


Fig.4a. Comparison with SIMS

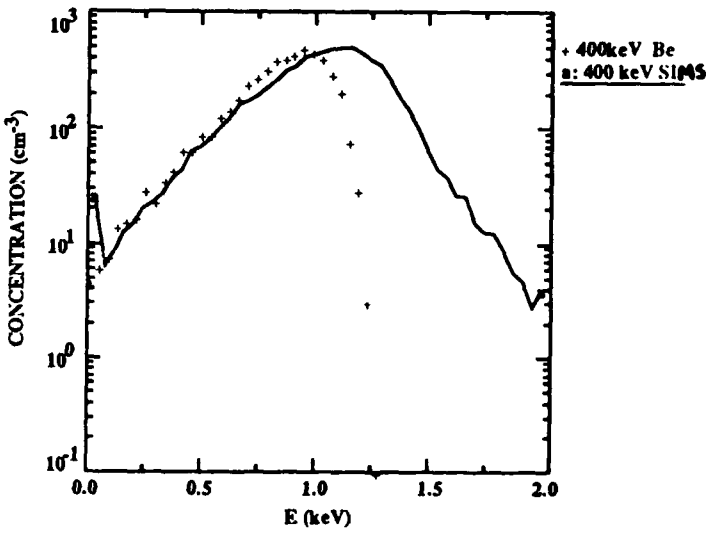


Fig.4b. Comparison with SIMS

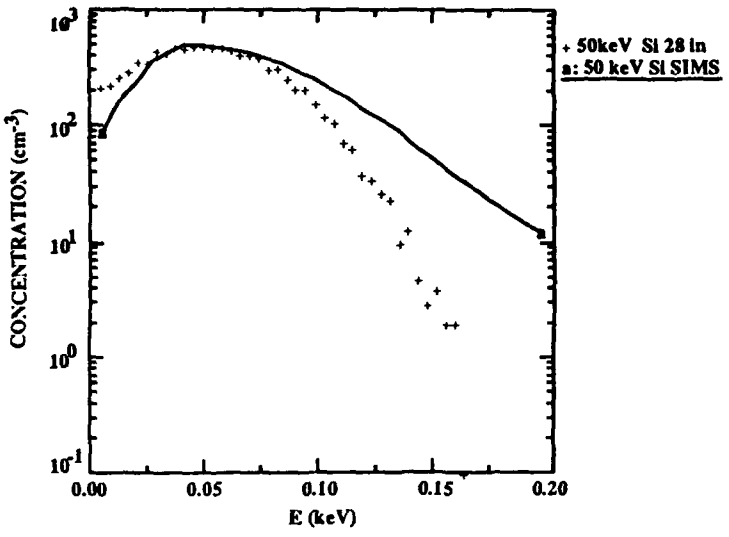


Fig.4c. Comparison with SIMS

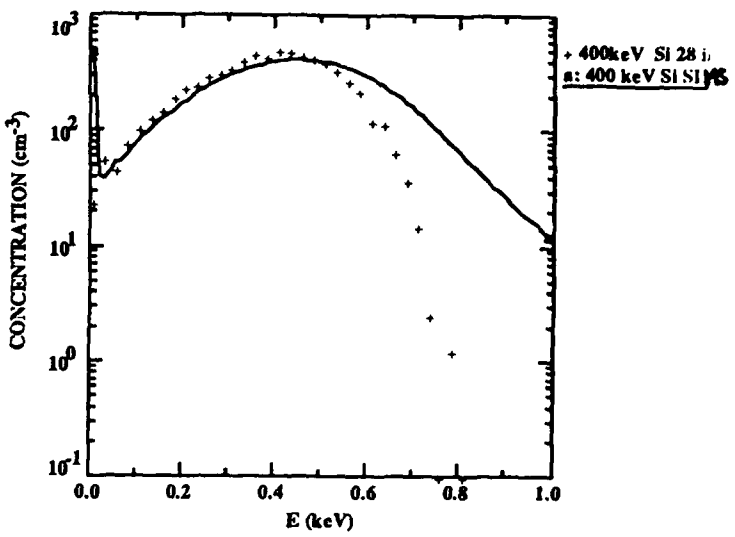


Fig.4d. Comparison with SIMS

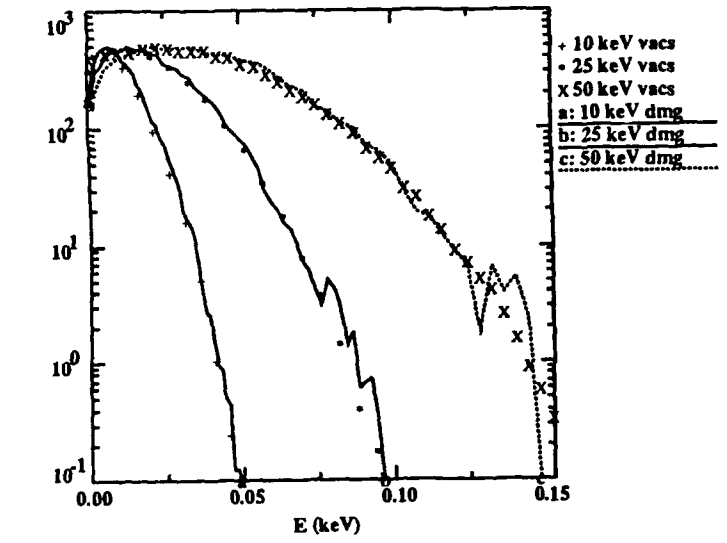


Fig.5a. Comparison of damage and vacancy production (Si in GaAs)

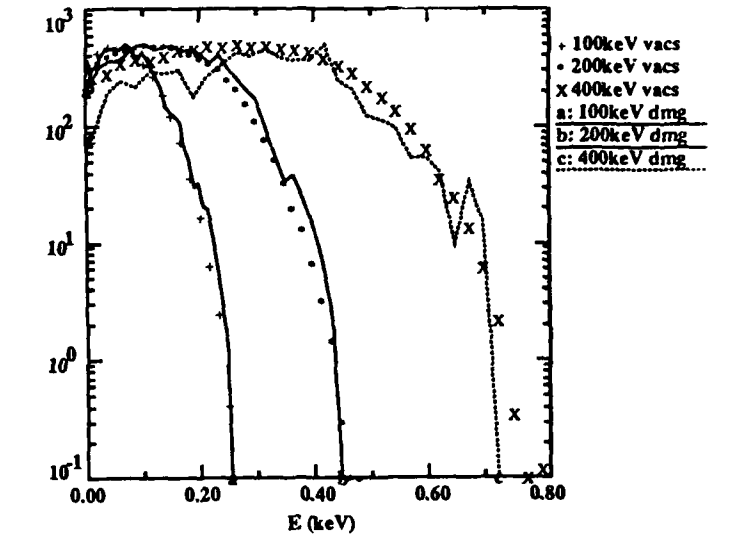


Fig.5b. Comparison of damge and vacancy production (Si in GaAs)

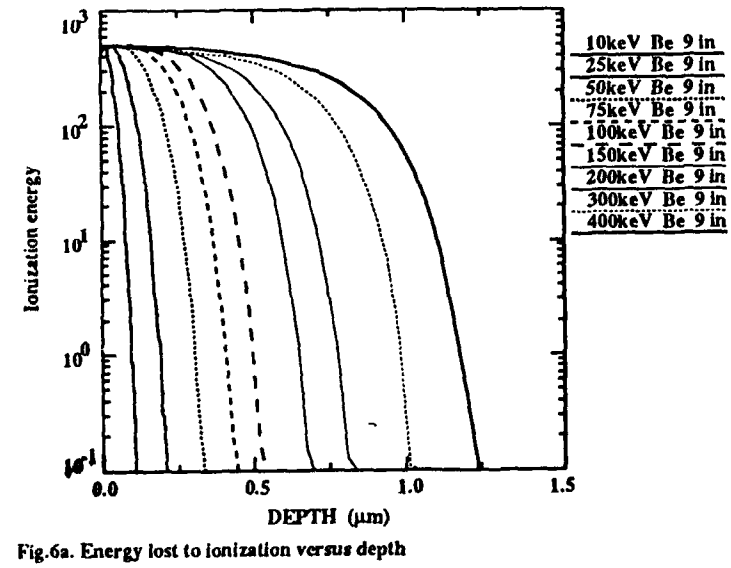


Fig.6a. Energy lost to ionization *versus* depth

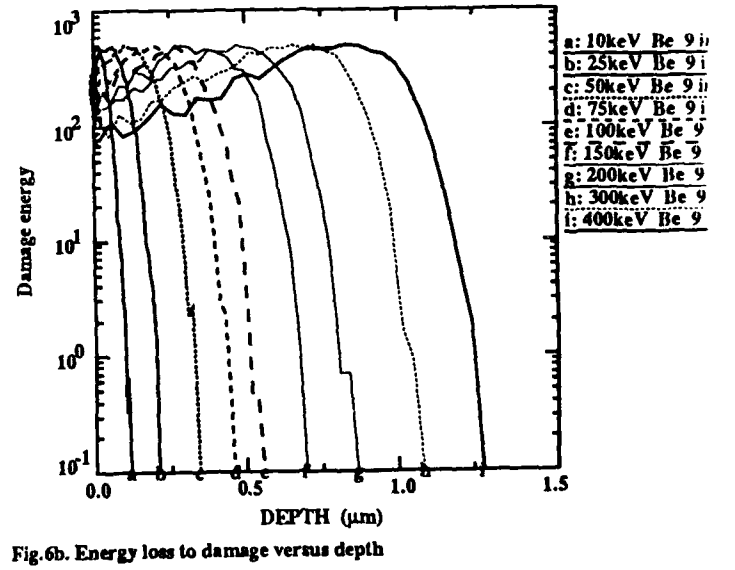


Fig.6b. Energy loss to damage versus depth

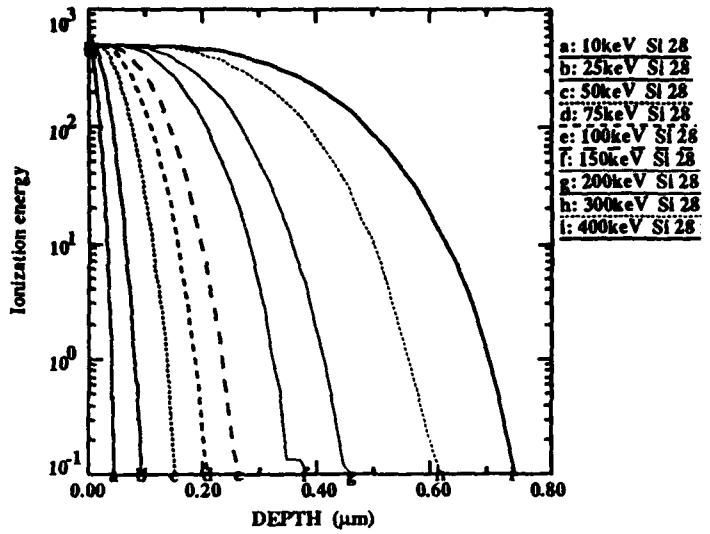


Fig.6c. Energy lost to ionization versus depth (Si in GaAs)

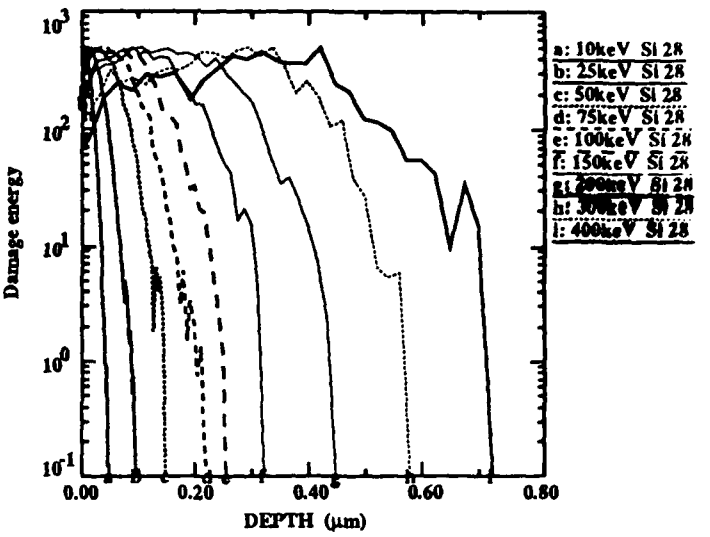


Fig.6d. Damage energy loss versus depth

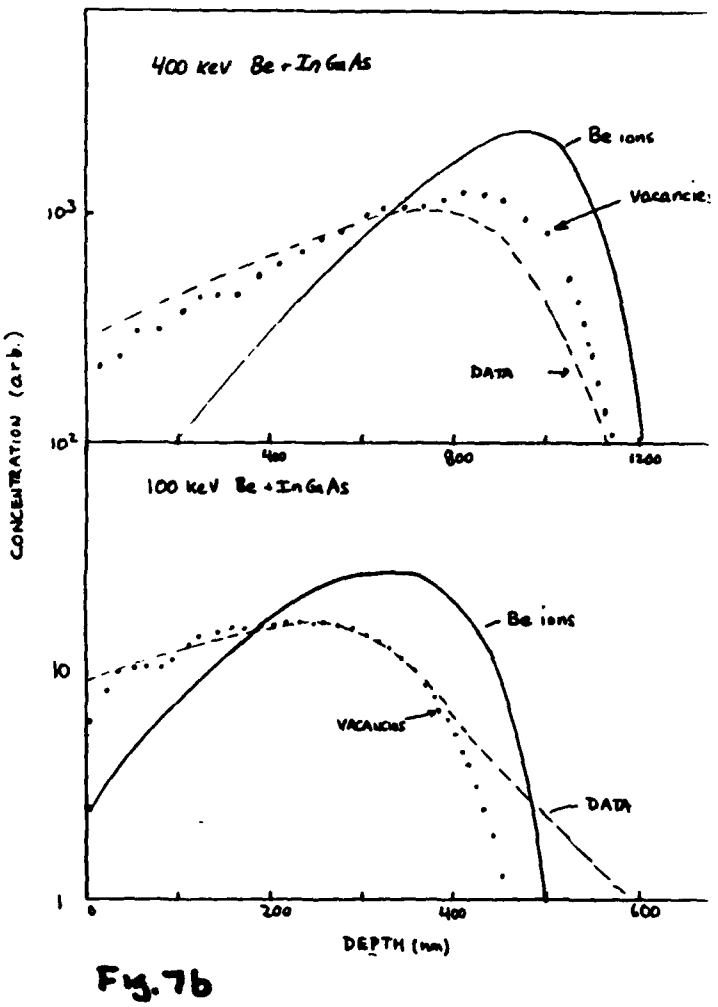


Fig.7b

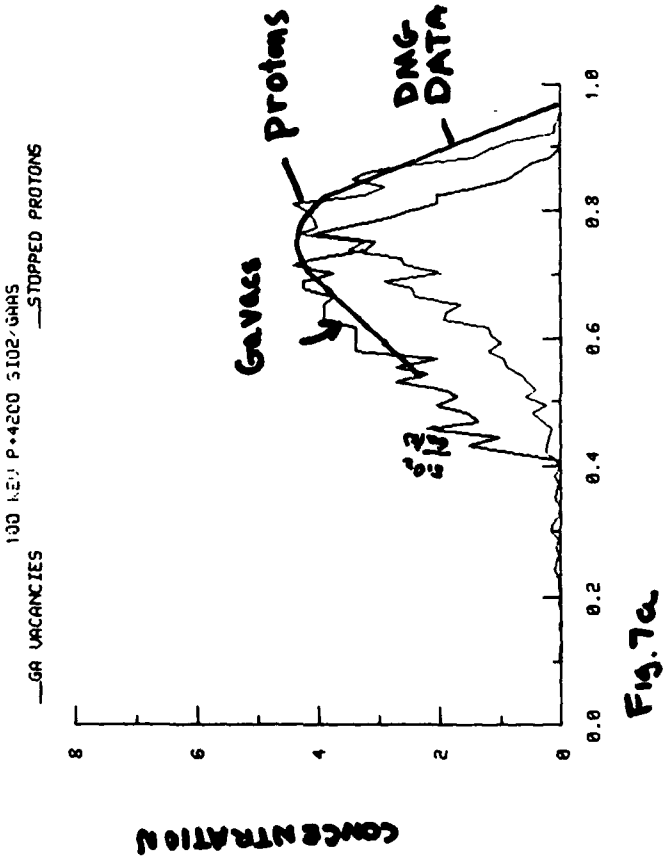


Fig.7a

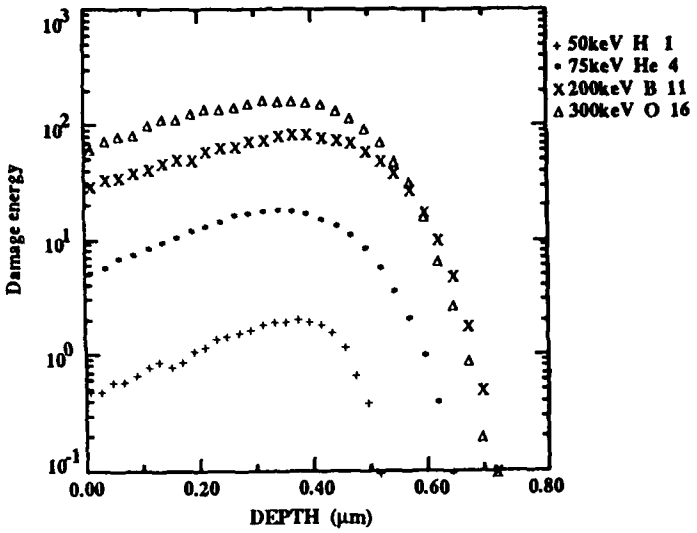


Fig.6a. Absolute damage energy distributions

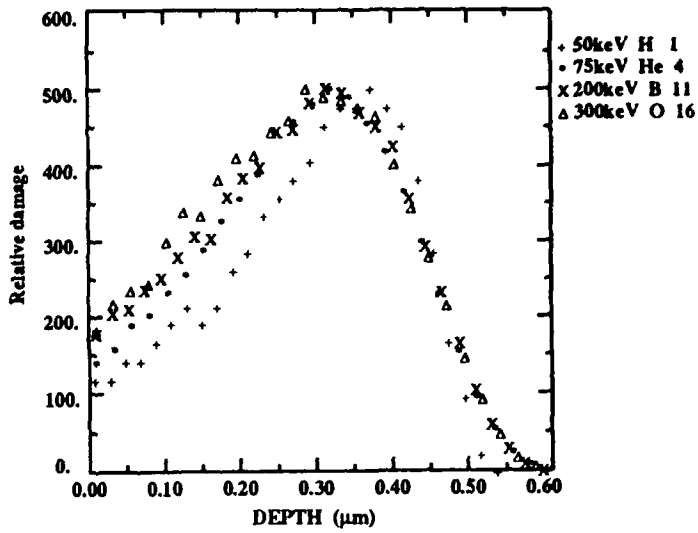


Fig.8b. Normalized damage distributions

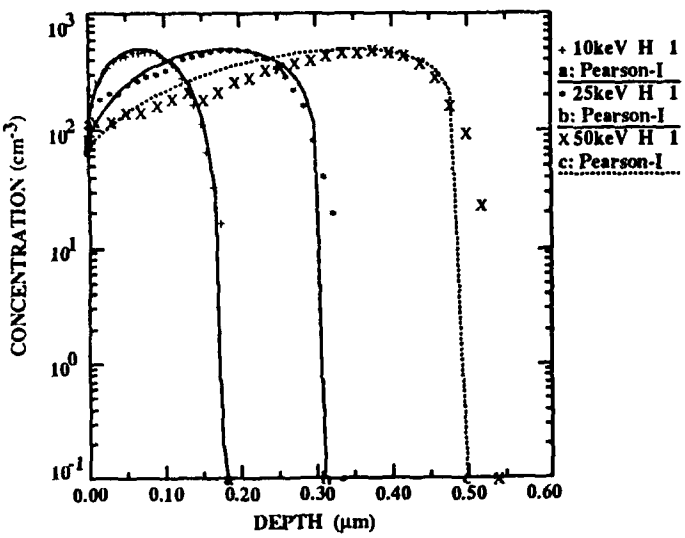


Fig.9a. Damage energy H in GaAs

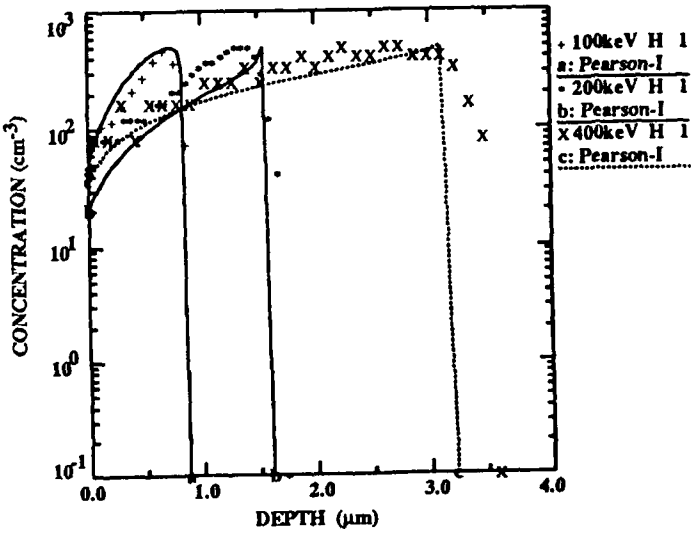


Fig.9b. Damage distributions (H in GaAs)

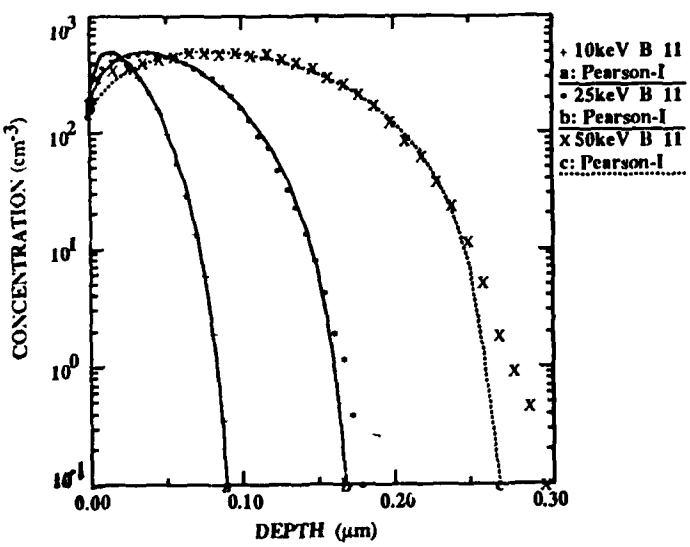


Fig.9c. Damage distributions B in GaAs

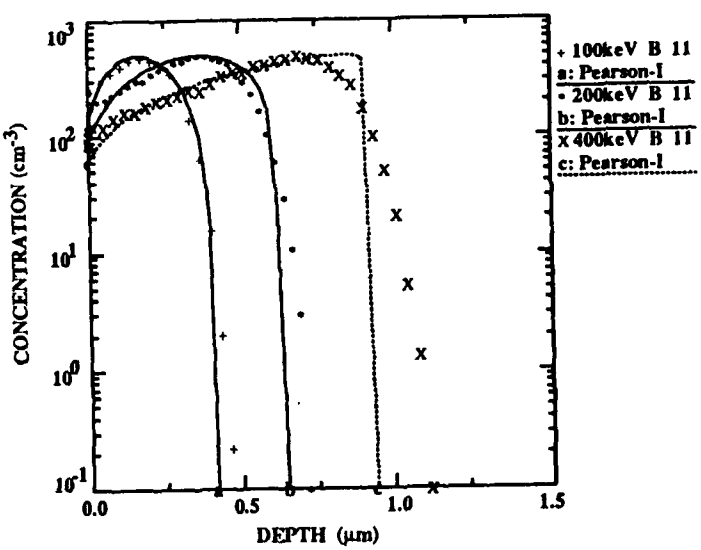


Fig.9d. Damage distributions B in GaAs

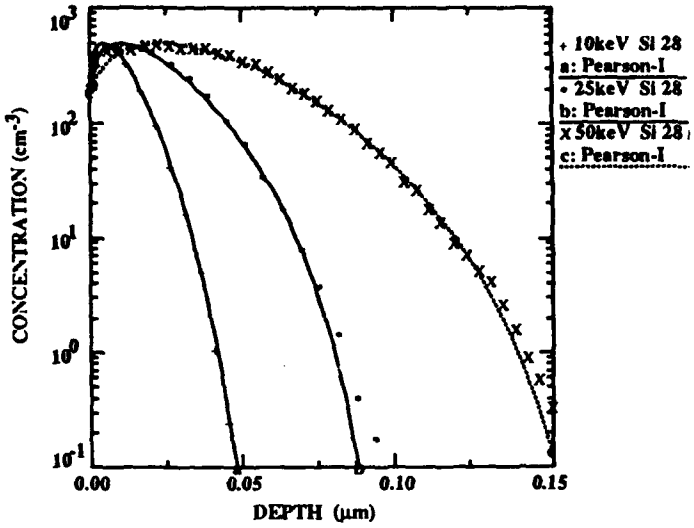


Fig.9e. Damage distributions Si in GaAs

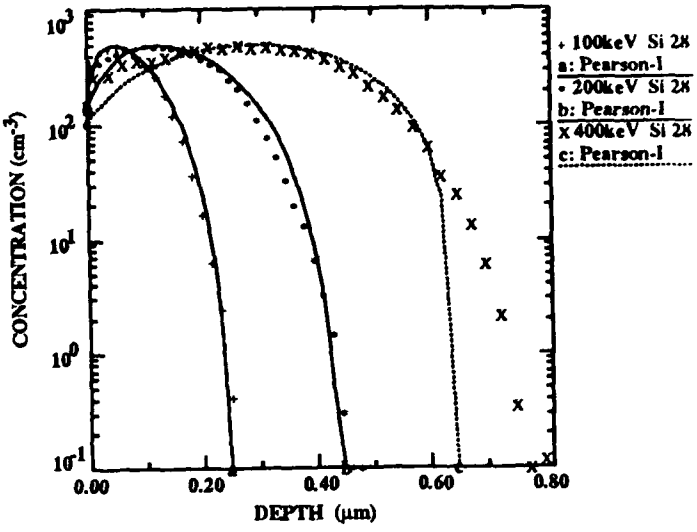


Fig.9f. Damage distributions SI in GaAs

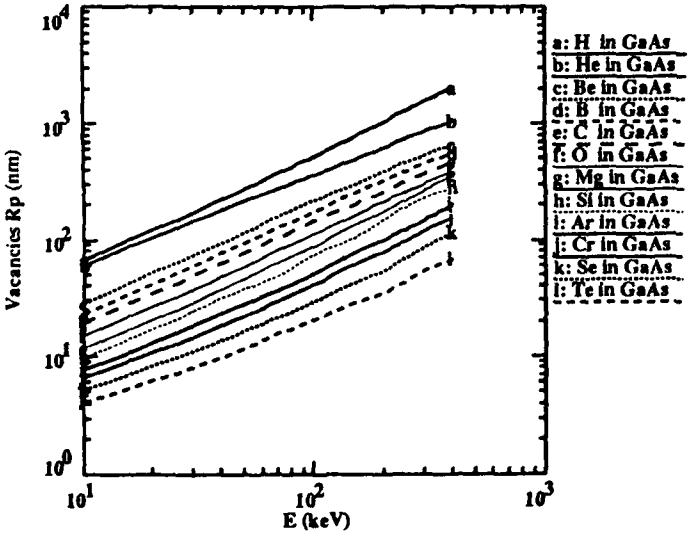


Fig.10a. Rp for vacancy distribution versus ion energy

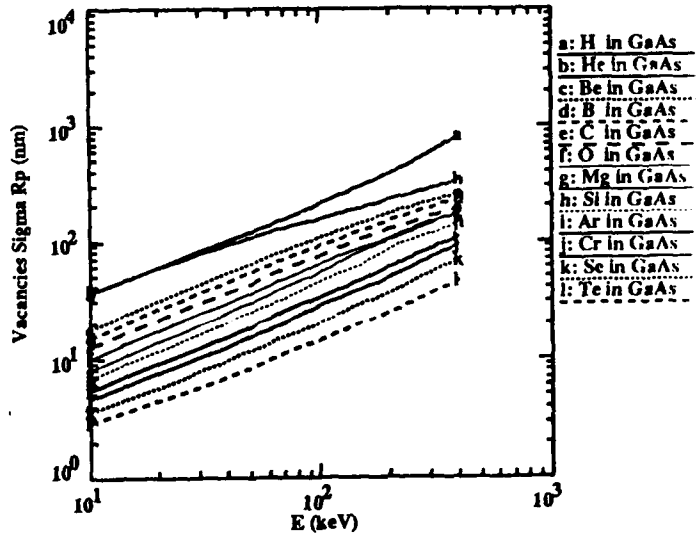


Fig.10b. Delta Rp for the vacancy distribution versus energy

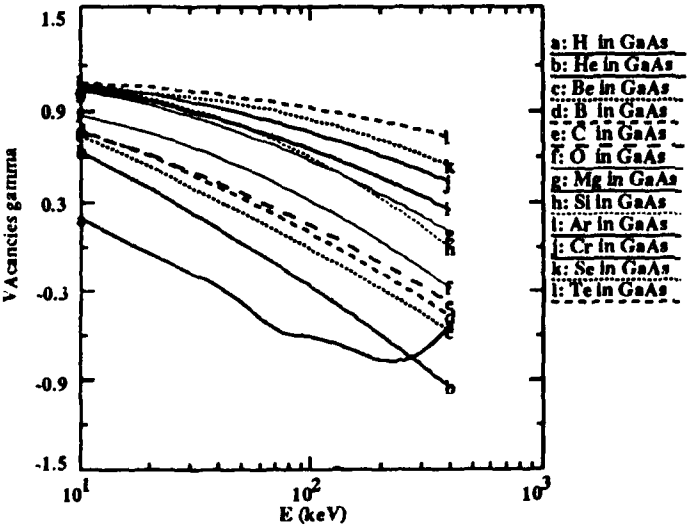


Fig.10c. Gamma for the vacancy distribution versus ion energy

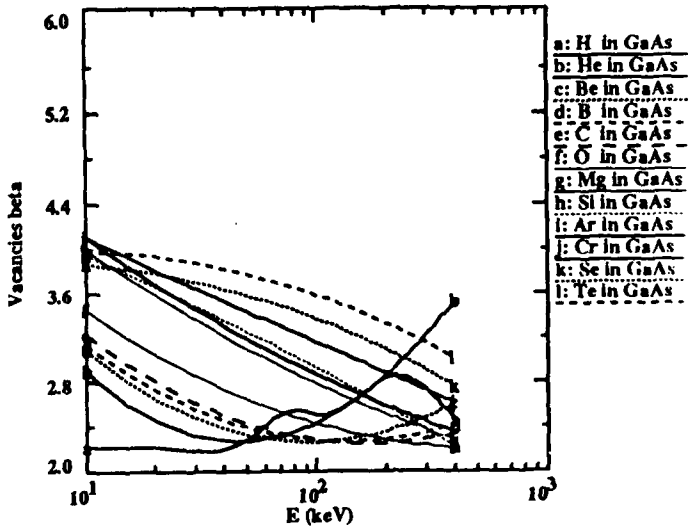


Fig.10d. Beta for vacancy distribution versus ion energy

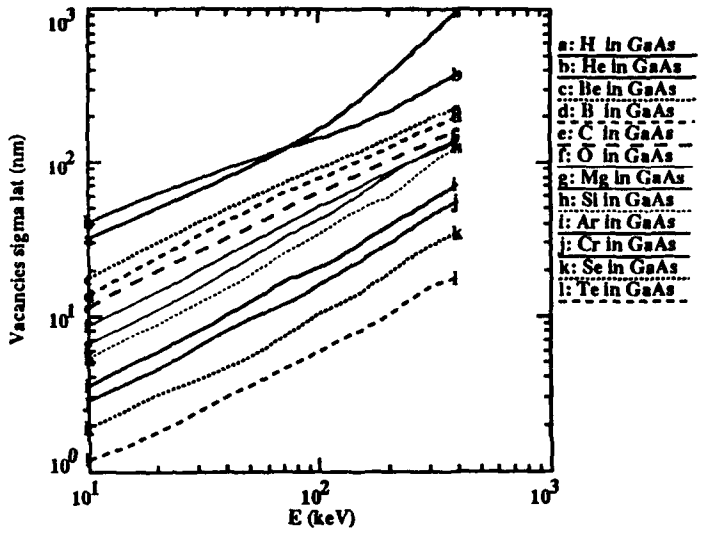


Fig.10e. Sigma lateral for vacancy distribution versus energy

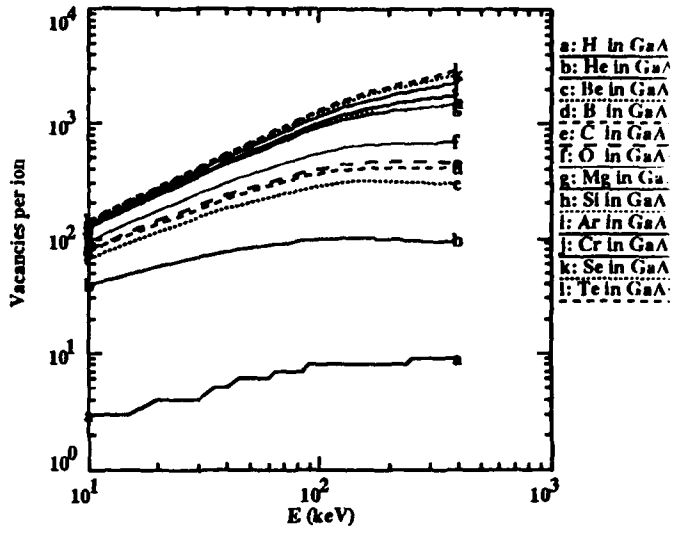


Fig.11. Number of vacancies per ion

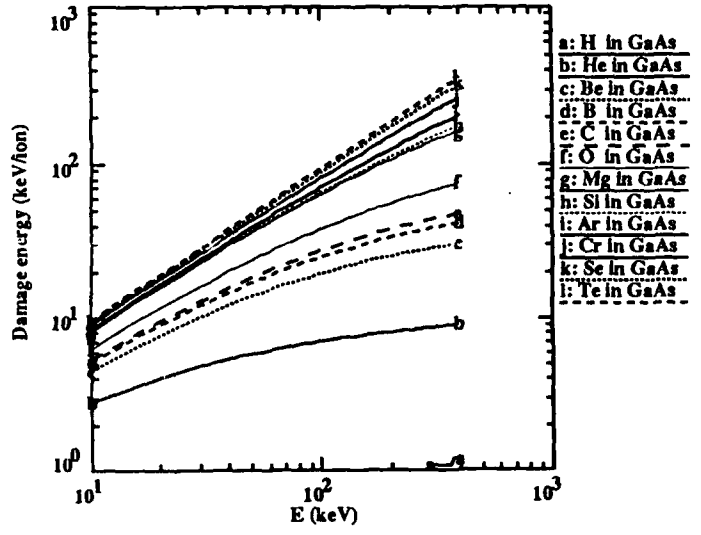


Fig.12b. Energy lost to damage

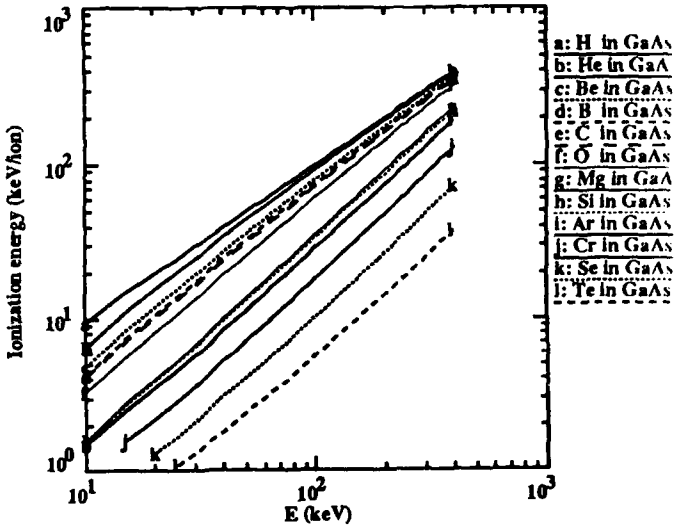


Fig.12a. Energy lost to ionization versus energy

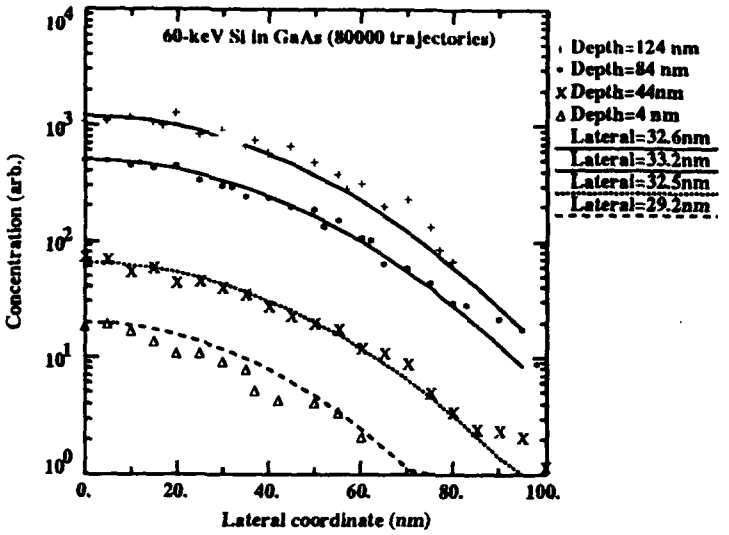


Fig.13a. Lateral concentration distributions for four depths

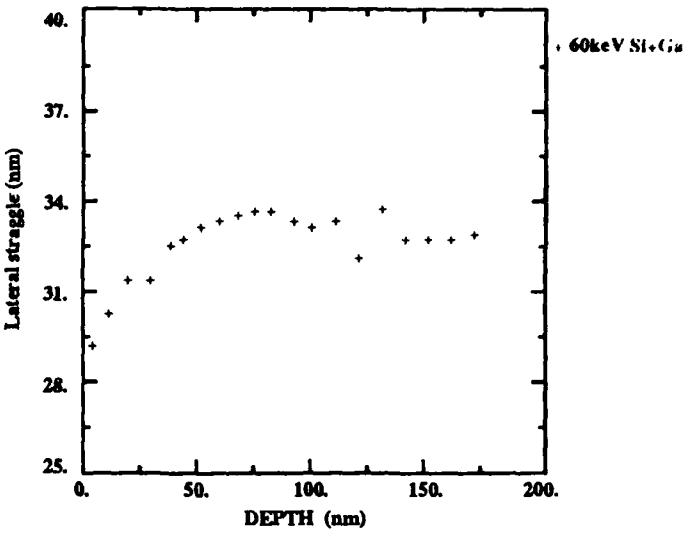


Fig.13b. Lateral straggle parameter versus depth

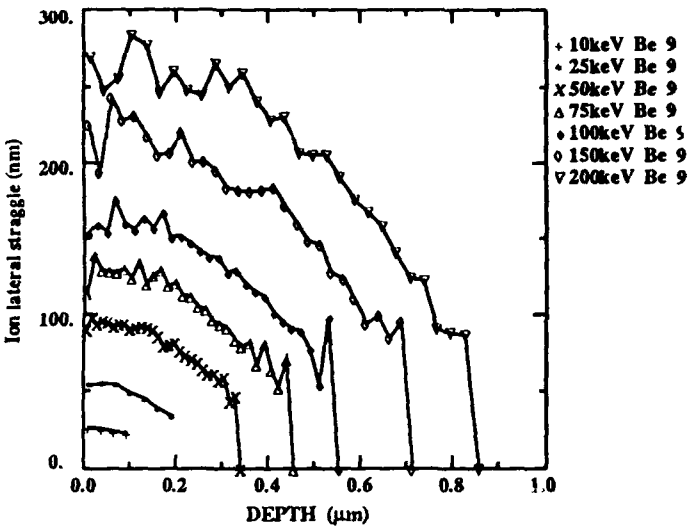


Fig.14a. Lateral straggle versus depth

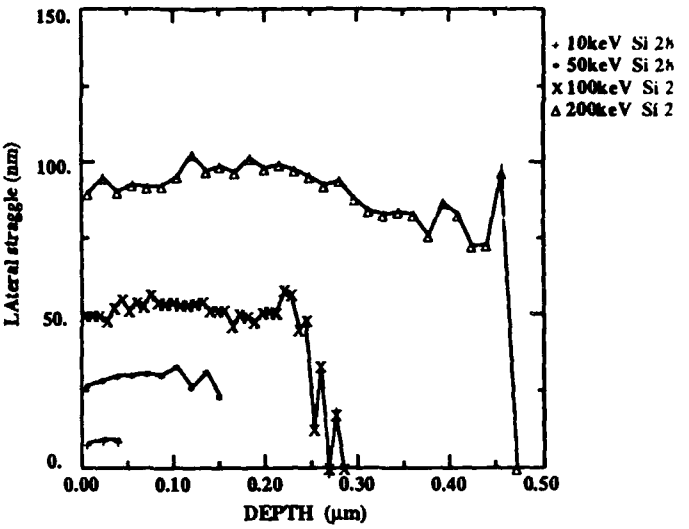


Fig.14b. Ion lateral straggle versus depth (Si in GaAs)

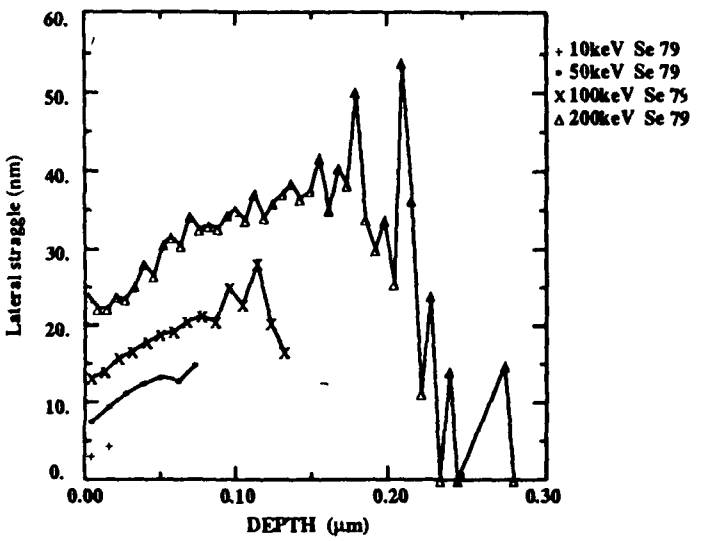


Fig.14c. Lateral straggle versus depth (Se in GaAs)

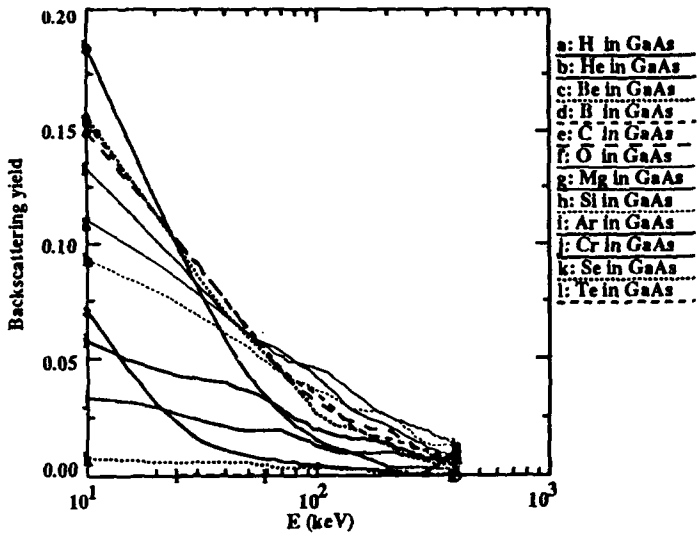


Fig.15. Fraction of ions backscattered versus ion energy

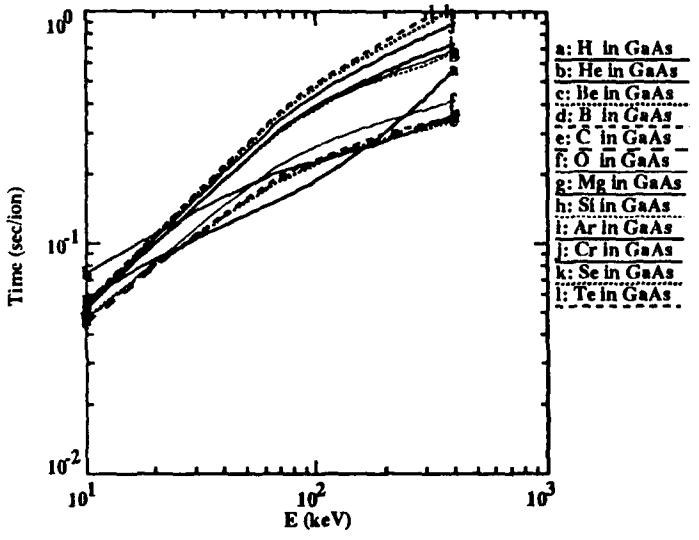


Fig.16a. Computation time (following recoils) versus ion energy

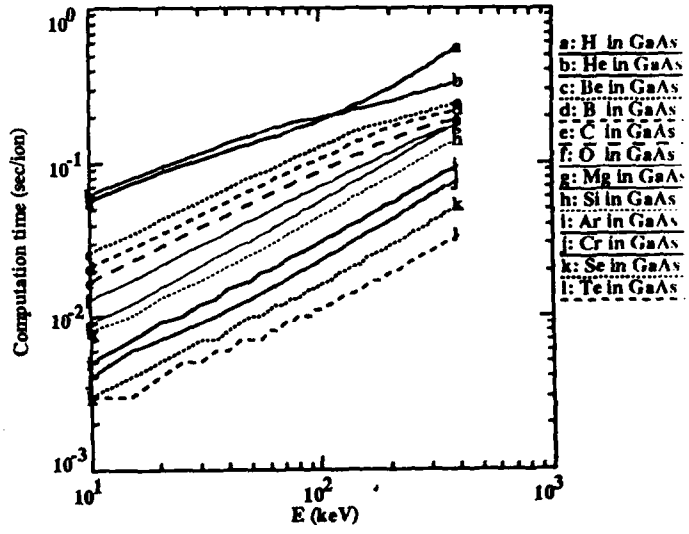


Fig.16b. Computation time (not following recoils)

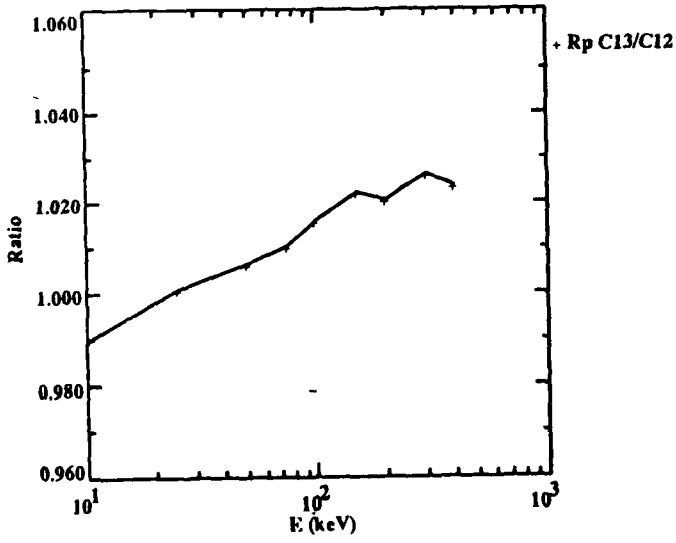


Fig.17. Ratio of Rp for C13 ions to C12 ions

Table I. Moments of Ion Distributions Implanted in GaAs.

Table I is on following pages: pages 110 through 128.

Explanation of Table I[a]

Item	Units	Note	Definition
E	keV		Ion energy
Rp	nm		First moment of the stopped-ion distribution
SigRp	nm		Ion longitudinal straggling
Gamma	none		Normalized third moment
Beta	none		Normalized fourth moment
Latrl	nm		Ion lateral straggling
Peak	nm	b	Position of the peak of the distribution
Stopped	nm	c	Where Ion distribution = 0.0001*peak
Path	nm		Average path length traveled by ion
Sig.Path	nm		Straggling of average path length
Dmg	keV/ion	d	Energy deposited in lattice by ejecting Ga,As atoms
Ioniz	keV/ion	d	Energy deposited by ejecting electrons

Notes:

a. To make this and Table II, TRIM was run at nine different energies between 10 and 400 keV. The parameters were then log-log or log(energy)-linear-spline interpolated at every ion energy. The gamma and beta values for ion atomic numbers greater than 1 were least-squares fitted to a quadratic function of the log of the ion energy, then interpolated.

b. From the moments of the distribution, a Pearson-I distribution was computed, and the peak position was determined by searching for the maximum on a 200-point grid. For $\gamma>0$, the peak position is smaller than Rp. For $\gamma<0$, it is greater than Rp.

c. For $\gamma>-0.3$, a Pearson-I distribution was computed from the moments, and the point where the distribution fell below 10^{-4} times the peak height was determined by searching on a 200 to 500-point grid. For $\gamma<-0.3$, the Pearson-I function cuts off too rapidly at large depths. For those values ($Z_{ion}<10$), the stopped position was estimated to be a few depth intervals above where TRIM-calculated distributions (Table III) vanish. The latter values are less accurate.

d. The Dmg and Ioniz energies add up to the total ion energy within interpolation uncertainties. Note that for H, little energy is lost by damage, but most is lost by ionization. For the heavy ions, most the energy is lost by damage.

Contents of Table I.

Atom distributions resulting from GaAs ionimplanted with H, He, Be, B, C, O, Al,Mg, Si, P, Ar,Cr, Zn,Ge,Se, Sn, Te, and Au. The implantation energy varies from 10 to 400keV.

H in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	99.4	40.0	-0.248	2.40	53.7	109.7	252.0	228.3	2.7	0.3	9.4
15	137.0	50.4	-0.394	2.52	67.6	157.0	307.2	288.8	2.9	0.4	14.7
20	172.6	59.2	-0.513	2.70	79.7	201.8	355.4	341.8	3.1	0.5	19.5
25	207.2	66.8	-0.621	2.92	90.6	244.5	400.0	390.2	3.2	0.5	24.4
30	241.3	73.4	-0.721	3.17	100.7	285.4	442.6	435.6	3.3	0.5	29.3
35	275.1	79.4	-0.809	3.41	110.3	324.7	483.6	479.0	3.4	0.5	34.2
40	308.5	84.7	-0.881	3.63	119.5	362.9	523.4	521.1	3.5	0.6	39.2
45	341.6	89.6	-0.939	3.82	128.5	400.2	562.1	562.4	3.5	0.6	44.2
50	374.4	94.1	-0.984	3.97	137.4	436.7	600.0	603.3	3.6	0.6	49.2
55	406.9	98.2	-1.018	4.10	146.3	472.5	637.3	643.8	3.7	0.6	54.2
60	439.2	102.2	-1.048	4.22	155.2	508.1	675.1	684.1	3.8	0.7	59.2
65	471.2	106.2	-1.079	4.34	164.1	543.5	714.3	724.2	3.9	0.7	64.2
70	503.1	110.3	-1.112	4.49	173.2	579.1	755.8	764.1	3.9	0.7	69.1
75	534.9	114.6	-1.151	4.65	182.5	615.1	800.0	803.8	4.0	0.7	74.1
80	566.5	119.1	-1.194	4.83	192.0	651.4	847.2	843.3	4.1	0.7	79.1
85	598.0	123.8	-1.238	5.01	201.6	687.9	896.4	882.7	4.1	0.7	84.1
90	629.4	128.5	-1.278	5.17	211.5	724.4	946.4	922.0	4.2	0.7	89.1
95	660.7	133.4	-1.312	5.31	221.5	760.7	996.2	961.3	4.2	0.8	94.1
100	691.9	138.2	-1.338	5.41	231.7	796.6	1045.0	1000.6	4.3	0.8	99.1
110	754.2	147.7	-1.364	5.53	252.6	867.2	1137.4	1079.2	4.4	0.8	109.0
120	816.2	157.3	-1.369	5.54	274.4	936.9	1223.3	1158.1	4.5	0.8	119.0
130	878.1	167.1	-1.361	5.50	297.1	1006.7	1303.5	1237.5	4.6	0.8	128.9
140	939.8	177.1	-1.349	5.43	320.7	1077.3	1378.9	1317.4	4.7	0.9	138.9
150	1001.5	187.5	-1.336	5.35	345.3	1149.5	1450.0	1398.1	4.8	0.9	149.0
160	1063.1	198.3	-1.324	5.26	371.0	1223.6	1517.9	1479.6	4.9	0.9	159.0
170	1124.7	209.6	-1.314	5.18	397.8	1299.0	1584.8	1561.9	5.0	0.9	169.0
180	1186.3	221.5	-1.306	5.10	425.6	1375.3	1652.9	1645.1	5.1	0.9	179.0
190	1247.8	234.0	-1.298	5.03	454.4	1451.9	1724.1	1729.2	5.2	0.9	189.0
200	1309.3	247.3	-1.292	4.97	484.1	1528.2	1800.0	1814.3	5.3	0.9	198.9
210	1370.8	261.4	-1.286	4.93	514.8	1604.1	1881.6	1900.4	5.4	1.0	208.8
220	1432.2	276.4	-1.280	4.88	546.3	1679.7	1968.2	1987.5	5.5	1.0	218.6
230	1493.6	292.1	-1.274	4.84	578.7	1755.5	2059.2	2075.7	5.5	1.0	228.5
240	1554.8	308.6	-1.267	4.80	611.8	1831.8	2153.7	2165.2	5.6	1.0	238.3
250	1615.8	326.0	-1.259	4.76	645.8	1908.9	2251.0	2255.9	5.7	1.0	248.3
260	1676.6	344.2	-1.250	4.71	680.4	1987.1	2350.6	2347.9	5.8	1.0	258.2
270	1737.2	363.2	-1.239	4.66	715.6	2066.6	2451.8	2441.3	5.8	1.0	268.3
280	1797.6	383.1	-1.226	4.60	751.5	2147.8	2554.1	2536.1	5.9	1.0	278.4
290	1857.7	403.9	-1.212	4.54	787.9	2230.7	2657.0	2632.3	6.0	1.1	288.5
300	1917.5	425.5	-1.196	4.47	824.9	2315.8	2760.0	2730.1	6.1	1.1	298.8
310	1977.0	448.1	-1.178	4.39	862.3	2403.0	2862.7	2829.4	6.2	1.1	309.1
320	2036.2	471.5	-1.158	4.30	900.3	2492.3	2965.0	2930.0	6.3	1.1	319.4
330	2095.2	495.7	-1.138	4.21	938.7	2583.4	3067.1	3032.0	6.4	1.1	329.7
340	2153.9	520.7	-1.117	4.12	977.5	2676.3	3169.0	3135.1	6.5	1.1	339.8
350	2212.4	546.5	-1.096	4.03	1016.8	2770.6	3270.8	3239.1	6.6	1.1	349.9
360	2270.6	573.0	-1.075	3.93	1056.5	2866.3	3372.6	3344.1	6.7	1.1	359.8
370	2328.8	600.2	-1.053	3.84	1096.7	2963.1	3474.3	3449.9	6.8	1.2	369.6
380	2386.7	628.0	-1.032	3.74	1137.2	3061.0	3576.1	3556.4	6.9	1.2	379.2
390	2444.5	656.4	-1.011	3.65	1178.2	3159.7	3678.0	3663.5	7.0	1.2	388.5
400	2502.2	685.3	-0.990	3.56	1219.5	3259.1	3780.0	3771.0	7.1	1.2	397.7

He in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	82.5	41.5	0.322	2.46	57.0	71.4	224.6	266.3	20.3	2.8	6.5
15	112.1	53.5	0.166	2.38	73.6	103.9	267.6	333.9	22.2	3.5	11.0
20	139.3	63.9	0.055	2.37	87.4	135.0	311.5	390.7	23.6	4.1	15.3
25	164.7	73.0	-0.030	2.39	98.7	165.0	360.8	439.7	24.6	4.5	19.8
30	188.7	81.2	-0.100	2.42	108.1	193.9	415.7	482.8	25.2	4.9	24.4
35	211.6	88.4	-0.159	2.46	116.4	221.7	470.9	521.5	25.7	5.2	29.2
40	233.6	94.8	-0.210	2.51	124.2	248.4	521.8	557.1	26.1	5.4	34.0
45	254.8	100.5	-0.255	2.55	131.6	274.2	565.3	590.3	26.4	5.7	38.8
50	275.4	105.6	-0.295	2.60	139.0	299.0	600.0	621.5	26.7	5.9	43.7
55	295.3	110.0	-0.332	2.65	146.4	322.9	625.9	651.1	26.9	6.0	48.5
60	314.7	114.0	-0.365	2.69	153.5	346.1	647.1	679.4	27.1	6.2	53.4
65	333.6	117.7	-0.395	2.74	160.2	368.6	666.9	706.3	27.3	6.3	58.2
70	351.9	121.1	-0.424	2.78	166.3	390.6	688.0	732.1	27.4	6.5	63.1
75	369.7	124.2	-0.450	2.83	171.7	412.1	712.0	756.8	27.5	6.6	68.0
80	387.1	127.3	-0.474	2.87	176.3	433.1	739.7	780.4	27.6	6.7	72.9
85	404.1	130.2	-0.497	2.92	180.5	453.6	769.2	803.3	27.6	6.8	77.8
90	420.7	133.0	-0.519	2.96	184.5	473.7	798.5	825.4	27.7	6.9	82.7
95	436.9	135.7	-0.540	3.00	188.3	493.3	825.9	847.1	27.7	7.0	87.7
100	453.0	138.5	-0.559	3.04	192.3	512.3	850.0	868.2	27.7	7.1	92.6
110	484.3	143.8	-0.595	3.12	200.5	548.9	887.1	909.6	27.8	7.2	102.4
120	515.0	149.0	-0.628	3.19	209.1	583.8	915.4	949.8	27.9	7.4	112.3
130	545.2	153.7	-0.659	3.26	217.8	617.3	941.0	988.9	27.9	7.5	122.2
140	575.0	158.0	-0.687	3.33	226.5	649.6	968.1	1027.2	28.0	7.6	132.1
150	604.5	161.7	-0.713	3.40	235.1	681.0	1000.0	1064.8	28.1	7.7	142.0
160	633.7	165.0	-0.737	3.46	243.4	711.7	1038.0	1101.7	28.3	7.8	152.0
170	662.7	168.0	-0.760	3.53	251.7	741.8	1080.8	1138.0	28.4	7.9	162.0
180	691.4	170.9	-0.782	3.59	260.0	771.6	1126.3	1173.8	28.5	8.0	171.9
190	719.6	173.8	-0.802	3.64	268.3	801.2	1173.1	1209.0	28.6	8.0	181.8
200	747.3	176.9	-0.822	3.70	276.7	830.7	1220.0	1243.8	28.8	8.1	191.6
210	774.5	180.3	-0.840	3.76	285.3	860.3	1266.0	1278.1	28.9	8.2	201.4
220	801.3	183.8	-0.858	3.81	294.0	889.8	1310.6	1312.1	29.0	8.2	211.2
230	827.6	187.5	-0.874	3.86	302.7	919.3	1353.8	1345.6	29.0	8.3	221.0
240	853.4	191.3	-0.890	3.91	311.6	948.6	1395.2	1378.8	29.1	8.3	230.8
250	878.9	195.1	-0.906	3.96	320.4	977.7	1434.7	1411.6	29.2	8.4	240.7
260	904.0	199.0	-0.921	4.01	329.3	1006.5	1472.2	1444.1	29.3	8.5	250.6
270	928.8	202.9	-0.935	4.06	338.2	1035.0	1507.5	1476.3	29.3	8.5	260.6
280	953.2	206.8	-0.949	4.11	347.0	1063.2	1540.6	1508.1	29.4	8.6	270.7
290	977.4	210.7	-0.962	4.15	355.8	1091.0	1571.5	1539.7	29.4	8.6	280.8
300	1001.2	214.5	-0.975	4.19	364.6	1118.5	1600.0	1571.0	29.5	8.7	291.1
310	1024.8	218.3	-0.987	4.24	373.2	1145.5	1626.2	1602.0	29.5	8.7	301.4
320	1048.1	222.1	-0.999	4.28	381.9	1172.1	1650.4	1632.7	29.6	8.8	311.8
330	1071.1	225.7	-1.010	4.32	390.4	1198.4	1672.8	1663.2	29.6	8.9	322.1
340	1094.0	229.4	-1.022	4.36	398.9	1224.3	1693.8	1693.4	29.7	8.9	332.3
350	1116.6	233.0	-1.033	4.40	407.3	1250.0	1713.5	1723.3	29.7	9.0	342.4
360	1139.0	236.5	-1.043	4.44	415.7	1275.4	1732.1	1752.9	29.8	9.0	352.4
370	1161.2	240.0	-1.053	4.48	424.0	1300.5	1750.0	1782.3	29.8	9.1	362.3
380	1183.3	243.5	-1.063	4.52	432.3	1325.4	1767.1	1811.3	29.9	9.1	371.9
390	1205.1	246.9	-1.073	4.55	440.4	1350.0	1783.7	1840.1	29.9	9.2	381.3
400	1226.8	250.3	-1.083	4.59	448.6	1374.5	1800.0	1868.6	30.0	9.3	390.5

Be in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	39.4	20.5	0.353	2.61	26.1	33.3	113.5	105.7	15.4	4.5	4.9
15	55.7	27.8	0.239	2.42	35.1	49.4	146.1	141.3	18.8	6.3	8.4
20	71.1	34.4	0.153	2.33	43.4	65.6	175.2	173.5	21.6	7.7	11.7
25	86.0	40.4	0.083	2.29	51.2	81.9	202.1	203.4	24.0	9.0	15.3
30	100.4	46.1	0.024	2.28	58.6	98.4	227.5	231.4	26.1	10.1	19.0
35	114.6	51.4	-0.027	2.29	65.6	115.2	251.4	258.0	28.0	11.2	22.9
40	128.7	56.4	-0.072	2.30	72.1	132.0	273.8	283.3	29.6	12.2	26.9
45	142.6	61.1	-0.113	2.32	78.3	148.9	294.7	307.5	31.0	13.1	31.1
50	156.6	65.5	-0.150	2.35	84.1	165.9	314.1	330.9	32.2	13.9	35.3
55	170.5	69.6	-0.185	2.38	89.6	182.8	332.2	353.4	33.2	14.6	39.6
60	184.3	73.5	-0.216	2.40	94.8	199.6	349.5	375.2	34.0	15.3	43.9
65	198.0	77.3	-0.246	2.43	99.8	216.3	366.3	396.4	34.8	15.9	48.3
70	211.4	81.0	-0.273	2.47	104.8	232.7	383.1	417.0	35.5	16.5	52.7
75	224.6	84.7	-0.299	2.50	109.7	248.9	400.0	437.1	36.2	17.1	57.2
80	237.5	88.3	-0.324	2.53	114.7	264.8	417.3	456.6	36.8	17.6	61.7
85	250.2	91.8	-0.347	2.56	119.6	280.4	435.5	475.7	37.4	18.1	66.3
90	262.6	95.2	-0.369	2.59	124.4	295.7	455.1	494.3	38.0	18.5	70.8
95	274.9	98.5	-0.390	2.62	129.1	310.7	476.5	512.5	38.6	19.0	75.4
100	287.0	101.6	-0.410	2.66	133.6	325.5	500.0	530.3	39.3	19.4	79.9
110	310.8	107.3	-0.448	2.72	142.0	354.2	553.5	564.5	40.5	20.3	89.0
120	334.1	112.6	-0.483	2.78	149.9	382.0	611.7	597.3	41.7	21.1	98.2
130	356.8	117.5	-0.516	2.84	157.3	408.9	669.8	628.8	42.8	21.9	107.4
140	378.8	122.2	-0.546	2.90	164.4	435.1	723.7	659.2	43.7	22.6	116.7
150	400.1	126.8	-0.575	2.95	171.3	460.5	770.0	688.7	44.5	23.2	126.2
160	420.8	131.4	-0.601	3.01	177.9	485.4	806.6	717.3	45.0	23.7	135.7
170	440.8	135.8	-0.627	3.06	184.3	509.6	835.6	745.2	45.4	24.2	145.3
180	460.4	140.1	-0.651	3.11	190.5	533.2	859.5	772.1	45.6	24.6	154.9
190	479.6	144.0	-0.674	3.17	196.4	556.3	880.4	798.3	45.9	25.0	164.5
200	498.5	147.6	-0.696	3.22	202.1	578.9	900.0	823.7	46.2	25.4	174.0
210	517.3	150.8	-0.717	3.27	207.5	601.0	919.6	848.4	46.4	25.8	183.5
220	535.8	153.8	-0.738	3.31	212.6	622.6	939.3	872.3	46.7	26.2	193.0
230	554.1	156.5	-0.757	3.36	217.7	643.8	959.1	895.7	47.0	26.5	202.5
240	572.2	159.0	-0.776	3.41	222.6	664.6	979.0	918.6	47.4	26.9	212.0
250	590.0	161.5	-0.794	3.45	227.5	685.1	999.0	941.1	47.7	27.2	221.7
260	607.7	163.9	-0.811	3.49	232.3	705.3	1019.1	963.2	48.0	27.5	231.4
270	625.1	166.2	-0.828	3.54	237.2	725.3	1039.2	985.0	48.3	27.8	241.1
280	642.3	168.6	-0.845	3.58	242.1	744.9	1059.5	1006.6	48.6	28.1	251.0
290	659.3	171.0	-0.860	3.62	247.0	764.4	1079.7	1027.9	48.9	28.4	261.0
300	676.0	173.5	-0.876	3.66	252.0	783.6	1100.0	1049.0	49.2	28.6	271.0
310	692.6	176.0	-0.891	3.70	257.2	802.7	1120.3	1070.0	49.5	28.9	281.1
320	708.9	178.6	-0.905	3.74	262.4	821.6	1140.7	1090.8	49.8	29.1	291.3
330	725.0	181.2	-0.919	3.78	267.6	840.4	1161.0	1111.4	50.1	29.3	301.5
340	741.0	183.9	-0.933	3.82	272.9	859.0	1181.2	1131.9	50.3	29.6	311.5
350	756.7	186.6	-0.946	3.85	278.2	877.4	1201.3	1152.2	50.6	29.8	321.5
360	772.4	189.3	-0.959	3.89	283.5	895.7	1221.4	1172.4	50.9	30.0	331.4
370	787.8	192.0	-0.972	3.93	288.9	913.9	1241.3	1192.3	51.1	30.2	341.0
380	803.2	194.6	-0.984	3.96	294.2	931.9	1261.0	1212.1	51.4	30.4	350.5
390	818.4	197.3	-0.997	4.00	299.5	949.8	1280.6	1231.7	51.6	30.5	359.8
400	833.6	199.9	-1.008	4.03	304.7	967.6	1300.0	1251.1	51.8	30.7	368.9

B in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	32.4	17.0	0.387	2.72	21.4	27.1	97.4	84.7	14.5	5.2	4.3
15	45.2	23.0	0.287	2.49	29.0	39.4	124.6	113.7	18.1	7.3	7.4
20	57.6	28.6	0.209	2.38	35.9	52.0	150.2	140.3	21.1	9.1	10.4
25	69.9	33.9	0.145	2.32	42.5	65.2	175.9	165.2	23.6	10.6	13.6
30	82.3	38.9	0.090	2.30	48.7	79.0	201.7	188.9	25.8	12.1	17.1
35	94.7	43.6	0.042	2.29	54.7	93.1	225.5	211.5	27.7	13.4	20.7
40	106.9	48.1	-0.001	2.29	60.4	107.3	245.8	233.2	29.4	14.6	24.5
45	118.9	52.3	-0.040	2.30	65.7	121.3	261.6	254.0	31.0	15.8	28.3
50	130.6	56.3	-0.076	2.32	70.8	134.8	272.6	273.9	32.4	16.9	32.2
55	141.9	60.1	-0.108	2.34	75.6	147.9	279.5	293.1	33.8	17.9	36.2
60	153.0	63.7	-0.139	2.36	80.2	160.6	285.6	311.6	35.1	18.9	40.2
65	163.9	67.2	-0.168	2.38	84.8	173.4	293.2	329.6	36.3	19.9	44.3
70	174.7	70.6	-0.194	2.41	89.3	186.2	304.3	347.2	37.4	20.7	48.4
75	185.4	73.8	-0.220	2.43	93.9	199.4	320.0	364.4	38.4	21.5	52.6
80	196.1	77.0	-0.244	2.46	98.5	212.9	341.1	381.4	39.3	22.3	56.8
85	206.8	80.1	-0.266	2.49	103.2	226.6	366.1	398.0	40.2	23.1	61.1
90	217.3	83.1	-0.288	2.51	107.7	240.4	393.6	414.3	40.9	23.8	65.4
95	227.9	85.9	-0.309	2.54	112.0	254.0	422.0	430.3	41.6	24.4	69.8
100	238.4	88.7	-0.329	2.57	116.1	267.3	450.0	446.0	42.2	25.0	74.2
110	259.1	93.8	-0.366	2.62	123.3	292.7	501.4	476.5	43.3	26.1	83.1
120	279.6	98.6	-0.400	2.68	129.9	316.7	547.0	506.0	44.2	27.2	92.1
130	299.6	103.1	-0.433	2.73	136.0	339.7	587.9	534.5	45.1	28.1	101.1
140	319.2	107.6	-0.463	2.78	141.9	362.1	625.3	562.1	46.0	29.0	110.3
150	338.2	111.9	-0.492	2.84	148.0	384.1	660.0	588.8	46.8	29.9	119.5
160	356.8	116.2	-0.519	2.89	154.3	406.0	692.8	614.6	47.7	30.7	128.7
170	374.8	120.4	-0.544	2.94	160.6	427.5	723.4	639.7	48.6	31.5	137.9
180	392.4	124.4	-0.568	2.98	166.8	448.5	751.6	664.0	49.4	32.3	147.2
190	409.6	128.1	-0.592	3.03	172.9	469.0	777.2	687.5	50.2	33.0	156.4
200	426.5	131.6	-0.614	3.08	178.7	488.7	800.0	710.3	50.9	33.7	165.7
210	443.0	134.8	-0.635	3.12	184.2	507.6	820.1	732.4	51.6	34.3	174.9
220	459.3	137.7	-0.656	3.17	189.4	525.9	837.9	753.8	52.1	34.9	184.1
230	475.2	140.5	-0.675	3.21	194.3	543.7	854.0	774.7	52.6	35.5	193.4
240	491.0	143.0	-0.694	3.25	199.1	561.1	868.9	795.1	53.1	36.0	202.8
250	506.5	145.4	-0.713	3.30	203.7	578.1	882.9	815.1	53.5	36.5	212.2
260	521.7	147.7	-0.730	3.34	208.1	594.9	896.4	834.7	53.9	37.0	221.7
270	536.8	149.9	-0.748	3.38	212.5	611.6	909.7	853.9	54.3	37.4	231.3
280	551.7	152.1	-0.764	3.42	216.7	628.2	922.9	872.9	54.6	37.9	241.1
290	566.4	154.2	-0.780	3.46	221.0	644.8	936.3	891.6	54.9	38.3	250.9
300	581.0	156.3	-0.796	3.50	225.1	661.5	950.0	910.1	55.2	38.7	260.8
310	595.4	158.4	-0.811	3.53	229.3	678.2	964.2	928.3	55.4	39.0	270.8
320	609.7	160.5	-0.826	3.57	233.5	695.1	978.8	946.4	55.6	39.4	280.8
330	623.8	162.5	-0.840	3.61	237.6	712.0	993.6	964.3	55.8	39.7	290.8
340	637.8	164.6	-0.854	3.64	241.7	728.9	1008.7	982.0	56.1	40.1	300.8
350	651.7	166.6	-0.868	3.68	245.7	745.9	1023.9	999.5	56.2	40.4	310.6
360	665.4	168.6	-0.881	3.71	249.8	762.9	1039.2	1016.9	56.4	40.7	320.4
370	679.1	170.6	-0.894	3.75	253.8	779.8	1054.5	1034.0	56.6	41.0	329.9
380	692.7	172.5	-0.907	3.78	257.7	796.7	1069.8	1051.0	56.8	41.3	339.3
390	706.1	174.5	-0.920	3.81	261.7	813.5	1085.0	1067.8	56.9	41.6	348.5
400	719.5	176.4	-0.932	3.84	265.6	830.3	1100.0	1084.5	57.1	41.9	357.5

C in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	27.4	14.5	0.421	2.81	17.6	22.7	86.3	69.5	12.7	5.4	4.2
15	38.3	19.5	0.328	2.55	24.0	33.5	109.0	93.2	15.9	7.6	7.1
20	48.6	24.1	0.253	2.43	29.9	44.1	130.0	114.7	18.5	9.5	10.0
25	58.6	28.2	0.190	2.36	35.3	54.5	150.6	134.8	20.8	11.2	13.1
30	68.5	32.2	0.136	2.33	40.4	64.8	171.0	153.9	22.9	12.8	16.3
35	78.2	35.9	0.088	2.31	45.2	75.1	190.4	172.0	24.7	14.3	19.8
40	87.8	39.5	0.044	2.31	49.7	85.5	208.1	189.5	26.3	15.8	23.4
45	97.3	43.1	0.005	2.32	54.0	96.2	223.5	206.4	27.8	17.1	27.1
50	106.7	46.6	-0.031	2.33	58.0	107.2	236.5	222.8	29.3	18.3	30.9
55	116.1	50.0	-0.065	2.34	61.9	118.5	247.5	238.8	30.6	19.4	34.8
60	125.4	53.4	-0.096	2.36	65.7	129.9	257.8	254.3	31.8	20.5	38.7
65	134.5	56.6	-0.126	2.38	69.4	141.3	269.0	269.5	32.9	21.5	42.7
70	143.6	59.7	-0.153	2.41	73.0	152.4	282.0	284.2	33.9	22.5	46.7
75	152.4	62.5	-0.180	2.43	76.7	163.2	297.5	298.5	34.8	23.4	50.8
80	161.2	65.2	-0.204	2.45	80.4	173.5	315.9	312.4	35.7	24.3	54.9
85	169.8	67.7	-0.228	2.48	84.2	183.6	336.3	326.0	36.4	25.2	59.1
90	178.3	70.0	-0.251	2.50	87.8	193.6	357.7	339.3	37.2	26.0	63.2
95	186.8	72.4	-0.272	2.53	91.5	203.6	379.2	352.3	37.9	26.8	67.4
100	195.2	74.7	-0.293	2.55	95.0	213.8	400.0	365.1	38.5	27.6	71.7
110	212.1	79.2	-0.332	2.60	101.7	235.0	437.4	390.2	39.9	29.0	80.2
120	228.8	83.7	-0.369	2.66	108.0	256.6	470.1	414.6	41.2	30.3	88.9
130	245.3	87.9	-0.403	2.71	113.9	278.2	499.1	438.3	42.4	31.5	97.6
140	261.5	92.0	-0.435	2.76	119.4	299.1	525.5	461.2	43.5	32.7	106.5
150	277.4	95.7	-0.465	2.81	124.5	319.0	550.0	483.5	44.5	33.7	115.5
160	293.0	99.2	-0.493	2.85	129.3	337.6	573.4	505.1	45.3	34.7	124.6
170	308.3	102.4	-0.520	2.90	133.9	355.2	595.9	526.1	46.1	35.7	133.7
180	323.2	105.5	-0.546	2.95	138.4	372.0	618.1	546.4	46.7	36.5	142.9
190	337.8	108.4	-0.571	2.99	143.0	388.4	640.0	566.3	47.2	37.4	152.0
200	352.1	111.2	-0.595	3.04	147.6	404.6	662.0	585.7	47.6	38.1	161.2
210	366.2	113.9	-0.618	3.08	152.4	420.7	684.1	604.6	48.0	38.8	170.3
220	380.0	116.6	-0.640	3.12	157.3	436.8	706.0	623.0	48.3	39.5	179.5
230	393.5	119.1	-0.661	3.17	162.2	452.8	727.6	641.1	48.6	40.2	188.6
240	406.8	121.6	-0.681	3.21	167.0	468.6	748.4	658.7	48.9	40.8	197.9
250	420.0	124.1	-0.701	3.25	171.7	484.3	768.4	676.0	49.1	41.4	207.2
260	432.9	126.4	-0.720	3.29	176.3	499.9	787.4	693.0	49.4	41.9	216.6
270	445.6	128.7	-0.738	3.33	180.7	515.2	805.1	709.6	49.7	42.5	226.1
280	458.2	130.9	-0.756	3.37	184.9	530.2	821.5	725.8	50.0	43.0	235.8
290	470.6	133.0	-0.773	3.40	188.8	545.0	836.5	741.8	50.4	43.5	245.5
300	482.9	135.1	-0.790	3.44	192.5	559.5	850.0	757.5	50.7	44.0	255.3
310	495.1	137.1	-0.806	3.48	195.8	573.8	862.0	772.9	51.1	44.5	265.2
320	507.1	139.0	-0.822	3.51	198.9	587.8	872.6	788.0	51.5	44.9	275.2
330	519.1	140.8	-0.838	3.55	201.8	601.5	882.1	802.9	52.0	45.4	285.1
340	530.9	142.6	-0.853	3.58	204.5	615.0	890.6	817.5	52.4	45.8	295.0
350	542.6	144.4	-0.868	3.62	207.0	628.4	898.3	831.9	52.9	46.2	304.8
360	554.2	146.1	-0.882	3.65	209.4	641.5	905.5	846.2	53.3	46.6	314.5
370	565.7	147.8	-0.896	3.68	211.6	654.5	912.1	860.3	53.8	47.0	324.0
380	577.1	149.5	-0.910	3.72	213.8	667.4	918.3	874.1	54.3	47.4	333.3
390	588.5	151.1	-0.924	3.75	215.9	680.2	924.2	887.9	54.7	47.8	342.4
400	599.8	152.7	-0.937	3.78	218.0	692.9	930.0	901.5	55.2	48.2	351.4

C13 in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	27.1	14.5	0.458	2.87	17.4	22.2	88.6	67.7	13.0	5.6	3.9
15	38.0	19.7	0.356	2.62	23.8	32.8	112.9	91.1	16.5	8.0	6.8
20	48.4	24.3	0.277	2.49	29.6	43.2	134.8	112.5	19.5	10.0	9.5
25	58.6	28.6	0.211	2.42	35.0	53.5	155.4	132.6	22.0	11.8	12.5
30	68.7	32.7	0.155	2.38	40.1	63.8	175.2	151.8	24.1	13.6	15.6
35	78.7	36.5	0.106	2.36	44.9	74.2	193.8	170.1	26.1	15.2	18.9
40	88.5	40.1	0.062	2.35	49.5	84.9	210.7	187.8	27.8	16.7	22.4
45	98.2	43.7	0.022	2.35	54.0	95.9	225.9	204.9	29.4	18.1	26.0
50	107.7	47.2	-0.015	2.36	58.2	107.2	239.3	221.5	30.9	19.4	29.7
55	117.1	50.7	-0.048	2.37	62.3	118.9	251.2	237.6	32.4	20.7	33.5
60	126.5	54.0	-0.080	2.38	66.3	130.8	262.7	253.3	33.7	21.9	37.3
65	135.7	57.2	-0.109	2.40	70.2	142.5	274.9	268.6	34.9	23.0	41.2
70	144.8	60.3	-0.136	2.42	74.0	153.9	288.4	283.5	36.1	24.0	45.2
75	153.8	63.2	-0.162	2.44	77.8	164.8	303.8	298.1	37.1	25.1	49.2
80	162.7	65.9	-0.187	2.45	81.5	175.1	321.5	312.2	38.0	26.1	53.2
85	171.6	68.4	-0.210	2.48	85.1	185.0	340.6	326.1	38.9	27.0	57.2
90	180.5	70.9	-0.232	2.50	88.7	194.8	360.5	339.7	39.7	27.9	61.3
95	189.3	73.4	-0.254	2.52	92.2	204.7	380.5	353.0	40.5	28.8	65.5
100	198.1	75.8	-0.274	2.54	95.7	214.9	400.0	366.2	41.4	29.6	69.6
110	215.6	80.8	-0.312	2.58	102.3	236.6	436.0	392.1	43.0	31.1	78.0
120	233.1	85.7	-0.348	2.63	108.6	259.2	468.4	417.2	44.7	32.5	86.6
130	250.2	90.4	-0.381	2.67	114.6	281.9	497.8	441.6	46.2	33.9	95.3
140	267.0	94.8	-0.412	2.71	120.3	303.9	524.9	465.2	47.5	35.1	104.0
150	283.3	98.8	-0.441	2.76	125.7	324.6	550.0	488.1	48.7	36.3	112.9
160	299.1	102.4	-0.469	2.80	130.8	343.6	573.7	510.2	49.6	37.4	121.9
170	314.5	105.6	-0.495	2.84	135.7	361.2	596.3	531.7	50.3	38.5	130.9
180	329.5	108.5	-0.520	2.88	140.3	377.9	618.4	552.5	51.0	39.6	139.9
190	344.3	111.3	-0.544	2.92	144.8	394.1	640.2	572.8	51.6	40.5	148.9
200	358.9	114.0	-0.567	2.96	149.1	410.1	662.0	592.7	52.1	41.4	157.9
210	373.3	116.6	-0.588	3.00	153.3	426.1	684.0	612.2	52.7	42.3	167.0
220	387.6	119.2	-0.609	3.04	157.5	442.2	705.9	631.3	53.2	43.1	176.0
230	401.7	121.7	-0.630	3.07	161.5	458.3	727.4	650.1	53.7	43.8	185.1
240	415.6	124.3	-0.649	3.11	165.6	474.4	748.2	668.4	54.3	44.5	194.2
250	429.3	126.7	-0.668	3.15	169.5	490.4	768.2	686.4	54.8	45.2	203.5
260	442.8	129.2	-0.686	3.18	173.5	506.5	787.2	704.1	55.3	45.8	212.8
270	456.2	131.6	-0.704	3.22	177.4	522.4	805.0	721.4	55.9	46.5	222.2
280	469.3	134.1	-0.721	3.25	181.4	538.3	821.5	738.4	56.4	47.1	231.7
290	482.2	136.5	-0.737	3.28	185.3	554.1	836.5	755.0	56.9	47.6	241.4
300	494.9	138.9	-0.753	3.32	189.3	569.7	850.0	771.3	57.4	48.2	251.1
310	507.4	141.3	-0.769	3.35	193.2	585.3	862.0	787.3	57.9	48.7	260.9
320	519.7	143.7	-0.784	3.38	197.2	600.7	872.6	803.0	58.4	49.3	270.8
330	531.8	146.1	-0.799	3.41	201.2	616.0	882.1	818.5	58.9	49.8	280.7
340	543.8	148.4	-0.813	3.44	205.2	631.2	890.6	833.7	59.4	50.3	290.5
350	555.6	150.8	-0.827	3.47	209.2	646.3	898.4	848.6	59.9	50.8	300.2
360	567.3	153.2	-0.841	3.50	213.1	661.3	905.5	863.4	60.4	51.3	309.8
370	578.9	155.5	-0.854	3.53	217.1	676.2	912.1	877.9	60.9	51.7	319.2
380	590.4	157.8	-0.867	3.56	221.0	691.0	918.3	892.3	61.3	52.2	328.4
390	601.8	160.1	-0.880	3.59	224.9	705.8	924.3	906.6	61.8	52.6	337.5
400	613.1	162.3	-0.893	3.62	228.8	720.5	930.0	920.6	62.2	53.1	346.3

O in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	21.4	11.8	0.523	2.92	13.8	16.8	72.8	51.3	11.7	6.3	3.3
15	29.8	16.1	0.436	2.69	18.6	23.8	92.9	69.3	15.1	9.2	5.6
20	37.8	19.9	0.367	2.56	23.0	30.8	110.8	85.7	18.0	11.7	8.0
25	45.5	23.5	0.308	2.49	27.2	38.3	127.5	101.2	20.5	13.9	10.5
30	53.1	26.8	0.258	2.44	31.2	46.1	143.4	116.0	22.7	16.1	13.2
35	60.7	29.9	0.213	2.42	35.1	54.3	158.7	130.2	24.7	18.2	16.0
40	68.2	32.9	0.172	2.40	38.8	62.7	173.5	144.0	26.6	20.2	19.0
45	75.7	35.8	0.135	2.39	42.4	71.2	188.0	157.5	28.3	22.1	22.1
50	83.2	38.7	0.101	2.39	45.9	79.7	202.2	170.8	29.8	23.9	25.3
55	90.7	41.5	0.070	2.39	49.3	88.1	216.0	183.7	31.4	25.6	28.6
60	98.2	44.3	0.041	2.39	52.6	96.5	229.3	196.5	32.8	27.2	31.9
65	105.7	47.0	0.013	2.40	55.9	105.0	242.1	209.0	34.2	28.7	35.4
70	113.1	49.7	-0.013	2.40	59.1	113.5	254.0	221.3	35.6	30.2	38.8
75	120.5	52.4	-0.037	2.41	62.4	122.2	265.2	233.4	36.9	31.6	42.4
80	127.9	55.0	-0.061	2.42	65.5	131.0	275.6	245.2	38.2	33.0	46.0
85	135.1	57.5	-0.083	2.44	68.7	139.9	285.9	256.8	39.5	34.3	49.7
90	142.3	59.9	-0.104	2.45	71.8	148.8	296.4	268.2	40.8	35.6	53.4
95	149.4	62.3	-0.124	2.46	74.8	157.6	307.7	279.4	41.9	36.8	57.2
100	156.5	64.5	-0.144	2.47	77.8	166.2	320.2	290.4	43.0	38.0	61.0
110	170.5	68.5	-0.181	2.50	83.5	182.8	348.9	311.9	44.7	40.3	68.7
120	184.3	72.3	-0.215	2.53	89.1	198.8	381.1	332.8	46.2	42.5	76.5
130	197.9	75.9	-0.247	2.56	94.3	214.5	414.7	353.2	47.5	44.5	84.5
140	211.5	79.3	-0.277	2.59	99.4	230.2	448.2	373.0	48.8	46.4	92.7
150	225.0	82.8	-0.305	2.62	104.2	246.1	480.0	392.5	50.2	48.3	100.9
160	238.5	86.2	-0.332	2.64	108.8	262.4	509.2	411.5	51.5	50.0	109.2
170	251.9	89.7	-0.358	2.67	113.3	278.8	535.6	430.1	52.9	51.6	117.6
180	265.1	93.1	-0.382	2.70	117.6	295.2	559.4	448.4	54.3	53.1	126.1
190	278.0	96.4	-0.405	2.73	121.9	311.4	580.8	466.3	55.5	54.6	134.6
200	290.8	99.5	-0.428	2.76	126.2	327.1	600.0	483.9	56.6	56.0	143.1
210	303.2	102.6	-0.449	2.78	130.5	342.3	617.1	501.2	57.6	57.3	151.6
220	315.4	105.4	-0.470	2.81	134.8	357.1	632.6	518.1	58.4	58.6	160.2
230	327.3	108.2	-0.489	2.84	139.0	371.4	647.0	534.6	59.2	59.8	168.9
240	338.9	110.8	-0.509	2.86	143.2	385.4	660.6	550.9	59.9	61.0	177.6
250	350.4	113.4	-0.527	2.89	147.2	399.0	673.7	566.8	60.5	62.1	186.4
260	361.6	115.8	-0.545	2.91	151.2	412.4	686.5	582.4	61.1	63.2	195.3
270	372.7	118.2	-0.562	2.94	155.0	425.5	699.4	597.6	61.7	64.2	204.3
280	383.6	120.6	-0.579	2.96	158.7	438.5	712.5	612.5	62.2	65.3	213.4
290	394.3	122.8	-0.596	2.99	162.2	451.3	726.0	627.1	62.7	66.3	222.7
300	404.8	125.0	-0.611	3.01	165.5	464.0	740.0	641.4	63.3	67.3	232.0
310	415.2	127.2	-0.627	3.03	168.7	476.6	754.6	655.3	63.8	68.3	241.4
320	425.5	129.3	-0.642	3.06	171.7	489.2	769.8	669.0	64.3	69.2	250.9
330	435.7	131.3	-0.656	3.08	174.6	501.6	785.4	682.4	64.9	70.2	260.3
340	445.8	133.4	-0.671	3.10	177.4	514.0	801.3	695.5	65.4	71.1	269.7
350	455.7	135.4	-0.685	3.12	180.1	526.3	817.5	708.5	65.9	72.0	279.0
360	465.6	137.3	-0.698	3.14	182.7	538.5	833.9	721.2	66.5	72.9	288.2
370	475.4	139.3	-0.712	3.17	185.3	550.7	850.4	733.8	67.0	73.7	297.2
380	485.1	141.2	-0.725	3.19	187.7	562.8	867.0	746.2	67.5	74.6	306.1
390	494.7	143.0	-0.737	3.21	190.2	574.9	883.5	758.5	68.0	75.4	314.8
400	504.3	144.9	-0.750	3.23	192.6	586.8	900.0	770.6	68.5	76.2	323.2

Al in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	15.1	8.8	0.647	3.21	9.5	11.0	57.6	32.0	10.0	8.3	1.5
15	20.9	11.8	0.605	3.02	12.7	15.7	76.8	43.2	13.3	12.4	2.6
20	26.3	14.6	0.566	2.91	15.7	20.3	93.8	53.7	16.4	16.1	3.7
25	31.7	17.4	0.529	2.83	18.6	24.8	108.9	63.9	19.2	19.7	4.9
30	37.1	20.3	0.496	2.77	21.4	29.2	122.5	74.0	22.0	23.3	6.2
35	42.5	23.1	0.466	2.73	24.3	33.7	135.5	83.9	24.6	26.9	7.7
40	47.9	25.8	0.438	2.70	27.1	38.4	148.2	93.6	27.1	30.3	9.2
45	53.3	28.4	0.412	2.67	29.9	43.2	161.2	103.3	29.6	33.7	10.8
50	58.7	30.8	0.387	2.65	32.8	48.4	174.5	112.8	31.8	37.0	12.4
55	64.1	33.1	0.364	2.63	35.7	53.8	188.3	122.3	34.0	40.3	14.2
60	69.4	35.3	0.342	2.61	38.5	59.4	202.2	131.6	36.2	43.5	15.9
65	74.8	37.5	0.322	2.60	41.4	65.0	215.9	140.9	38.3	46.6	17.8
70	80.2	39.7	0.302	2.59	44.1	70.7	229.0	150.1	40.4	49.6	19.7
75	85.6	42.1	0.283	2.58	46.8	76.3	241.5	159.3	42.5	52.7	21.6
80	91.0	44.5	0.265	2.57	49.4	81.7	253.1	168.4	44.7	55.6	23.6
85	96.4	47.0	0.248	2.57	52.0	87.0	264.1	177.4	46.9	58.6	25.7
90	101.8	49.5	0.231	2.56	54.5	92.4	274.8	186.5	49.0	61.4	27.9
95	107.3	51.9	0.215	2.56	57.0	97.8	285.5	195.5	51.1	64.3	30.0
100	112.9	54.3	0.200	2.55	59.4	103.4	296.4	204.5	53.0	67.0	32.3
110	124.0	58.6	0.170	2.55	64.4	115.2	319.0	222.5	56.6	72.4	36.9
120	135.3	62.7	0.143	2.54	69.4	127.5	342.2	240.4	59.9	77.5	41.7
130	146.6	66.6	0.117	2.54	74.4	140.0	365.8	258.3	63.0	82.5	46.7
140	157.8	70.5	0.092	2.54	79.4	152.6	389.2	276.0	66.0	87.4	51.8
150	168.9	74.5	0.069	2.54	84.4	164.9	412.1	293.5	69.1	92.1	57.1
160	179.9	78.7	0.046	2.54	89.4	176.8	434.4	310.9	72.2	96.7	62.5
170	190.9	83.0	0.025	2.54	94.4	188.4	455.9	328.1	75.4	101.2	68.0
180	201.8	87.2	0.005	2.54	99.4	200.1	476.4	345.1	78.5	105.6	73.6
190	212.7	91.3	-0.015	2.55	104.3	211.9	495.9	362.0	81.4	109.9	79.3
200	223.8	95.2	-0.034	2.55	109.1	224.1	514.4	378.8	84.1	114.0	85.0
210	235.0	98.8	-0.052	2.55	113.9	236.7	531.9	395.5	86.7	118.1	90.8
220	246.3	102.2	-0.069	2.56	118.6	249.8	548.6	412.1	89.0	122.0	96.7
230	257.6	105.4	-0.086	2.56	123.2	263.1	564.6	428.6	91.2	125.8	102.7
240	269.0	108.5	-0.103	2.56	127.7	276.7	580.3	445.0	93.3	129.6	108.9
250	280.5	111.5	-0.119	2.57	132.1	290.4	595.7	461.3	95.3	133.2	115.2
260	291.9	114.5	-0.134	2.57	136.4	304.1	610.9	477.5	97.3	136.8	121.6
270	303.2	117.4	-0.149	2.57	140.6	317.8	626.3	493.5	99.2	140.3	128.2
280	314.5	120.4	-0.163	2.58	144.7	331.4	641.7	509.4	101.2	143.7	135.0
290	325.7	123.4	-0.178	2.58	148.7	344.9	657.4	525.3	103.2	147.0	141.9
300	336.7	126.5	-0.191	2.59	152.6	358.2	673.3	540.9	105.2	150.3	148.9
310	347.7	129.7	-0.205	2.59	156.3	371.1	689.7	556.5	107.2	153.4	156.1
320	358.5	133.0	-0.218	2.60	160.0	383.9	706.4	571.9	109.4	156.6	163.4
330	369.2	136.3	-0.231	2.60	163.6	396.4	723.3	587.3	111.5	159.6	170.7
340	379.9	139.7	-0.243	2.61	167.1	408.7	740.5	602.5	113.7	162.6	178.0
350	390.4	143.1	-0.255	2.61	170.5	420.9	757.8	617.7	115.8	165.5	185.3
360	400.9	146.5	-0.267	2.62	173.9	433.0	775.3	632.7	118.0	168.4	192.5
370	411.4	150.0	-0.279	2.62	177.2	444.9	792.8	647.7	120.2	171.1	199.6
380	421.8	153.5	-0.290	2.62	180.5	456.8	810.3	662.6	122.4	173.8	206.5
390	432.1	157.0	-0.302	2.63	183.7	468.6	827.8	677.5	124.6	176.5	213.4
400	442.5	160.5	-0.313	2.63	186.9	480.4	845.3	692.3	126.7	179.1	220.0

Mg in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	16.2	9.5	0.680	3.18	10.3	11.2	60.3	35.6	10.8	8.1	1.6
15	22.3	12.9	0.623	3.00	14.0	16.0	81.5	48.2	14.4	12.2	2.8
20	28.2	16.0	0.574	2.89	17.4	20.8	100.5	60.0	17.6	15.8	4.0
25	34.1	19.0	0.531	2.81	20.7	25.9	117.8	71.5	20.6	19.2	5.3
30	40.0	21.9	0.492	2.76	24.0	31.3	133.7	83.0	23.5	22.7	6.7
35	46.0	24.7	0.458	2.72	27.2	36.9	148.7	94.2	26.2	26.1	8.3
40	52.0	27.5	0.426	2.68	30.3	42.7	163.0	105.4	28.8	29.4	10.0
45	58.0	30.3	0.397	2.66	33.5	48.6	177.0	116.3	31.3	32.6	11.7
50	63.9	33.0	0.370	2.64	36.5	54.6	190.7	127.1	33.8	35.8	13.5
55	69.9	35.7	0.344	2.62	39.6	60.6	204.3	137.6	36.2	38.9	15.4
60	75.9	38.3	0.320	2.60	42.5	66.6	218.0	148.1	38.5	41.9	17.3
65	81.9	41.0	0.298	2.59	45.5	72.7	231.7	158.4	40.8	44.9	19.3
70	87.9	43.6	0.277	2.58	48.4	78.8	245.5	168.7	43.1	47.8	21.4
75	93.9	46.3	0.256	2.57	51.3	85.0	259.6	179.0	45.3	50.7	23.5
80	100.0	49.0	0.237	2.56	54.1	91.2	274.0	189.3	47.5	53.5	25.7
85	106.1	51.7	0.218	2.56	57.0	97.5	288.3	199.5	49.7	56.2	28.0
90	112.2	54.3	0.201	2.55	59.8	103.8	302.3	209.8	51.9	58.9	30.2
95	118.2	57.0	0.184	2.55	62.6	110.2	315.7	220.0	53.9	61.5	32.6
100	124.2	59.5	0.167	2.54	65.4	116.6	328.5	230.1	55.9	64.1	35.0
110	136.1	64.4	0.136	2.54	71.0	129.5	351.8	250.2	59.7	69.2	39.9
120	147.9	69.1	0.107	2.53	76.6	142.6	373.0	270.0	63.2	74.0	44.9
130	159.7	73.5	0.080	2.53	82.1	155.8	393.3	289.6	66.5	78.7	50.2
140	171.7	77.9	0.054	2.53	87.8	169.3	413.6	309.2	69.7	83.2	55.8
150	183.9	82.1	0.030	2.53	93.4	182.9	434.6	328.6	72.9	87.5	61.5
160	196.5	86.3	0.007	2.53	99.2	196.6	456.5	348.0	75.9	91.7	67.4
170	209.3	90.4	-0.016	2.53	104.9	210.5	478.9	367.3	78.9	95.7	73.4
180	222.1	94.4	-0.037	2.53	110.6	224.5	501.1	386.4	81.8	99.6	79.5
190	234.8	98.4	-0.057	2.53	116.2	238.4	522.7	405.4	84.6	103.4	85.7
200	247.4	102.3	-0.076	2.54	121.8	252.3	543.3	424.3	87.3	107.2	91.9
210	259.8	106.2	-0.095	2.54	127.2	266.0	562.6	442.8	89.8	110.8	98.1
220	271.9	109.9	-0.113	2.54	132.5	279.7	580.6	461.2	92.2	114.4	104.4
230	283.9	113.6	-0.130	2.55	137.7	293.4	597.8	479.4	94.5	117.8	110.7
240	295.7	117.3	-0.147	2.55	142.8	307.0	614.3	497.4	96.7	121.2	117.2
250	307.4	120.8	-0.164	2.55	147.7	320.5	630.3	515.1	98.7	124.5	123.8
260	318.9	124.3	-0.179	2.56	152.5	334.1	646.0	532.7	100.7	127.7	130.6
270	330.4	127.8	-0.195	2.56	157.1	347.8	661.4	550.1	102.6	130.8	137.5
280	341.9	131.1	-0.209	2.56	161.6	361.4	676.8	567.3	104.4	133.8	144.6
290	353.3	134.4	-0.224	2.57	166.0	375.1	692.2	584.3	106.1	136.8	151.9
300	364.8	137.7	-0.238	2.57	170.2	388.9	707.8	601.1	107.8	139.6	159.3
310	376.2	140.9	-0.252	2.58	174.3	402.8	723.6	617.7	109.4	142.4	166.9
320	387.6	144.0	-0.265	2.58	178.3	416.7	739.5	634.2	110.9	145.1	174.6
330	399.1	147.1	-0.278	2.58	182.1	430.7	755.6	650.5	112.4	147.8	182.4
340	410.5	150.1	-0.291	2.59	185.9	444.8	771.8	666.7	113.8	150.3	190.1
350	422.0	153.1	-0.303	2.59	189.6	458.9	788.1	682.7	115.2	152.8	197.8
360	433.5	156.1	-0.315	2.60	193.2	473.1	804.3	698.6	116.6	155.3	205.4
370	444.9	159.0	-0.327	2.60	196.7	487.3	820.6	714.4	117.9	157.6	212.9
380	456.4	161.9	-0.339	2.61	200.2	501.6	836.8	730.2	119.2	159.9	220.3
390	467.8	164.8	-0.350	2.61	203.7	516.0	853.0	745.8	120.5	162.2	227.6
400	479.2	167.6	-0.361	2.61	207.1	530.3	869.1	761.4	121.7	164.4	234.6

Si in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	14.0	8.1	0.687	3.26	8.7	10.0	53.4	29.2	9.3	8.2	1.6
15	19.3	11.0	0.625	3.07	11.6	14.3	71.9	39.4	12.4	12.3	2.7
20	24.4	13.7	0.573	2.96	14.3	18.6	88.5	49.0	15.2	16.0	3.9
25	29.4	16.3	0.529	2.88	17.0	23.1	103.6	58.2	17.7	19.5	5.2
30	34.3	18.7	0.491	2.82	19.6	27.7	117.6	67.2	20.1	23.0	6.5
35	39.2	21.0	0.457	2.77	22.2	32.4	130.7	76.0	22.3	26.5	8.0
40	44.1	23.3	0.425	2.74	24.7	37.0	143.0	84.7	24.4	29.9	9.5
45	48.9	25.5	0.397	2.71	27.3	41.6	154.7	93.2	26.6	33.3	11.2
50	53.7	27.8	0.371	2.68	29.8	45.9	165.9	101.5	28.8	36.6	12.9
55	58.4	30.1	0.346	2.66	32.2	50.1	176.6	109.8	31.0	39.8	14.7
60	63.1	32.4	0.323	2.64	34.7	54.2	187.1	117.9	33.1	42.9	16.5
65	67.9	34.6	0.302	2.63	37.0	58.5	197.3	126.0	35.2	46.0	18.4
70	72.7	36.7	0.281	2.61	39.3	63.0	207.3	134.1	37.2	49.1	20.4
75	77.6	38.8	0.262	2.60	41.6	67.9	217.2	142.2	39.0	52.0	22.4
80	82.5	40.7	0.244	2.59	43.7	73.2	227.0	150.3	40.7	54.9	24.5
85	87.6	42.6	0.226	2.58	45.9	78.8	236.7	158.4	42.2	57.8	26.6
90	92.7	44.5	0.210	2.58	48.0	84.6	246.5	166.4	43.7	60.6	28.8
95	97.8	46.3	0.194	2.57	50.1	90.6	256.2	174.5	45.2	63.3	31.0
100	103.0	48.2	0.178	2.56	52.3	96.5	266.0	182.5	46.7	66.0	33.3
110	113.2	52.0	0.149	2.55	56.7	108.1	285.8	198.5	49.7	71.3	38.0
120	123.3	55.8	0.122	2.54	61.2	119.2	305.5	214.2	52.8	76.3	42.9
130	133.3	59.7	0.097	2.54	65.6	130.0	325.1	229.7	55.9	81.3	47.9
140	143.2	63.5	0.073	2.53	70.1	140.5	344.5	245.0	59.0	86.1	53.1
150	152.9	67.2	0.050	2.53	74.4	150.7	363.5	260.1	61.9	90.8	58.4
160	162.4	70.9	0.029	2.53	78.6	160.8	382.0	275.0	64.8	95.5	63.8
170	171.9	74.5	0.008	2.52	82.7	170.8	400.1	289.7	67.6	100.0	69.3
180	181.3	78.0	-0.011	2.52	86.7	180.9	417.4	304.2	70.2	104.4	74.8
190	190.8	81.4	-0.030	2.52	90.6	191.4	434.1	318.7	72.8	108.7	80.5
200	200.4	84.7	-0.048	2.52	94.4	202.3	450.0	333.2	75.2	112.8	86.3
210	210.2	87.9	-0.065	2.52	98.2	213.6	465.1	347.6	77.4	116.8	92.2
220	220.1	91.1	-0.082	2.52	101.9	225.4	479.6	362.1	79.6	120.6	98.2
230	230.1	94.3	-0.098	2.52	105.6	237.5	493.6	376.5	81.7	124.4	104.3
240	240.0	97.3	-0.113	2.52	109.2	249.8	507.3	390.8	83.7	128.0	110.5
250	250.0	100.3	-0.128	2.52	112.8	262.1	520.8	405.0	85.7	131.6	116.9
260	260.0	103.3	-0.142	2.53	116.4	274.4	534.2	419.2	87.5	135.1	123.4
270	269.8	106.2	-0.156	2.53	120.0	286.6	547.5	433.2	89.4	138.5	130.1
280	279.6	109.1	-0.170	2.53	123.6	298.6	561.0	447.1	91.2	141.9	136.8
290	289.2	112.0	-0.183	2.53	127.1	310.2	574.6	460.8	92.9	145.3	143.7
300	298.7	114.8	-0.196	2.53	130.7	321.5	588.4	474.4	94.7	148.6	150.7
310	308.0	117.6	-0.208	2.53	134.3	332.4	602.5	487.8	96.4	151.8	157.9
320	317.1	120.3	-0.221	2.54	137.9	342.9	616.7	501.0	98.1	155.0	165.1
330	326.1	123.1	-0.232	2.54	141.6	353.0	631.2	514.1	99.7	158.2	172.3
340	335.0	125.8	-0.244	2.54	145.2	362.8	645.8	527.1	101.4	161.3	179.5
350	343.8	128.5	-0.255	2.54	148.8	372.4	660.4	540.0	103.0	164.3	186.6
360	352.5	131.1	-0.266	2.55	152.4	381.7	675.2	552.7	104.6	167.3	193.7
370	361.1	133.7	-0.277	2.55	156.0	390.9	689.9	565.4	106.2	170.2	200.6
380	369.6	136.4	-0.287	2.55	159.6	399.9	704.7	578.0	107.8	173.0	207.4
390	378.1	139.0	-0.298	2.55	163.2	408.9	719.5	590.5	109.4	175.8	214.1
400	386.6	141.5	-0.308	2.56	166.8	417.8	734.1	603.0	110.9	178.5	220.6

P in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	13.0	7.3	0.607	3.15	7.5	9.8	48.3	25.3	8.1	7.9	1.9
15	17.6	9.7	0.557	2.96	10.1	13.7	61.7	34.0	10.7	11.9	3.3
20	22.1	11.9	0.513	2.84	12.6	17.5	73.8	42.0	13.0	15.3	4.6
25	26.4	14.1	0.473	2.77	14.8	21.3	85.3	49.7	15.1	18.7	6.0
30	30.6	16.1	0.437	2.71	16.9	25.0	96.6	57.0	17.1	22.1	7.6
35	34.8	18.2	0.404	2.67	19.0	28.9	107.5	64.2	19.0	25.4	9.3
40	39.1	20.1	0.374	2.64	20.9	32.8	118.1	71.3	20.8	28.6	11.0
45	43.3	22.0	0.346	2.61	22.9	36.9	128.2	78.2	22.6	31.7	12.9
50	47.4	23.8	0.320	2.59	24.8	41.0	138.0	85.0	24.2	34.8	14.8
55	51.6	25.6	0.296	2.58	26.7	45.3	147.4	91.8	25.8	37.8	16.8
60	55.8	27.3	0.273	2.56	28.5	49.7	156.4	98.5	27.3	40.7	18.9
65	59.9	29.0	0.251	2.55	30.4	54.0	165.1	105.2	28.8	43.6	21.0
70	64.0	30.7	0.230	2.55	32.2	58.4	173.6	111.7	30.3	46.4	23.2
75	68.0	32.4	0.210	2.54	34.1	62.8	181.7	118.2	31.7	49.2	25.4
80	72.0	34.1	0.191	2.53	35.9	67.1	189.6	124.6	33.2	51.9	27.7
85	76.0	35.8	0.173	2.53	37.7	71.4	197.4	130.9	34.6	54.6	30.0
90	80.0	37.5	0.156	2.53	39.5	75.6	204.9	137.2	36.0	57.2	32.3
95	84.0	39.2	0.139	2.52	41.3	79.9	212.4	143.4	37.4	59.8	34.8
100	87.9	40.8	0.123	2.52	43.0	84.1	219.8	149.6	38.7	62.3	37.2
110	96.0	43.9	0.093	2.52	46.5	92.7	234.5	161.9	41.2	67.3	42.2
120	104.1	46.7	0.064	2.52	49.9	101.5	249.0	174.2	43.5	72.0	47.5
130	112.2	49.5	0.037	2.52	53.2	110.5	263.5	186.4	45.6	76.6	52.9
140	120.5	52.2	0.012	2.52	56.4	119.7	277.8	198.5	47.7	81.0	58.5
150	128.8	54.9	-0.013	2.53	59.5	129.1	292.0	210.6	49.6	85.2	64.4
160	137.2	57.5	-0.036	2.53	62.6	138.9	306.1	222.5	51.5	89.2	70.4
170	145.6	60.2	-0.058	2.54	65.6	148.8	320.1	234.4	53.3	93.1	76.5
180	153.9	62.8	-0.079	2.54	68.6	158.6	333.9	246.1	55.1	97.0	82.6
190	162.1	65.4	-0.099	2.55	71.6	168.3	347.5	257.6	56.9	100.8	88.8
200	170.2	67.9	-0.118	2.55	74.6	177.7	360.9	268.9	58.7	104.6	94.9
210	178.0	70.5	-0.137	2.56	77.5	186.6	374.1	279.9	60.5	108.3	101.0
220	185.6	72.9	-0.155	2.57	80.5	195.3	387.0	290.8	62.3	112.0	107.1
230	193.1	75.3	-0.172	2.57	83.5	203.7	399.6	301.5	64.1	115.7	113.2
240	200.5	77.7	-0.189	2.58	86.4	211.9	411.9	312.0	65.9	119.3	119.5
250	207.8	80.1	-0.205	2.59	89.3	220.0	423.9	322.4	67.6	122.8	125.9
260	215.1	82.4	-0.221	2.59	92.2	228.1	435.6	332.7	69.3	126.2	132.5
270	222.3	84.6	-0.236	2.60	95.0	236.3	446.9	343.0	70.9	129.5	139.2
280	229.6	86.8	-0.251	2.61	97.8	244.5	457.9	353.2	72.4	132.7	146.2
290	236.9	89.0	-0.266	2.61	100.5	252.8	468.5	363.4	73.9	135.8	153.3
300	244.3	91.1	-0.280	2.62	103.2	261.4	478.7	373.5	75.3	138.8	160.6
310	251.7	93.2	-0.293	2.63	105.8	270.1	488.6	383.7	76.6	141.7	168.1
320	259.2	95.2	-0.307	2.63	108.4	279.0	498.2	393.8	77.8	144.5	175.8
330	266.8	97.2	-0.320	2.64	110.9	288.2	507.5	403.9	79.0	147.2	183.5
340	274.4	99.1	-0.333	2.65	113.4	297.4	516.5	414.0	80.2	149.8	191.2
350	282.0	101.1	-0.345	2.65	115.8	306.8	525.3	424.1	81.3	152.4	198.8
360	289.7	103.0	-0.357	2.66	118.3	316.3	533.9	434.2	82.3	154.8	206.5
370	297.3	104.9	-0.369	2.67	120.7	325.9	542.4	444.2	83.4	157.2	214.0
380	305.0	106.7	-0.381	2.67	123.0	335.6	550.7	454.2	84.4	159.6	221.4
390	312.7	108.6	-0.392	2.68	125.4	345.4	558.9	464.2	85.4	161.9	228.6
400	320.4	110.4	-0.403	2.69	127.7	355.1	566.9	474.2	86.3	164.1	235.7

Ar in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	11.3	6.4	0.640	3.26	6.3	8.6	43.8	20.4	7.2	8.4	1.5
15	15.3	8.6	0.602	3.10	8.3	11.7	56.8	27.2	9.5	12.7	2.5
20	19.0	10.5	0.567	2.99	10.2	14.8	68.3	33.5	11.6	16.5	3.5
25	22.6	12.3	0.534	2.92	12.0	17.9	78.9	39.5	13.6	20.3	4.6
30	26.2	14.0	0.503	2.86	13.8	21.0	88.8	45.3	15.5	24.0	5.7
35	29.7	15.7	0.475	2.82	15.5	24.1	98.2	51.0	17.3	27.8	6.9
40	33.3	17.4	0.449	2.79	17.2	27.3	107.3	56.6	19.1	31.5	8.3
45	36.8	19.1	0.425	2.76	18.8	30.5	116.2	62.1	20.9	35.1	9.7
50	40.3	20.7	0.402	2.74	20.4	33.8	124.9	67.6	22.6	38.6	11.1
55	43.7	22.4	0.381	2.71	21.9	37.1	133.5	73.1	24.2	42.1	12.7
60	47.2	24.0	0.361	2.70	23.4	40.4	142.0	78.6	25.8	45.5	14.2
65	50.7	25.6	0.341	2.68	24.9	43.9	150.3	84.0	27.4	48.9	15.9
70	54.3	27.1	0.323	2.67	26.4	47.4	158.6	89.4	28.9	52.2	17.6
75	57.8	28.6	0.305	2.66	27.9	51.0	166.7	94.8	30.3	55.4	19.3
80	61.4	30.0	0.288	2.65	29.3	54.7	174.7	100.1	31.6	58.6	21.1
85	65.0	31.4	0.272	2.64	30.8	58.5	182.5	105.4	32.9	61.8	22.9
90	68.6	32.8	0.257	2.63	32.2	62.3	190.3	110.7	34.2	64.9	24.8
95	72.2	34.1	0.242	2.62	33.7	66.2	197.9	115.9	35.4	68.0	26.7
100	75.8	35.4	0.227	2.62	35.1	70.0	205.5	121.2	36.6	71.1	28.7
110	82.9	38.0	0.200	2.60	38.0	77.6	220.5	131.5	38.9	77.0	32.7
120	89.9	40.6	0.174	2.60	40.8	85.1	235.0	141.8	41.2	82.8	36.9
130	96.8	43.2	0.149	2.59	43.7	92.6	248.9	152.0	43.5	88.5	41.2
140	103.7	45.8	0.126	2.58	46.5	100.0	262.2	162.0	45.8	94.1	45.6
150	110.5	48.4	0.104	2.58	49.3	107.4	274.8	172.0	48.1	99.6	50.1
160	117.2	51.0	0.083	2.57	52.1	114.7	286.7	181.8	50.4	105.0	54.7
170	123.8	53.5	0.063	2.57	54.8	122.1	298.3	191.5	52.6	110.4	59.4
180	130.5	56.1	0.044	2.57	57.5	129.4	309.7	201.2	54.9	115.6	64.2
190	137.1	58.6	0.026	2.56	60.2	136.7	321.4	210.7	57.0	120.7	69.1
200	143.8	61.1	0.008	2.56	62.8	143.9	333.5	220.3	59.1	125.7	74.0
210	150.5	63.5	-0.009	2.56	65.3	151.0	346.1	229.8	61.1	130.5	79.0
220	157.3	65.8	-0.025	2.56	67.8	158.1	359.1	239.3	63.0	135.3	84.0
230	164.1	68.1	-0.041	2.56	70.2	165.2	372.2	248.7	64.9	139.9	89.2
240	170.9	70.4	-0.057	2.56	72.6	172.3	385.4	258.2	66.7	144.5	94.5
250	177.7	72.6	-0.072	2.56	75.0	179.4	398.4	267.5	68.5	148.9	100.0
260	184.6	74.8	-0.086	2.56	77.4	186.7	411.0	276.9	70.2	153.3	105.6
270	191.4	76.9	-0.100	2.56	79.7	194.0	423.3	286.2	71.8	157.7	111.3
280	198.3	79.0	-0.114	2.56	82.1	201.5	435.1	295.5	73.5	161.9	117.2
290	205.1	81.1	-0.127	2.56	84.5	209.1	446.3	304.8	75.1	166.2	123.2
300	212.0	83.1	-0.140	2.56	87.0	216.8	456.7	314.0	76.7	170.3	129.4
310	218.8	85.1	-0.153	2.56	89.4	224.8	466.4	323.3	78.3	174.4	135.7
320	225.6	87.1	-0.165	2.56	91.9	232.9	475.5	332.4	79.8	178.4	142.0
330	232.4	89.1	-0.177	2.56	94.4	241.1	484.0	341.6	81.3	182.4	148.5
340	239.2	91.0	-0.189	2.56	96.9	249.5	492.0	350.7	82.9	186.3	154.9
350	246.0	92.9	-0.201	2.56	99.4	258.1	499.6	359.8	84.3	190.1	161.2
360	252.8	94.8	-0.212	2.57	102.0	266.7	506.8	368.9	85.8	193.8	167.5
370	259.6	96.6	-0.223	2.57	104.5	275.4	513.8	377.9	87.3	197.5	173.8
380	266.4	98.5	-0.234	2.57	107.1	284.2	520.5	386.9	88.7	201.1	179.9
390	273.1	100.3	-0.244	2.57	109.6	293.0	527.1	395.9	90.2	204.6	185.9
400	279.9	102.1	-0.255	2.57	112.1	301.9	533.5	404.9	91.6	208.0	191.7

Cr in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	9.6	5.4	0.675	3.33	5.0	7.2	37.8	15.9	6.2	9.0	1.0
15	12.8	7.2	0.647	3.23	6.6	9.5	47.4	21.1	8.2	13.7	1.6
20	15.7	8.8	0.619	3.16	8.1	11.8	56.9	25.8	10.0	17.9	2.2
25	18.6	10.3	0.594	3.10	9.4	14.1	67.0	30.3	11.6	22.0	2.9
30	21.5	11.8	0.571	3.06	10.7	16.6	77.9	34.7	13.2	26.2	3.6
35	24.4	13.2	0.550	3.03	12.0	19.2	88.8	39.0	14.8	30.4	4.4
40	27.2	14.6	0.530	2.99	13.2	21.8	99.1	43.2	16.3	34.6	5.3
45	30.0	16.0	0.512	2.97	14.4	24.4	108.3	47.3	17.8	38.7	6.1
50	32.7	17.3	0.494	2.94	15.6	27.0	116.2	51.5	19.2	42.8	7.1
55	35.5	18.5	0.478	2.92	16.9	29.6	122.8	55.6	20.6	46.9	8.0
60	38.1	19.7	0.462	2.90	18.1	32.2	128.7	59.7	22.0	50.9	9.0
65	40.8	20.9	0.447	2.89	19.4	34.7	134.5	63.7	23.4	54.9	10.0
70	43.5	22.2	0.433	2.87	20.6	37.2	140.6	67.8	24.8	58.8	11.0
75	46.2	23.4	0.420	2.85	21.8	39.6	147.3	71.8	26.1	62.7	12.1
80	48.9	24.7	0.407	2.84	23.0	42.0	154.9	75.8	27.4	66.6	13.2
85	51.7	26.0	0.395	2.83	24.2	44.4	162.8	79.8	28.8	70.5	14.4
90	54.4	27.2	0.383	2.82	25.3	46.9	170.8	83.8	30.0	74.3	15.6
95	57.2	28.4	0.371	2.80	26.5	49.5	178.4	87.8	31.3	78.1	16.8
100	60.0	29.6	0.360	2.79	27.6	52.1	185.5	91.8	32.5	81.8	18.1
110	65.7	31.9	0.339	2.77	29.9	57.8	197.4	99.9	34.8	89.2	20.6
120	71.4	34.1	0.319	2.75	32.2	63.8	207.6	108.1	37.0	96.5	23.4
130	77.1	36.2	0.301	2.74	34.5	70.0	217.4	116.1	39.1	103.7	26.1
140	82.7	38.4	0.283	2.72	36.7	76.0	227.7	124.1	41.3	110.8	29.0
150	88.3	40.5	0.266	2.71	39.0	81.8	239.2	132.0	43.5	117.9	32.0
160	93.7	42.7	0.250	2.70	41.2	87.4	252.4	139.7	45.9	124.9	35.0
170	99.1	45.0	0.235	2.68	43.4	92.7	266.8	147.3	48.2	131.9	38.1
180	104.4	47.3	0.220	2.67	45.6	97.9	281.6	154.8	50.6	138.7	41.2
190	109.9	49.6	0.206	2.66	47.8	103.1	296.4	162.4	53.0	145.5	44.4
200	115.3	52.0	0.193	2.65	50.0	108.5	310.6	170.0	55.3	152.1	47.7
210	120.9	54.3	0.180	2.64	52.2	114.1	323.9	177.8	57.6	158.6	51.0
220	126.6	56.7	0.167	2.63	54.4	119.8	336.4	185.6	59.9	165.0	54.5
230	132.4	59.1	0.155	2.62	56.6	125.7	348.2	193.4	62.1	171.3	58.0
240	138.2	61.4	0.143	2.61	58.8	131.7	359.5	201.3	64.2	177.5	61.6
250	144.0	63.7	0.132	2.61	61.0	137.8	370.4	209.3	66.3	183.7	65.3
260	149.8	66.0	0.120	2.60	63.1	143.9	381.0	217.2	68.3	189.9	69.2
270	155.6	68.2	0.110	2.59	65.3	150.1	391.4	225.1	70.4	196.0	73.1
280	161.4	70.3	0.099	2.58	67.5	156.2	401.6	233.0	72.3	202.1	77.2
290	167.2	72.4	0.089	2.58	69.6	162.4	411.8	240.8	74.3	208.2	81.3
300	172.9	74.5	0.079	2.57	71.7	168.4	422.0	248.6	76.1	214.2	85.6
310	178.6	76.4	0.069	2.56	73.8	174.4	432.4	256.2	78.0	220.2	90.0
320	184.2	78.3	0.060	2.56	75.9	180.4	442.7	263.9	79.8	226.2	94.4
330	189.7	80.1	0.051	2.55	77.9	186.3	453.1	271.4	81.6	232.2	98.8
340	195.3	81.9	0.042	2.55	80.0	192.1	463.6	279.0	83.4	238.0	103.3
350	200.7	83.7	0.033	2.54	82.0	197.9	474.0	286.4	85.1	243.8	107.7
360	206.2	85.4	0.024	2.54	84.1	203.7	484.5	293.9	86.9	249.5	112.1
370	211.6	87.0	0.016	2.53	86.1	209.4	495.0	301.2	88.6	255.0	116.4
380	217.0	88.7	0.007	2.53	88.1	215.1	505.4	308.6	90.2	260.5	120.6
390	222.4	90.3	-0.001	2.52	90.1	220.9	515.8	315.9	91.9	265.8	124.8
400	227.7	91.9	-0.009	2.52	92.1	226.6	526.1	323.3	93.6	271.0	128.9

Zn in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	8.5	4.7	0.658	3.30	4.2	6.4	33.0	13.0	5.4	9.3	0.7
15	11.2	6.1	0.642	3.24	5.4	8.6	41.4	17.1	7.1	14.1	1.2
20	13.8	7.4	0.624	3.19	6.5	10.7	49.2	20.9	8.5	18.5	1.6
25	16.2	8.7	0.607	3.16	7.6	12.7	57.1	24.5	10.0	22.8	2.1
30	18.6	9.9	0.591	3.13	8.7	14.8	65.2	28.0	11.3	27.2	2.7
35	21.0	11.1	0.575	3.10	9.7	16.8	73.4	31.5	12.7	31.6	3.2
40	23.3	12.3	0.561	3.08	10.7	18.9	81.5	34.9	13.9	36.0	3.9
45	25.6	13.4	0.547	3.06	11.7	20.9	89.4	38.2	15.2	40.5	4.5
50	27.9	14.5	0.534	3.04	12.6	22.9	97.1	41.4	16.4	44.8	5.1
55	30.1	15.6	0.522	3.03	13.5	24.8	104.5	44.5	17.6	49.2	5.8
60	32.2	16.6	0.510	3.01	14.4	26.7	111.7	47.5	18.8	53.5	6.5
65	34.4	17.6	0.499	3.00	15.3	28.7	118.5	50.6	19.9	57.8	7.2
70	36.6	18.6	0.488	2.99	16.2	30.6	125.0	53.6	21.1	62.0	7.9
75	38.8	19.6	0.478	2.97	17.0	32.7	131.1	56.7	22.2	66.3	8.7
80	41.0	20.6	0.468	2.96	17.9	34.7	137.0	59.8	23.3	70.5	9.5
85	43.2	21.5	0.459	2.95	18.9	36.8	142.7	63.0	24.4	74.7	10.3
90	45.5	22.5	0.450	2.94	19.8	39.0	148.4	66.1	25.5	78.8	11.1
95	47.7	23.5	0.441	2.93	20.7	41.1	154.2	69.2	26.6	83.0	12.0
100	49.9	24.5	0.432	2.92	21.6	43.2	160.3	72.3	27.6	87.1	12.8
110	54.3	26.4	0.416	2.91	23.3	47.3	173.5	78.4	29.7	95.3	14.6
120	58.6	28.3	0.401	2.89	25.0	51.3	187.3	84.5	31.6	103.5	16.4
130	62.9	30.3	0.386	2.88	26.7	55.3	201.3	90.4	33.5	111.6	18.3
140	67.3	32.2	0.372	2.86	28.4	59.3	214.9	96.4	35.4	119.6	20.3
150	71.7	34.1	0.359	2.85	30.1	63.5	227.9	102.5	37.4	127.5	22.4
160	76.2	36.0	0.347	2.84	31.9	67.8	239.9	108.6	39.3	135.4	24.6
170	80.7	37.9	0.335	2.83	33.6	72.1	251.0	114.7	41.3	143.2	26.8
180	85.3	39.8	0.323	2.82	35.4	76.6	261.6	120.9	43.3	150.9	29.2
190	89.8	41.7	0.312	2.81	37.2	81.0	271.6	127.0	45.3	158.5	31.5
200	94.4	43.6	0.301	2.80	38.9	85.5	281.3	133.1	47.3	166.1	33.8
210	98.9	45.4	0.291	2.79	40.6	90.0	290.8	139.2	49.3	173.6	36.2
220	103.4	47.2	0.281	2.78	42.2	94.5	300.1	145.2	51.2	181.1	38.5
230	107.9	49.0	0.271	2.77	43.9	99.0	309.4	151.2	53.1	188.5	41.0
240	112.4	50.7	0.262	2.76	45.5	103.4	318.6	157.2	55.0	195.8	43.5
250	116.9	52.5	0.253	2.75	47.1	108.0	327.8	163.1	56.9	203.2	46.1
260	121.5	54.3	0.244	2.75	48.8	112.5	337.1	169.1	58.7	210.5	48.7
270	126.0	56.0	0.235	2.74	50.4	117.1	346.5	175.1	60.6	217.8	51.5
280	130.5	57.8	0.227	2.73	52.0	121.7	356.0	181.1	62.4	225.0	54.4
290	135.1	59.6	0.219	2.72	53.7	126.4	365.7	187.1	64.2	232.3	57.3
300	139.7	61.3	0.211	2.72	55.4	131.1	375.5	193.2	66.0	239.5	60.4
310	144.4	63.1	0.203	2.71	57.0	135.9	385.5	199.3	67.9	246.7	63.6
320	149.0	64.9	0.196	2.70	58.8	140.7	395.7	205.5	69.7	253.9	66.8
330	153.7	66.7	0.188	2.70	60.5	145.6	406.0	211.7	71.5	261.0	70.1
340	158.4	68.5	0.181	2.69	62.3	150.5	416.5	217.9	73.3	268.0	73.4
350	163.2	70.3	0.174	2.69	64.0	155.4	427.0	224.1	75.1	274.9	76.6
360	167.9	72.1	0.167	2.68	65.8	160.4	437.6	230.4	76.9	281.7	79.9
370	172.7	73.9	0.160	2.68	67.6	165.4	448.2	236.6	78.6	288.3	83.1
380	177.5	75.7	0.154	2.67	69.4	170.5	458.9	242.9	80.4	294.9	86.3
390	182.3	77.5	0.147	2.67	71.2	175.5	469.6	249.2	82.2	301.2	89.4
400	187.1	79.3	0.141	2.66	73.0	180.6	480.2	255.5	84.0	307.5	92.4

Ge in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	8.3	4.5	0.676	3.36	3.9	6.4	32.1	12.3	5.2	9.5	0.5
15	11.0	5.9	0.664	3.32	5.0	8.6	41.2	16.2	6.8	14.4	0.9
20	13.5	7.2	0.649	3.29	6.1	10.6	49.7	19.8	8.3	18.9	1.2
25	15.8	8.4	0.635	3.26	7.1	12.5	58.2	23.2	9.6	23.4	1.6
30	18.1	9.6	0.621	3.24	8.2	14.4	66.7	26.4	10.9	27.9	2.0
35	20.3	10.7	0.608	3.21	9.1	16.1	75.0	29.6	12.1	32.5	2.4
40	22.5	11.8	0.595	3.19	10.1	17.9	82.7	32.7	13.3	37.1	2.8
45	24.7	12.8	0.583	3.18	11.0	19.7	89.8	35.7	14.5	41.7	3.3
50	26.8	13.8	0.571	3.16	11.9	21.5	96.0	38.7	15.7	46.2	3.8
55	28.9	14.9	0.560	3.14	12.8	23.4	101.6	41.7	16.9	50.7	4.2
60	31.0	15.9	0.550	3.13	13.6	25.3	106.9	44.6	18.0	55.2	4.8
65	33.1	16.9	0.540	3.11	14.4	27.2	112.4	47.5	19.2	59.7	5.3
70	35.2	17.8	0.530	3.10	15.2	29.1	118.4	50.4	20.3	64.1	5.8
75	37.3	18.8	0.521	3.08	16.1	30.9	125.2	53.3	21.4	68.6	6.4
80	39.4	19.8	0.512	3.07	16.9	32.8	132.8	56.2	22.5	73.0	7.0
85	41.5	20.7	0.503	3.06	17.8	34.6	141.0	59.1	23.5	77.4	7.6
90	43.6	21.7	0.495	3.05	18.7	36.5	149.4	62.0	24.6	81.8	8.2
95	45.6	22.6	0.487	3.04	19.5	38.3	157.7	64.8	25.6	86.2	8.8
100	47.7	23.5	0.479	3.02	20.4	40.2	165.6	67.7	26.6	90.6	9.4
110	51.8	25.4	0.465	3.00	22.0	44.1	179.6	73.3	28.6	99.2	10.7
120	55.9	27.2	0.450	2.98	23.7	48.0	191.6	78.9	30.5	107.9	12.0
130	60.0	29.1	0.437	2.97	25.3	52.0	202.5	84.5	32.5	116.4	13.4
140	64.1	30.9	0.425	2.95	26.9	56.0	212.6	90.2	34.4	125.0	14.9
150	68.4	32.8	0.413	2.93	28.4	60.0	222.6	95.9	36.4	133.5	16.5
160	72.7	34.7	0.401	2.92	30.1	64.0	232.5	101.6	38.4	141.9	18.1
170	77.0	36.6	0.390	2.90	31.7	67.9	242.6	107.4	40.5	150.3	19.7
180	81.5	38.4	0.379	2.89	33.3	71.9	252.7	113.3	42.5	158.7	21.4
190	85.9	40.3	0.369	2.88	34.9	76.0	262.9	119.2	44.5	166.9	23.2
200	90.4	42.1	0.359	2.86	36.6	80.2	273.1	125.0	46.5	175.0	24.9
210	94.8	43.9	0.350	2.85	38.2	84.5	283.3	130.9	48.4	183.1	26.7
220	99.3	45.6	0.341	2.84	39.9	88.9	293.5	136.7	50.3	191.1	28.5
230	103.8	47.4	0.332	2.83	41.5	93.4	303.7	142.6	52.2	199.0	30.4
240	108.2	49.1	0.323	2.82	43.2	97.9	313.9	148.4	54.0	207.0	32.4
250	112.7	50.8	0.315	2.81	44.9	102.5	324.2	154.3	55.8	214.9	34.4
260	117.2	52.5	0.306	2.79	46.5	107.1	334.5	160.1	57.7	222.8	36.4
270	121.6	54.2	0.299	2.78	48.2	111.7	344.8	165.9	59.5	230.7	38.6
280	126.1	55.9	0.291	2.77	49.8	116.3	355.1	171.8	61.4	238.7	40.8
290	130.6	57.6	0.283	2.77	51.5	120.8	365.4	177.6	63.2	246.6	43.0
300	135.0	59.3	0.276	2.76	53.1	125.2	375.7	183.5	65.1	254.6	45.4
310	139.5	61.1	0.269	2.75	54.7	129.6	386.0	189.3	67.0	262.6	47.7
320	144.0	62.9	0.262	2.74	56.4	134.0	396.4	195.2	68.9	270.5	50.2
330	148.4	64.7	0.255	2.73	58.0	138.2	406.8	201.1	70.8	278.5	52.6
340	152.9	66.6	0.248	2.72	59.6	142.4	417.1	206.9	72.8	286.3	55.1
350	157.3	68.4	0.242	2.71	61.2	146.6	427.4	212.8	74.7	294.0	57.5
360	161.7	70.3	0.235	2.70	62.8	150.8	437.8	218.7	76.7	301.6	60.0
370	166.2	72.1	0.229	2.70	64.4	154.9	448.1	224.6	78.7	309.1	62.4
380	170.6	74.0	0.223	2.69	66.0	159.0	458.3	230.5	80.7	316.4	64.7
390	175.1	75.9	0.217	2.68	67.6	163.1	468.6	236.3	82.6	323.6	67.0
400	179.5	77.7	0.211	2.67	69.2	167.2	478.8	242.2	84.6	330.6	69.3

Se in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	8.1	4.2	0.645	3.38	3.7	6.6	31.3	11.7	4.9	9.4	0.6
15	10.6	5.5	0.633	3.31	4.7	8.5	38.7	15.2	6.3	14.3	1.0
20	12.9	6.7	0.618	3.26	5.6	10.3	45.8	18.4	7.6	18.8	1.3
25	15.1	7.8	0.604	3.23	6.5	12.1	53.1	21.4	8.9	23.2	1.7
30	17.2	8.8	0.591	3.20	7.4	13.8	60.6	24.4	10.1	27.8	2.1
35	19.2	9.9	0.578	3.17	8.2	15.4	68.1	27.2	11.3	32.3	2.6
40	21.3	10.9	0.566	3.15	9.1	17.1	75.5	30.0	12.4	36.9	3.1
45	23.3	11.8	0.555	3.13	9.9	18.9	82.5	32.8	13.5	41.4	3.6
50	25.3	12.8	0.544	3.11	10.7	20.7	89.1	35.5	14.6	45.9	4.1
55	27.3	13.7	0.534	3.09	11.5	22.6	95.3	38.2	15.6	50.4	4.6
60	29.2	14.6	0.524	3.07	12.3	24.4	101.1	40.9	16.6	54.8	5.2
65	31.1	15.5	0.515	3.06	13.1	26.3	106.8	43.5	17.6	59.2	5.7
70	33.1	16.4	0.506	3.05	13.8	28.2	112.4	46.2	18.5	63.7	6.3
75	35.0	17.3	0.497	3.03	14.6	29.9	118.0	48.8	19.5	68.1	6.9
80	37.0	18.1	0.489	3.02	15.3	31.7	123.7	51.4	20.4	72.4	7.5
85	38.9	19.0	0.480	3.01	16.0	33.4	129.5	54.0	21.3	76.8	8.2
90	40.8	19.9	0.473	3.00	16.7	35.0	135.2	56.6	22.2	81.2	8.8
95	42.8	20.7	0.465	2.99	17.4	36.7	141.0	59.2	23.1	85.5	9.5
100	44.7	21.6	0.458	2.98	18.0	38.3	146.7	61.7	24.0	89.8	10.2
110	48.5	23.3	0.444	2.96	19.4	41.7	158.0	66.8	25.9	98.4	11.5
120	52.4	24.9	0.431	2.95	20.9	45.2	169.1	71.9	27.7	106.9	13.0
130	56.2	26.6	0.419	2.93	22.3	48.7	179.9	76.9	29.6	115.4	14.5
140	60.1	28.2	0.407	2.92	23.8	52.3	190.5	82.0	31.4	123.8	16.1
150	63.9	29.8	0.396	2.91	25.3	56.0	201.0	87.2	33.2	132.2	17.7
160	67.8	31.5	0.385	2.89	26.7	59.7	211.2	92.4	35.0	140.6	19.5
170	71.7	33.1	0.375	2.88	28.3	63.5	221.1	97.6	36.7	148.8	21.2
180	75.6	34.7	0.365	2.87	29.8	67.3	230.9	102.8	38.5	157.1	23.0
190	79.5	36.3	0.355	2.86	31.2	71.1	240.3	108.0	40.2	165.2	24.9
200	83.4	38.0	0.346	2.85	32.7	75.0	249.6	113.2	41.9	173.3	26.7
210	87.4	39.6	0.337	2.84	34.2	78.8	258.6	118.3	43.7	181.3	28.5
220	91.3	41.2	0.329	2.83	35.7	82.7	267.4	123.4	45.5	189.2	30.4
230	95.2	42.8	0.321	2.82	37.1	86.6	276.1	128.4	47.2	197.1	32.3
240	99.1	44.5	0.313	2.82	38.5	90.5	284.8	133.5	49.0	205.0	34.3
250	103.0	46.1	0.305	2.81	39.9	94.4	293.5	138.5	50.8	212.9	36.4
260	106.9	47.7	0.297	2.80	41.3	98.3	302.3	143.5	52.5	220.8	38.5
270	110.9	49.3	0.290	2.79	42.7	102.2	311.3	148.6	54.3	228.6	40.7
280	114.8	50.9	0.283	2.79	44.0	106.1	320.4	153.6	56.0	236.5	42.9
290	118.8	52.5	0.276	2.78	45.4	110.1	329.6	158.7	57.7	244.4	45.3
300	122.8	54.1	0.269	2.77	46.7	114.0	339.2	163.8	59.3	252.3	47.7
310	126.9	55.6	0.262	2.77	48.0	118.0	349.0	168.9	61.0	260.1	50.2
320	130.9	57.2	0.256	2.76	49.3	122.0	359.0	174.0	62.6	268.0	52.8
330	135.0	58.7	0.249	2.75	50.5	125.9	369.2	179.2	64.2	275.8	55.3
340	139.1	60.2	0.243	2.75	51.8	129.9	379.5	184.3	65.8	283.5	57.9
350	143.2	61.7	0.237	2.74	53.0	133.9	390.1	189.5	67.4	291.1	60.5
360	147.3	63.2	0.231	2.74	54.3	138.0	400.7	194.7	68.9	298.6	63.1
370	151.4	64.7	0.225	2.73	55.5	142.0	411.4	199.9	70.4	306.0	65.6
380	155.6	66.2	0.220	2.73	56.7	146.0	422.1	205.1	71.9	313.1	68.1
390	159.7	67.7	0.214	2.72	57.9	150.0	432.9	210.3	73.5	320.2	70.5
400	163.8	69.2	0.209	2.72	59.1	154.1	443.7	215.5	75.0	327.1	72.9

Sn in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	7.3	3.3	0.653	3.44	2.8	6.0	25.5	9.4	3.7	9.6	0.4
15	9.3	4.2	0.644	3.38	3.6	7.7	32.7	12.0	4.7	14.7	0.6
20	11.2	5.1	0.635	3.34	4.2	9.2	38.9	14.4	5.7	19.3	0.9
25	12.9	5.9	0.626	3.31	4.9	10.7	44.6	16.6	6.5	23.9	1.1
30	14.5	6.7	0.618	3.29	5.5	12.1	49.7	18.7	7.4	28.5	1.4
35	16.1	7.4	0.610	3.27	6.0	13.4	54.6	20.8	8.2	33.2	1.7
40	17.7	8.1	0.602	3.25	6.6	14.7	59.3	22.7	9.0	38.0	2.0
45	19.2	8.8	0.595	3.23	7.1	15.9	63.8	24.6	9.8	42.7	2.3
50	20.6	9.5	0.588	3.22	7.6	17.2	68.2	26.5	10.5	47.4	2.6
55	22.0	10.1	0.582	3.21	8.0	18.4	72.5	28.2	11.2	52.1	2.9
60	23.4	10.7	0.575	3.20	8.5	19.5	76.7	30.0	11.9	56.8	3.2
65	24.8	11.3	0.570	3.18	8.9	20.7	80.9	31.7	12.6	61.5	3.5
70	26.2	11.9	0.564	3.17	9.3	21.9	85.2	33.4	13.2	66.1	3.9
75	27.6	12.5	0.559	3.17	9.8	23.1	89.4	35.2	13.9	70.8	4.2
80	29.0	13.1	0.553	3.16	10.3	24.3	93.7	36.9	14.5	75.4	4.6
85	30.4	13.6	0.548	3.15	10.8	25.6	98.1	38.7	15.2	80.0	5.0
90	31.8	14.2	0.544	3.14	11.4	26.8	102.5	40.4	15.8	84.6	5.3
95	33.2	14.8	0.539	3.13	11.9	28.1	107.0	42.2	16.5	89.3	5.7
100	34.5	15.3	0.534	3.13	12.4	29.4	111.5	43.9	17.1	93.8	6.1
110	37.3	16.5	0.526	3.11	13.3	31.9	120.8	47.3	18.3	103.0	6.9
120	39.9	17.6	0.518	3.10	14.2	34.4	130.0	50.5	19.5	112.2	7.7
130	42.5	18.7	0.510	3.09	15.0	36.8	138.7	53.8	20.7	121.3	8.6
140	45.1	19.8	0.503	3.08	15.9	39.2	146.9	57.0	21.9	130.5	9.5
150	47.7	21.0	0.496	3.07	16.7	41.5	154.2	60.1	23.1	139.6	10.4
160	50.2	22.1	0.489	3.06	17.5	43.6	160.7	63.2	24.3	148.8	11.3
170	52.7	23.2	0.483	3.06	18.3	45.8	166.5	66.3	25.6	157.9	12.2
180	55.2	24.3	0.477	3.05	19.1	47.9	172.2	69.4	26.8	166.9	13.2
190	57.7	25.4	0.471	3.04	19.9	50.1	177.9	72.6	28.0	175.9	14.2
200	60.3	26.5	0.465	3.04	20.7	52.4	183.8	75.7	29.1	184.8	15.2
210	62.8	27.5	0.460	3.03	21.5	54.8	190.0	78.9	30.3	193.7	16.2
220	65.4	28.5	0.455	3.02	22.4	57.3	196.7	82.0	31.4	202.4	17.2
230	68.0	29.5	0.450	3.02	23.2	59.9	203.6	85.2	32.4	211.2	18.3
240	70.6	30.5	0.445	3.01	24.0	62.5	210.7	88.4	33.5	220.0	19.4
250	73.2	31.5	0.440	3.01	24.9	65.1	218.0	91.6	34.6	228.8	20.5
260	75.8	32.4	0.435	3.00	25.7	67.8	225.5	94.9	35.7	237.6	21.7
270	78.4	33.4	0.431	3.00	26.6	70.4	233.1	98.1	36.7	246.4	22.9
280	81.1	34.4	0.426	2.99	27.5	73.0	240.7	101.3	37.8	255.3	24.1
290	83.7	35.4	0.422	2.99	28.4	75.6	248.4	104.5	38.9	264.2	25.4
300	86.3	36.4	0.418	2.98	29.2	78.2	256.1	107.7	40.0	273.2	26.8
310	89.0	37.4	0.414	2.98	30.1	80.7	263.8	110.9	41.1	282.2	28.1
320	91.6	38.5	0.410	2.97	31.0	83.2	271.5	114.2	42.3	291.2	29.5
330	94.3	39.5	0.406	2.97	31.9	85.6	279.2	117.4	43.4	300.2	30.9
340	96.9	40.6	0.402	2.97	32.8	87.9	286.9	120.6	44.6	309.1	32.3
350	99.5	41.7	0.398	2.96	33.7	90.3	294.6	123.7	45.8	317.9	33.7
360	102.2	42.7	0.395	2.96	34.6	92.6	302.2	126.9	47.0	326.5	35.1
370	104.8	43.8	0.391	2.95	35.6	94.8	309.9	130.1	48.1	335.0	36.5
380	107.4	44.9	0.388	2.95	36.5	97.1	317.5	133.3	49.3	343.4	37.9
390	110.0	46.0	0.384	2.95	37.4	99.4	325.1	136.5	50.5	351.5	39.2
400	112.7	47.1	0.381	2.94	38.3	101.6	332.7	139.6	51.7	359.5	40.5

Te in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	7.3	3.2	0.641	3.30	2.7	6.0	23.8	9.3	3.6	9.6	0.4
15	9.4	4.2	0.640	3.30	3.4	7.8	32.0	11.8	4.6	14.7	0.6
20	11.2	5.0	0.635	3.30	4.1	9.3	38.8	14.1	5.5	19.3	0.8
25	12.8	5.8	0.629	3.29	4.6	10.7	44.2	16.2	6.4	23.9	1.1
30	14.4	6.5	0.622	3.28	5.2	12.0	48.5	18.2	7.2	28.6	1.3
35	15.9	7.1	0.616	3.27	5.7	13.3	52.4	20.2	7.9	33.3	1.6
40	17.4	7.8	0.609	3.26	6.3	14.6	56.3	22.0	8.6	38.1	1.8
45	18.8	8.4	0.603	3.25	6.8	15.8	60.5	23.8	9.4	42.9	2.1
50	20.3	9.0	0.597	3.24	7.2	17.1	65.1	25.6	10.0	47.6	2.4
55	21.7	9.7	0.591	3.23	7.7	18.3	70.3	27.3	10.7	52.3	2.7
60	23.0	10.3	0.585	3.23	8.2	19.5	75.6	29.1	11.4	57.0	3.0
65	24.4	10.9	0.580	3.22	8.6	20.7	81.0	30.8	12.0	61.7	3.3
70	25.8	11.5	0.574	3.21	9.0	21.9	86.2	32.4	12.7	66.4	3.6
75	27.1	12.0	0.569	3.20	9.5	23.1	91.0	34.1	13.3	71.1	3.9
80	28.4	12.6	0.564	3.19	10.0	24.2	95.4	35.8	13.9	75.7	4.3
85	29.7	13.2	0.560	3.19	10.4	25.2	99.3	37.4	14.6	80.4	4.6
90	31.0	13.7	0.555	3.18	10.9	26.3	102.9	39.0	15.2	85.0	5.0
95	32.3	14.3	0.550	3.17	11.3	27.4	106.2	40.7	15.8	89.7	5.3
100	33.6	14.8	0.546	3.17	11.8	28.5	109.3	42.3	16.4	94.3	5.7
110	36.3	15.9	0.537	3.15	12.6	30.8	115.1	45.5	17.7	103.5	6.4
120	38.9	17.0	0.529	3.14	13.4	33.2	120.8	48.7	18.9	112.7	7.2
130	41.5	18.1	0.522	3.13	14.2	35.6	126.7	51.9	20.1	121.9	8.0
140	44.1	19.2	0.514	3.12	15.0	38.0	133.0	55.0	21.3	131.1	8.8
150	46.6	20.3	0.507	3.11	15.8	40.3	140.1	58.1	22.4	140.3	9.7
160	49.1	21.3	0.500	3.09	16.5	42.5	148.0	61.1	23.5	149.5	10.5
170	51.5	22.3	0.494	3.08	17.2	44.6	156.4	64.0	24.5	158.7	11.4
180	53.9	23.3	0.488	3.07	18.0	46.8	165.1	67.0	25.5	167.8	12.3
190	56.3	24.3	0.482	3.07	18.7	48.9	173.8	70.0	26.5	176.9	13.2
200	58.8	25.2	0.476	3.06	19.5	51.1	182.2	72.9	27.6	185.9	14.1
210	61.2	26.2	0.470	3.05	20.2	53.3	190.3	75.9	28.6	194.8	15.0
220	63.7	27.2	0.465	3.04	21.0	55.6	198.0	78.9	29.7	203.7	16.0
230	66.1	28.2	0.459	3.03	21.8	58.0	205.4	81.9	30.8	212.5	17.0
240	68.6	29.2	0.454	3.02	22.6	60.3	212.6	84.9	31.9	221.4	18.0
250	71.1	30.1	0.449	3.01	23.4	62.7	219.5	88.0	33.0	230.3	19.0
260	73.6	31.1	0.444	3.01	24.2	65.1	226.3	91.0	34.1	239.2	20.1
270	76.1	32.1	0.439	3.00	25.0	67.5	232.9	94.1	35.2	248.1	21.2
280	78.7	33.1	0.435	2.99	25.8	69.9	239.4	97.1	36.3	257.1	22.3
290	81.2	34.1	0.430	2.98	26.6	72.3	245.9	100.2	37.4	266.2	23.5
300	83.7	35.1	0.426	2.98	27.4	74.7	252.3	103.3	38.5	275.2	24.7
310	86.3	36.1	0.422	2.97	28.2	77.0	258.7	106.3	39.5	284.4	26.0
320	88.9	37.1	0.417	2.96	29.0	79.4	265.1	109.4	40.6	293.5	27.3
330	91.4	38.1	0.413	2.96	29.8	81.7	271.4	112.5	41.7	302.6	28.6
340	94.0	39.0	0.409	2.95	30.6	84.0	277.7	115.5	42.7	311.6	29.9
350	96.6	40.0	0.405	2.94	31.3	86.3	284.0	118.6	43.8	320.5	31.2
360	99.1	41.0	0.401	2.94	32.1	88.6	290.3	121.6	44.8	329.2	32.4
370	101.7	42.0	0.397	2.93	32.9	90.9	296.5	124.7	45.9	337.8	33.7
380	104.3	43.0	0.394	2.93	33.6	93.2	302.8	127.7	46.9	346.3	35.0
390	106.8	44.0	0.390	2.92	34.4	95.4	308.9	130.8	48.0	354.5	36.2
400	109.4	45.0	0.386	2.91	35.2	97.7	315.1	133.8	49.0	362.6	37.4

Au in GaAs

I. Ion Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Peak nm	Stopped nm	Path nm	Sig.Path nm	Dmg keV	Ioniz keV
10	7.0	2.4	0.593	3.34	2.1	6.2	20.5	8.1	2.6	9.4	0.6
15	8.7	3.1	0.597	3.35	2.6	7.7	25.1	10.1	3.3	14.4	1.0
20	10.2	3.6	0.596	3.35	3.1	9.0	29.3	11.9	3.9	18.9	1.3
25	11.6	4.1	0.594	3.35	3.5	10.2	33.3	13.5	4.5	23.4	1.6
30	12.9	4.6	0.590	3.34	3.8	11.3	37.2	15.0	5.0	28.0	1.9
35	14.1	5.1	0.586	3.33	4.2	12.4	41.0	16.5	5.5	32.6	2.3
40	15.3	5.6	0.582	3.32	4.5	13.5	44.5	17.8	6.0	37.2	2.7
45	16.4	6.0	0.577	3.31	4.8	14.5	47.8	19.2	6.4	41.9	3.1
50	17.5	6.4	0.573	3.30	5.1	15.4	50.9	20.5	6.9	46.5	3.5
55	18.6	6.8	0.569	3.30	5.5	16.4	53.7	21.7	7.3	51.1	3.9
60	19.6	7.2	0.565	3.29	5.8	17.3	56.5	22.9	7.8	55.7	4.3
65	20.7	7.6	0.561	3.28	6.1	18.2	59.3	24.1	8.2	60.3	4.7
70	21.7	7.9	0.557	3.27	6.3	19.1	62.3	25.3	8.6	64.9	5.1
75	22.7	8.3	0.553	3.26	6.6	20.0	65.5	26.4	9.0	69.4	5.5
80	23.6	8.7	0.549	3.26	6.9	20.8	68.9	27.6	9.3	74.0	6.0
85	24.5	9.0	0.545	3.25	7.1	21.7	72.5	28.6	9.7	78.6	6.4
90	25.5	9.4	0.541	3.24	7.4	22.5	76.1	29.7	10.1	83.2	6.8
95	26.4	9.7	0.538	3.23	7.6	23.3	79.6	30.8	10.4	87.7	7.3
100	27.3	10.1	0.534	3.23	7.9	24.1	82.8	31.8	10.8	92.3	7.7
110	29.1	10.7	0.528	3.21	8.3	25.8	88.4	33.9	11.4	101.3	8.7
120	30.9	11.3	0.521	3.20	8.8	27.5	93.1	36.0	12.0	110.3	9.6
130	32.7	11.9	0.515	3.19	9.2	29.1	97.3	38.0	12.7	119.3	10.6
140	34.4	12.4	0.509	3.17	9.6	30.8	101.2	40.0	13.3	128.3	11.6
150	36.1	13.0	0.503	3.16	10.1	32.3	104.9	41.9	13.9	137.4	12.6
160	37.8	13.6	0.498	3.15	10.5	33.9	108.7	43.8	14.6	146.4	13.7
170	39.4	14.3	0.492	3.14	11.0	35.4	112.5	45.7	15.3	155.4	14.7
180	41.0	14.9	0.487	3.13	11.4	36.9	116.4	47.6	15.9	164.3	15.8
190	42.6	15.5	0.482	3.12	11.8	38.3	120.4	49.5	16.6	173.2	16.9
200	44.2	16.1	0.477	3.11	12.3	39.8	124.5	51.4	17.2	182.0	18.0
210	45.8	16.7	0.473	3.10	12.7	41.3	128.6	53.3	17.9	190.7	19.1
220	47.5	17.3	0.468	3.09	13.1	42.7	132.8	55.1	18.5	199.4	20.3
230	49.1	17.9	0.464	3.08	13.6	44.2	137.0	57.0	19.1	208.0	21.5
240	50.7	18.4	0.459	3.07	14.0	45.6	141.2	58.9	19.7	216.7	22.7
250	52.4	19.0	0.455	3.06	14.4	47.1	145.4	60.8	20.3	225.4	23.9
260	54.0	19.5	0.451	3.05	14.8	48.6	149.5	62.6	20.9	234.1	25.2
270	55.6	20.0	0.447	3.05	15.3	50.1	153.5	64.5	21.4	242.9	26.4
280	57.3	20.6	0.443	3.04	15.7	51.6	157.4	66.3	22.0	251.7	27.8
290	58.9	21.1	0.439	3.03	16.1	53.0	161.2	68.1	22.6	260.6	29.1
300	60.5	21.6	0.435	3.02	16.5	54.5	164.9	70.0	23.2	269.5	30.5
310	62.0	22.2	0.432	3.01	16.9	56.0	168.4	71.7	23.7	278.5	31.9
320	63.6	22.7	0.428	3.01	17.2	57.5	171.8	73.5	24.3	287.5	33.3
330	65.2	23.2	0.425	3.00	17.6	59.0	175.1	75.3	24.9	296.4	34.7
340	66.7	23.7	0.421	2.99	18.0	60.5	178.3	77.0	25.4	305.3	36.1
350	68.2	24.3	0.418	2.99	18.4	62.1	181.4	78.7	26.0	314.1	37.5
360	69.7	24.8	0.414	2.98	18.7	63.6	184.5	80.4	26.5	322.7	38.9
370	71.3	25.3	0.411	2.97	19.1	65.1	187.5	82.1	27.1	331.2	40.3
380	72.7	25.8	0.408	2.97	19.5	66.6	190.4	83.8	27.6	339.6	41.7
390	74.2	26.3	0.405	2.96	19.8	68.0	193.3	85.5	28.2	347.7	43.0
400	75.7	26.8	0.402	2.95	20.2	69.5	196.1	87.1	28.7	355.7	44.3

Table II. Moments of Vacancy Distributions Generated by Ions in Table I.

Table II is on following pages: pages 132 through 150.

Explanation of Table II

Item	Units	Note	Definition
E	keV		Ion energy
Rp	nm	a	First moment of the vacancy distribution
SigRp	nm	a	Vacancy straggling
Gamma	none	a	Normalized third moment for vacancy distribution
Beta	none	a	Normalized fourth moment for vacancy distribution
Latrl	nm	a	Vacancy distribution lateral straggling
Bcksct	per ion		Fraction of ions that are backscattered.
Vacs	per ion	b	Number of vacancies created for each ion
Ion rep	per ion		Fraction of ions replacing Ga, As atoms
#cols	per ion	c	Number of collisions undergone by each atom
t with	sec/ion	d	Computation time following recoils
t w/o	sec/ion	d	Computation time when recoils are not followed.

Notes:

a. The vacancy distribution is a measure of the damage or trap formation since displaced Ga and As atoms that do not find their way back to lattice sites during the post-implant anneal (if any) tend to result in traps or dislocations.

b. Includes vacancies created by collisions with recoil atoms, calculated when all recoils are followed.[d]

c. This includes distant collisions where only ionization energy is lost between lattice sites.

d. The computation times are for a CRAY XMP, without vectorizing, hence should be scalable to nearly any computer. For heavy ions, one gets up to a factor of 1000 speed up if one does not follow recoils. In each run, for at least 1000 ions, recoils were always followed; for the remaining 9000 ions, they were not. For H, recoils were always followed, so t w/o is unmeaningful.

Contents of Table II.

Vacancy and damage distributions resulting from GaAs ion implanted with H, He, Be, B, C, O, Al,Mg, Si, P, Ar,Cr, Zn,Ge,Se, Sn, Te, and Au. The implantation energy varies from 10 to 400keV.

H in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	67.1	36.3	0.148	2.22	32.1	0.070	3.	0.00	783.	0.057	0.057
15	95.1	48.9	0.014	2.22	41.6	0.045	3.	0.00	1002.	0.073	0.073
20	121.9	60.4	-0.080	2.22	50.0	0.030	4.	0.00	1195.	0.086	0.086
25	148.0	71.1	-0.149	2.20	57.7	0.022	4.	0.00	1370.	0.096	0.096
30	173.6	81.3	-0.206	2.19	64.9	0.016	4.	0.00	1532.	0.105	0.105
35	199.0	91.1	-0.256	2.18	71.9	0.013	5.	0.00	1687.	0.113	0.113
40	224.2	100.7	-0.306	2.20	78.9	0.011	5.	0.00	1837.	0.120	0.120
45	249.5	109.9	-0.356	2.23	85.8	0.010	6.	0.00	1983.	0.127	0.127
50	274.8	119.0	-0.407	2.28	92.7	0.009	6.	0.00	2128.	0.133	0.133
55	300.3	128.0	-0.458	2.34	99.8	0.008	6.	0.00	2271.	0.139	0.139
60	325.7	136.8	-0.506	2.41	106.9	0.007	6.	0.00	2414.	0.145	0.145
65	351.0	145.7	-0.547	2.46	114.0	0.007	7.	0.00	2556.	0.150	0.150
70	376.1	154.6	-0.579	2.50	121.0	0.006	7.	0.00	2697.	0.156	0.156
75	400.8	163.6	-0.601	2.52	127.9	0.006	7.	0.00	2838.	0.161	0.161
80	425.1	172.7	-0.613	2.53	134.7	0.006	7.	0.00	2978.	0.167	0.167
85	449.2	181.9	-0.620	2.53	141.5	0.005	7.	0.00	3117.	0.172	0.172
90	473.0	191.2	-0.625	2.52	148.4	0.005	8.	0.00	3257.	0.178	0.178
95	496.9	200.4	-0.628	2.51	155.5	0.005	8.	0.00	3396.	0.183	0.183
100	520.8	209.5	-0.632	2.50	162.9	0.005	8.	0.00	3535.	0.189	0.189
110	569.0	227.6	-0.644	2.50	178.8	0.004	8.	0.00	3814.	0.200	0.200
120	617.9	245.4	-0.661	2.52	196.0	0.004	8.	0.00	4093.	0.211	0.211
130	667.7	262.8	-0.680	2.55	214.5	0.004	8.	0.00	4374.	0.222	0.222
140	718.3	280.0	-0.699	2.59	234.1	0.003	8.	0.00	4657.	0.233	0.233
150	769.9	296.7	-0.717	2.63	254.9	0.003	8.	0.00	4942.	0.245	0.245
160	822.5	313.3	-0.735	2.68	276.8	0.003	8.	0.00	5230.	0.256	0.256
170	875.8	329.7	-0.751	2.72	299.7	0.003	8.	0.00	5521.	0.268	0.268
180	929.5	346.4	-0.764	2.76	323.5	0.003	8.	0.00	5816.	0.279	0.279
190	983.3	363.4	-0.774	2.79	348.0	0.002	8.	0.00	6114.	0.291	0.291
200	1037.1	381.1	-0.782	2.82	373.2	0.002	8.	0.00	6415.	0.303	0.303
210	1090.6	399.4	-0.787	2.83	398.9	0.002	8.	0.00	6720.	0.315	0.315
220	1143.8	418.3	-0.790	2.84	425.2	0.002	8.	0.00	7029.	0.327	0.327
230	1196.7	437.9	-0.789	2.83	452.2	0.001	8.	0.00	7342.	0.340	0.340
240	1249.3	458.0	-0.787	2.83	479.6	0.001	8.	0.00	7659.	0.352	0.352
250	1301.6	478.6	-0.782	2.82	507.7	0.001	9.	0.00	7981.	0.365	0.365
260	1353.6	499.7	-0.775	2.80	536.4	0.001	9.	0.00	8306.	0.378	0.378
270	1405.4	521.1	-0.766	2.78	565.7	0.001	9.	0.00	8637.	0.391	0.391
280	1456.8	542.9	-0.755	2.76	595.6	0.001	9.	0.00	8971.	0.404	0.404
290	1508.0	565.0	-0.743	2.74	626.2	0.002	9.	0.00	9311.	0.417	0.417
300	1558.9	587.3	-0.729	2.71	657.3	0.002	9.	0.00	9656.	0.431	0.431
310	1609.5	609.9	-0.713	2.69	689.2	0.003	9.	0.00	10005.	0.445	0.445
320	1659.9	632.8	-0.697	2.66	721.6	0.004	9.	0.00	10359.	0.459	0.459
330	1710.1	655.8	-0.679	2.64	754.7	0.005	9.	0.00	10717.	0.473	0.473
340	1760.1	679.1	-0.661	2.61	788.3	0.006	9.	0.00	11078.	0.487	0.487
350	1810.0	702.5	-0.643	2.58	822.5	0.007	9.	0.00	11443.	0.502	0.502
360	1859.7	726.1	-0.624	2.56	857.3	0.008	9.	0.00	11810.	0.516	0.516
370	1909.2	749.9	-0.606	2.53	892.5	0.009	9.	0.00	12181.	0.531	0.531
380	1958.7	773.8	-0.588	2.50	928.3	0.010	9.	0.00	12553.	0.546	0.546
390	2008.1	797.8	-0.570	2.48	964.5	0.011	9.	0.00	12927.	0.560	0.560
400	2057.4	822.0	-0.552	2.45	1001.2	0.012	9.	0.00	13303.	0.575	0.575

He in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	60.4	37.1	0.582	2.87	40.1	0.184	39.	0.00	849.	0.074	0.062
15	83.7	48.8	0.445	2.59	52.2	0.145	49.	0.00	1094.	0.094	0.079
20	105.4	59.2	0.343	2.45	62.4	0.117	57.	0.00	1304.	0.111	0.093
25	126.0	68.6	0.261	2.37	71.0	0.096	63.	0.00	1486.	0.125	0.105
30	145.7	77.2	0.192	2.32	78.3	0.080	68.	0.00	1646.	0.138	0.116
35	164.7	85.2	0.133	2.29	84.7	0.067	72.	0.00	1791.	0.149	0.125
40	182.8	92.6	0.080	2.28	90.7	0.057	76.	0.00	1923.	0.159	0.134
45	200.1	99.6	0.033	2.27	96.3	0.049	79.	0.00	2045.	0.168	0.142
50	216.7	106.1	-0.009	2.27	101.9	0.042	82.	0.00	2159.	0.177	0.150
55	232.5	112.3	-0.048	2.28	107.3	0.037	84.	0.00	2267.	0.185	0.157
60	247.9	118.1	-0.085	2.29	112.5	0.033	87.	0.00	2370.	0.193	0.164
65	262.8	123.6	-0.118	2.30	117.4	0.029	89.	0.00	2467.	0.199	0.170
70	277.5	128.8	-0.149	2.32	122.0	0.026	90.	0.00	2560.	0.205	0.176
75	292.1	133.8	-0.179	2.34	126.2	0.024	92.	0.00	2650.	0.210	0.181
80	306.6	138.6	-0.207	2.35	129.9	0.021	93.	0.00	2735.	0.214	0.184
85	320.9	143.1	-0.233	2.37	133.4	0.020	95.	0.00	2818.	0.218	0.188
90	335.0	147.5	-0.258	2.39	136.7	0.018	96.	0.00	2898.	0.221	0.191
95	348.9	151.7	-0.282	2.41	140.0	0.017	97.	0.00	2976.	0.224	0.194
100	362.4	155.8	-0.304	2.43	143.4	0.015	98.	0.00	3052.	0.226	0.197
110	388.6	163.7	-0.347	2.47	150.3	0.013	99.	0.00	3201.	0.232	0.203
120	413.8	171.3	-0.386	2.51	157.4	0.012	100.	0.00	3344.	0.237	0.208
130	438.8	178.7	-0.422	2.56	164.6	0.011	101.	0.00	3484.	0.243	0.214
140	463.7	186.0	-0.456	2.60	171.8	0.010	101.	0.00	3620.	0.248	0.219
150	488.9	193.1	-0.488	2.64	178.8	0.009	101.	0.00	3754.	0.254	0.225
160	514.6	200.2	-0.518	2.68	185.8	0.008	101.	0.00	3886.	0.259	0.230
170	540.5	207.1	-0.546	2.72	192.7	0.007	101.	0.00	4016.	0.264	0.235
180	566.6	213.8	-0.573	2.76	199.7	0.006	100.	0.00	4143.	0.268	0.240
190	592.5	220.4	-0.599	2.80	207.0	0.005	100.	0.00	4269.	0.273	0.245
200	618.1	226.7	-0.623	2.84	214.5	0.004	99.	0.00	4392.	0.278	0.250
210	643.4	232.8	-0.647	2.88	222.4	0.004	98.	0.00	4515.	0.283	0.255
220	668.2	238.6	-0.669	2.91	230.7	0.004	98.	0.00	4635.	0.287	0.260
230	692.6	244.4	-0.691	2.95	239.1	0.004	97.	0.00	4754.	0.292	0.264
240	716.6	249.9	-0.711	2.99	247.7	0.004	96.	0.00	4871.	0.296	0.269
250	740.2	255.5	-0.731	3.02	256.3	0.004	96.	0.00	4987.	0.301	0.273
260	763.4	260.9	-0.750	3.06	265.1	0.004	95.	0.00	5102.	0.305	0.278
270	786.1	266.3	-0.769	3.09	273.8	0.004	95.	0.00	5216.	0.310	0.282
280	808.4	271.7	-0.787	3.12	282.4	0.004	94.	0.00	5329.	0.314	0.287
290	830.4	277.2	-0.804	3.16	291.0	0.004	94.	0.00	5441.	0.318	0.291
300	851.9	282.6	-0.821	3.19	299.4	0.004	94.	0.00	5552.	0.323	0.296
310	873.0	288.1	-0.838	3.22	307.7	0.004	94.	0.00	5662.	0.327	0.300
320	893.8	293.6	-0.854	3.25	315.8	0.004	94.	0.00	5771.	0.331	0.304
330	914.2	299.1	-0.869	3.29	323.8	0.003	94.	0.00	5879.	0.336	0.309
340	934.4	304.6	-0.884	3.32	331.7	0.003	94.	0.00	5986.	0.340	0.313
350	954.3	310.1	-0.899	3.35	339.5	0.003	94.	0.00	6092.	0.344	0.317
360	973.9	315.6	-0.913	3.38	347.2	0.003	94.	0.00	6197.	0.348	0.321
370	993.3	321.0	-0.927	3.41	354.8	0.002	94.	0.00	6302.	0.353	0.326
380	1012.5	326.4	-0.941	3.44	362.3	0.002	95.	0.00	6405.	0.357	0.330
390	1031.6	331.8	-0.954	3.46	369.8	0.002	95.	0.00	6507.	0.361	0.334
400	1050.5	337.2	-0.967	3.49	377.3	0.001	95.	0.00	6608.	0.365	0.338

Be in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/c
10	27.7	18.0	0.679	3.06	17.6	0.154	67.	0.00	344.	0.048	0.026
15	40.1	24.7	0.566	2.80	24.1	0.129	91.	0.00	468.	0.066	0.034
20	51.9	30.9	0.482	2.64	30.0	0.111	113.	0.00	580.	0.082	0.042
25	63.0	36.9	0.414	2.54	35.4	0.097	132.	0.00	686.	0.096	0.049
30	73.6	42.7	0.357	2.47	40.4	0.085	149.	0.00	784.	0.109	0.056
35	83.9	48.3	0.308	2.42	45.0	0.076	165.	0.00	878.	0.120	0.062
40	94.2	53.7	0.265	2.38	49.4	0.069	179.	0.00	968.	0.131	0.068
45	104.7	58.8	0.226	2.35	53.6	0.063	192.	0.00	1055.	0.142	0.074
50	115.5	63.8	0.191	2.33	57.6	0.058	203.	0.00	1138.	0.152	0.080
55	126.6	68.5	0.158	2.31	61.4	0.054	213.	0.00	1219.	0.161	0.085
60	137.9	73.1	0.129	2.30	65.2	0.050	222.	0.00	1297.	0.170	0.090
65	149.2	77.6	0.101	2.28	68.8	0.047	231.	0.00	1373.	0.179	0.095
70	160.3	81.9	0.075	2.28	72.3	0.044	239.	0.00	1447.	0.187	0.100
75	171.1	86.3	0.051	2.27	75.7	0.041	247.	0.00	1519.	0.193	0.105
80	181.5	90.6	0.028	2.27	79.0	0.037	255.	0.00	1590.	0.200	0.110
85	191.5	94.8	0.006	2.26	82.2	0.034	262.	0.00	1659.	0.206	0.114
90	201.1	98.9	-0.015	2.26	85.3	0.031	269.	0.00	1726.	0.211	0.119
95	210.3	102.9	-0.034	2.26	88.3	0.028	275.	0.00	1792.	0.216	0.123
100	219.2	106.8	-0.053	2.26	91.3	0.026	281.	0.00	1855.	0.221	0.127
110	236.2	114.1	-0.088	2.27	97.0	0.023	292.	0.00	1977.	0.231	0.136
120	252.4	121.1	-0.120	2.27	102.6	0.021	300.	0.00	2093.	0.240	0.144
130	268.2	127.9	-0.150	2.28	107.9	0.021	307.	0.00	2204.	0.249	0.151
140	284.1	134.5	-0.178	2.29	113.1	0.020	311.	0.00	2312.	0.256	0.158
150	300.4	141.1	-0.204	2.30	118.0	0.019	314.	0.00	2416.	0.263	0.164
160	317.1	147.8	-0.229	2.31	122.8	0.018	315.	0.00	2518.	0.268	0.170
170	334.0	154.4	-0.253	2.32	127.6	0.017	315.	0.00	2617.	0.273	0.174
180	351.2	160.8	-0.275	2.33	132.3	0.015	314.	0.00	2714.	0.277	0.178
190	368.2	167.0	-0.296	2.34	137.0	0.014	312.	0.00	2808.	0.280	0.182
200	385.1	172.9	-0.316	2.35	141.9	0.013	311.	0.00	2899.	0.284	0.186
210	401.6	178.3	-0.335	2.37	146.9	0.012	310.	0.00	298..	0.287	0.189
220	417.9	183.5	-0.354	2.38	152.0	0.011	308.	0.00	3073.	0.290	0.193
230	433.8	188.4	-0.372	2.39	157.2	0.010	307.	0.00	3157.	0.293	0.196
240	449.4	193.0	-0.389	2.40	162.3	0.009	306.	0.00	3239.	0.296	0.199
250	464.8	197.5	-0.405	2.41	167.4	0.008	305.	0.00	3319.	0.299	0.202
260	479.8	201.9	-0.421	2.43	172.4	0.008	304.	0.00	3398.	0.302	0.205
270	494.5	206.2	-0.436	2.44	177.3	0.007	303.	0.00	3475.	0.305	0.208
280	509.0	210.4	-0.451	2.45	182.0	0.007	303.	0.00	3552.	0.308	0.211
290	523.2	214.6	-0.466	2.46	186.6	0.006	302.	0.00	3628.	0.311	0.214
300	537.1	218.7	-0.479	2.48	190.9	0.006	302.	0.00	3703.	0.314	0.217
310	550.7	222.9	-0.493	2.49	195.1	0.006	302.	0.00	3777.	0.317	0.220
320	564.1	227.1	-0.506	2.50	199.0	0.005	302.	0.00	3851.	0.320	0.223
330	577.3	231.2	-0.519	2.51	202.8	0.005	302.	0.00	3924.	0.323	0.226
340	590.3	235.4	-0.531	2.52	206.5	0.005	301.	0.00	3997.	0.326	0.229
350	603.2	239.5	-0.543	2.54	210.0	0.005	302.	0.00	4069.	0.328	0.232
360	615.9	243.6	-0.555	2.55	213.4	0.005	302.	0.00	4140.	0.331	0.235
370	628.4	247.7	-0.567	2.56	216.7	0.005	302.	0.00	4211.	0.334	0.238
380	640.8	251.8	-0.578	2.57	220.0	0.005	302.	0.00	4281.	0.337	0.241
390	653.1	255.8	-0.589	2.58	223.2	0.005	302.	0.00	4350.	0.339	0.244
400	665.3	259.8	-0.600	2.60	226.3	0.005	302.	0.00	4419.	0.342	0.246

B in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	22.7	15.0	0.717	3.10	13.8	0.152	77.	0.00	276.	0.047	0.021
15	32.4	20.8	0.623	2.86	19.1	0.128	106.	0.00	377.	0.065	0.028
20	41.8	26.2	0.550	2.71	24.0	0.111	132.	0.00	469.	0.081	0.034
25	51.0	31.3	0.490	2.62	28.6	0.099	156.	0.00	556.	0.096	0.040
30	60.0	36.1	0.439	2.54	33.0	0.089	178.	0.00	640.	0.110	0.046
35	68.9	40.6	0.394	2.49	37.2	0.081	198.	0.00	719.	0.123	0.051
40	77.6	45.0	0.354	2.45	41.2	0.074	217.	0.00	796.	0.135	0.056
45	86.2	49.4	0.318	2.41	45.1	0.068	235.	0.00	869.	0.146	0.061
50	94.7	53.6	0.285	2.39	48.8	0.062	251.	0.00	940.	0.157	0.066
55	103.0	57.8	0.255	2.36	52.4	0.057	266.	0.00	1009.	0.168	0.071
60	111.1	61.9	0.226	2.35	55.8	0.052	281.	0.00	1075.	0.178	0.075
65	119.1	65.9	0.200	2.33	59.1	0.048	294.	0.00	1140.	0.187	0.080
70	127.0	69.8	0.175	2.32	62.2	0.045	306.	0.00	1203.	0.196	0.084
75	134.9	73.5	0.152	2.31	65.1	0.042	318.	0.00	1264.	0.203	0.088
80	142.6	77.2	0.130	2.30	67.8	0.040	329.	0.00	1324.	0.210	0.092
85	150.4	80.7	0.109	2.29	70.4	0.038	339.	0.00	1383.	0.216	0.096
90	158.2	84.1	0.089	2.28	72.9	0.037	348.	0.00	1441.	0.221	0.100
95	166.2	87.3	0.069	2.28	75.4	0.035	356.	0.00	1498.	0.226	0.103
100	174.4	90.5	0.051	2.27	77.9	0.034	363.	0.00	1554.	0.231	0.107
110	191.5	96.7	0.017	2.27	82.9	0.030	375.	0.00	1664.	0.240	0.114
120	208.8	102.6	-0.015	2.27	88.0	0.027	384.	0.00	1770.	0.247	0.121
130	225.9	108.5	-0.045	2.26	93.0	0.024	391.	0.00	1872.	0.255	0.128
140	242.3	114.4	-0.073	2.26	97.9	0.021	397.	0.00	1971.	0.262	0.134
150	257.4	120.4	-0.099	2.27	102.7	0.019	401.	0.00	2066.	0.269	0.141
160	271.2	126.6	-0.124	2.27	107.3	0.018	404.	0.00	2158.	0.277	0.147
170	284.1	132.7	-0.147	2.27	111.8	0.017	407.	0.00	2247.	0.283	0.153
180	296.4	138.7	-0.170	2.27	116.2	0.017	409.	0.00	2332.	0.290	0.159
190	308.7	144.5	-0.191	2.28	120.5	0.016	410.	0.00	2415.	0.296	0.164
200	321.1	150.0	-0.212	2.28	124.8	0.016	411.	0.00	2496.	0.301	0.169
210	334.0	155.0	-0.231	2.29	129.1	0.015	411.	0.00	2574.	0.305	0.173
220	347.3	159.8	-0.250	2.29	133.3	0.015	411.	0.00	2651.	0.309	0.177
230	360.7	164.3	-0.268	2.30	137.5	0.014	411.	0.00	2725.	0.313	0.180
240	374.3	168.6	-0.285	2.30	141.7	0.014	410.	0.00	2798.	0.316	0.183
250	387.8	172.7	-0.302	2.31	145.8	0.013	409.	0.00	2869.	0.318	0.186
260	401.3	176.8	-0.319	2.32	149.8	0.012	409.	0.00	2939.	0.321	0.189
270	414.5	180.8	-0.334	2.32	153.7	0.012	408.	0.00	3007.	0.323	0.191
280	427.4	184.9	-0.349	2.33	157.6	0.011	408.	0.00	3075.	0.326	0.194
290	440.0	188.9	-0.364	2.34	161.4	0.011	407.	0.00	3141.	0.328	0.196
300	452.2	193.0	-0.379	2.34	165.1	0.010	407.	0.00	3207.	0.331	0.199
310	463.9	197.2	-0.393	2.35	168.7	0.010	407.	0.00	3272.	0.333	0.201
320	475.2	201.4	-0.406	2.36	172.3	0.010	407.	0.00	3336.	0.336	0.204
330	486.0	205.7	-0.419	2.36	175.7	0.010	407.	0.00	3399.	0.338	0.206
340	496.6	210.1	-0.432	2.37	179.1	0.009	407.	0.00	3462.	0.341	0.209
350	506.9	214.4	-0.445	2.38	182.4	0.009	407.	0.00	3524.	0.343	0.211
360	517.0	218.8	-0.457	2.38	185.7	0.009	408.	0.00	3585.	0.346	0.214
370	526.8	223.2	-0.469	2.39	189.0	0.009	408.	0.00	3646.	0.349	0.216
380	536.5	227.5	-0.481	2.40	192.1	0.009	408.	0.00	3706.	0.351	0.219
390	546.1	231.9	-0.492	2.40	195.3	0.008	409.	0.00	3766.	0.354	0.221
400	555.5	236.2	-0.503	2.41	198.4	0.008	409.	0.00	3824.	0.356	0.224

C in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **********	w/o **sec/ion**	
10	19.5	12.7	0.706	3.19	11.4	0.147	80.	0.00	228.	0.045	0.017
15	27.1	17.4	0.623	2.94	15.9	0.126	112.	0.00	309.	0.063	0.023
20	34.5	21.7	0.559	2.79	19.9	0.111	142.	0.00	384.	0.079	0.028
25	41.8	25.6	0.505	2.68	23.4	0.099	168.	0.00	454.	0.094	0.033
30	49.2	29.1	0.459	2.60	26.3	0.090	192.	0.00	521.	0.107	0.038
35	56.4	32.5	0.418	2.54	29.1	0.081	214.	0.00	585.	0.120	0.042
40	63.6	36.0	0.382	2.49	31.8	0.074	234.	0.00	647.	0.131	0.046
45	70.7	39.4	0.349	2.45	34.4	0.067	253.	0.00	707.	0.143	0.050
50	77.6	43.0	0.318	2.42	37.2	0.061	270.	0.00	765.	0.153	0.054
55	84.3	46.8	0.290	2.40	40.1	0.056	286.	0.00	823.	0.164	0.058
60	90.9	50.6	0.264	2.38	43.1	0.051	302.	0.00	878.	0.173	0.062
65	97.5	54.2	0.240	2.36	46.0	0.047	316.	0.00	933.	0.182	0.065
70	104.3	57.7	0.217	2.34	48.8	0.043	330.	0.00	985.	0.190	0.069
75	111.1	60.8	0.196	2.33	51.5	0.040	343.	0.00	1037.	0.198	0.072
80	118.2	63.6	0.175	2.31	54.0	0.038	355.	0.00	1086.	0.204	0.076
85	125.3	66.2	0.156	2.30	56.4	0.036	367.	0.00	1135.	0.210	0.079
90	132.3	68.7	0.137	2.30	58.7	0.034	378.	0.00	1182.	0.216	0.082
95	139.3	71.2	0.120	2.29	60.9	0.032	388.	0.00	1228.	0.221	0.085
100	145.9	73.9	0.103	2.28	63.0	0.031	397.	0.00	1273.	0.225	0.088
110	158.5	79.6	0.071	2.27	67.3	0.028	413.	0.00	1363.	0.234	0.094
120	170.1	85.7	0.041	2.26	71.5	0.026	427.	0.00	1449.	0.242	0.100
130	181.4	91.7	0.013	2.26	75.6	0.024	438.	0.00	1533.	0.249	0.105
140	192.5	97.6	-0.013	2.25	79.7	0.023	447.	0.00	1615.	0.256	0.111
150	203.6	103.1	-0.037	2.25	83.6	0.022	454.	0.00	1694.	0.263	0.116
160	215.0	108.0	-0.060	2.25	87.6	0.021	460.	0.00	1771.	0.270	0.121
170	226.6	112.5	-0.082	2.25	91.4	0.020	464.	0.00	1845.	0.276	0.126
180	238.2	116.7	-0.103	2.25	95.1	0.020	467.	0.00	1917.	0.282	0.131
190	249.7	120.7	-0.123	2.25	98.8	0.019	469.	0.00	1988.	0.287	0.135
200	261.1	124.7	-0.142	2.25	102.4	0.019	470.	0.00	2057.	0.292	0.140
210	272.3	128.6	-0.161	2.25	105.9	0.018	471.	0.00	2124.	0.297	0.144
220	283.3	132.6	-0.178	2.26	109.3	0.017	471.	0.00	2189.	0.301	0.148
230	294.2	136.5	-0.195	2.26	112.6	0.016	470.	0.00	2253.	0.305	0.152
240	304.9	140.5	-0.212	2.26	115.8	0.015	470.	0.00	2316.	0.309	0.156
250	315.5	144.3	-0.228	2.27	119.0	0.014	469.	0.00	2378.	0.312	0.159
260	326.1	148.1	-0.243	2.27	122.1	0.013	468.	0.00	2438.	0.315	0.162
270	336.6	151.8	-0.258	2.28	125.1	0.012	467.	0.00	2497.	0.318	0.165
280	347.0	155.5	-0.272	2.28	128.1	0.011	466.	0.00	2555.	0.321	0.168
290	357.5	159.1	-0.286	2.28	131.1	0.011	465.	0.00	2612.	0.323	0.171
300	367.9	162.5	-0.299	2.29	134.0	0.010	464.	0.00	2667.	0.326	0.173
310	378.4	165.9	-0.313	2.29	136.8	0.009	463.	0.00	2722.	0.328	0.176
320	388.8	169.2	-0.325	2.30	139.6	0.009	462.	0.00	2776.	0.330	0.178
330	399.3	172.4	-0.338	2.30	142.4	0.008	462.	0.00	2829.	0.332	0.180
340	409.7	175.6	-0.350	2.31	145.1	0.008	461.	0.00	2882.	0.334	0.183
350	420.2	178.7	-0.362	2.31	147.8	0.007	460.	0.00	2933.	0.336	0.185
360	430.6	181.7	-0.373	2.32	150.5	0.007	459.	0.00	2984.	0.338	0.186
370	441.0	184.7	-0.385	2.32	153.2	0.007	459.	0.00	3035.	0.339	0.188
380	451.4	187.6	-0.396	2.33	155.8	0.006	458.	0.00	3084.	0.341	0.190
390	461.7	190.5	-0.406	2.33	158.4	0.006	458.	0.00	3134.	0.343	0.192
400	472.1	193.4	-0.417	2.34	161.0	0.006	457.	0.00	3182.	0.344	0.194

C13 in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	19.3	12.9	0.739	3.24	11.3	0.138	83.	0.00	222.	0.046	0.017
15	26.8	17.6	0.646	2.96	15.2	0.116	117.	0.00	303.	0.064	0.023
20	34.0	21.9	0.575	2.80	18.9	0.103	148.	0.01	378.	0.081	0.028
25	41.0	25.9	0.517	2.68	22.5	0.093	177.	0.00	448.	0.097	0.033
30	47.9	29.7	0.468	2.60	26.1	0.087	203	0.00	514.	0.111	0.037
35	54.9	33.4	0.425	2.54	29.7	0.081	227.	0.00	578.	0.124	0.042
40	61.9	37.0	0.388	2.48	33.2	0.076	248.	0.00	640.	0.137	0.046
45	69.1	40.6	0.354	2.44	36.6	0.071	268.	0.00	700.	0.149	0.050
50	76.5	44.2	0.323	2.41	39.8	0.065	287.	0.00	759.	0.160	0.054
55	84.0	47.8	0.294	2.38	42.9	0.059	304.	0.00	817.	0.171	0.058
60	91.5	51.4	0.268	2.36	45.9	0.053	320.	0.00	874.	0.181	0.062
65	98.8	54.9	0.243	2.34	48.7	0.048	336.	0.00	929.	0.190	0.065
70	105.9	58.3	0.220	2.32	51.4	0.044	351.	0.01	983.	0.199	0.069
75	112.6	61.6	0.198	2.31	53.9	0.040	366.	0.01	1035.	0.207	0.073
80	119.0	64.7	0.178	2.30	56.3	0.038	381.	0.01	1086.	0.214	0.076
85	125.0	67.8	0.158	2.28	58.5	0.037	395.	0.01	1135.	0.221	0.079
90	130.9	70.8	0.140	2.28	60.7	0.036	408.	0.01	1183.	0.227	0.082
95	136.9	73.7	0.122	2.27	62.8	0.035	420.	0.01	1230.	0.233	0.086
100	143.0	76.7	0.105	2.26	64.9	0.034	431.	0.01	1276.	0.238	0.089
110	155.8	82.8	0.073	2.25	68.9	0.031	448.	0.01	1368.	0.247	0.095
120	169.2	88.9	0.044	2.24	72.8	0.029	461.	0.01	1457.	0.255	0.101
130	182.6	94.8	0.017	2.24	76.6	0.027	471.	0.01	1544.	0.262	0.106
140	196.0	100.5	-0.009	2.23	80.5	0.024	479.	0.00	1628.	0.269	0.112
150	208.8	105.9	-0.033	2.23	84.3	0.022	485.	0.00	1710.	0.276	0.117
160	221.1	110.9	-0.055	2.23	88.1	0.020	490.	0.00	1789.	0.282	0.123
170	233.0	115.6	-0.077	2.23	91.8	0.018	494.	0.00	1865.	0.289	0.128
180	244.6	120.0	-0.097	2.23	95.6	0.016	497.	0.00	1940.	0.295	0.133
190	256.2	124.3	-0.117	2.23	99.3	0.015	499.	0.00	2013.	0.301	0.138
200	267.9	128.4	-0.135	2.23	102.9	0.014	500.	0.00	2084.	0.306	0.142
210	279.8	132.5	-0.153	2.24	106.5	0.013	500.	0.00	2153.	0.311	0.147
220	291.8	136.5	-0.170	2.24	110.0	0.013	500.	0.00	2221.	0.315	0.151
230	303.9	140.5	-0.187	2.24	113.4	0.012	499.	0.00	2287.	0.319	0.155
240	316.0	144.4	-0.202	2.25	116.8	0.012	498.	0.00	2352.	0.323	0.158
250	327.9	148.2	-0.218	2.25	120.0	0.012	497.	0.00	2416.	0.326	0.162
260	339.7	151.9	-0.232	2.26	123.2	0.012	497.	0.00	2478.	0.330	0.165
270	351.2	155.6	-0.246	2.26	126.3	0.012	496.	0.00	2539.	0.333	0.169
280	362.4	159.2	-0.260	2.27	129.4	0.012	496.	0.00	2599.	0.336	0.172
290	373.2	162.8	-0.274	2.27	132.3	0.011	496.	0.00	2658.	0.339	0.175
300	383.5	166.3	-0.287	2.28	135.2	0.011	496.	0.00	2716.	0.342	0.177
310	393.5	169.7	-0.299	2.28	138.0	0.011	497.	0.00	2772.	0.345	0.180
320	403.0	173.1	-0.311	2.29	140.7	0.011	498.	0.00	2828.	0.348	0.182
330	412.2	176.4	-0.323	2.29	143.3	0.010	499.	0.00	2883.	0.350	0.185
340	421.1	179.7	-0.335	2.30	145.9	0.010	501.	0.00	2937.	0.353	0.187
350	429.7	182.9	-0.346	2.30	148.4	0.010	502.	0.00	2990.	0.356	0.189
360	438.1	186.1	-0.357	2.31	150.9	0.009	504.	0.00	3043.	0.358	0.191
370	446.3	189.3	-0.368	2.31	153.3	0.009	506.	0.00	3095.	0.361	0.193
380	454.4	192.4	-0.378	2.32	155.7	0.009	507.	0.00	3146.	0.363	0.195
390	462.3	195.5	-0.389	2.33	158.1	0.008	509.	0.00	3197.	0.366	0.197
400	470.2	198.5	-0.399	2.33	160.5	0.008	511.	0.00	3247.	0.368	0.199

O in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	15.0	10.1	0.807	3.41	8.7	0.131	94.	0.04	170.	0.047	0.013
15	21.0	13.9	0.749	3.17	11.7	0.113	134.	0.04	231.	0.066	0.017
20	26.7	17.4	0.699	3.02	14.4	0.100	172.	0.04	288.	0.084	0.021
25	32.2	20.7	0.654	2.92	17.1	0.090	207.	0.05	343.	0.101	0.025
30	37.6	23.8	0.613	2.84	19.7	0.081	240.	0.05	394.	0.117	0.029
35	42.9	26.8	0.577	2.77	22.2	0.074	271.	0.05	444.	0.132	0.032
40	48.2	29.7	0.543	2.72	24.7	0.068	300.	0.05	493.	0.146	0.035
45	53.6	32.7	0.512	2.67	27.1	0.064	327.	0.05	540.	0.160	0.039
50	59.0	35.6	0.483	2.63	29.4	0.060	353.	0.04	587.	0.173	0.042
55	64.5	38.7	0.455	2.60	31.7	0.057	377.	0.04	632.	0.186	0.045
60	70.0	41.7	0.430	2.57	33.9	0.055	400.	0.04	676.	0.198	0.048
65	75.6	44.7	0.405	2.54	36.1	0.054	422.	0.04	720.	0.209	0.051
70	81.1	47.6	0.382	2.52	38.3	0.052	442.	0.04	763.	0.220	0.054
75	86.6	50.4	0.360	2.50	40.5	0.050	462.	0.04	805.	0.229	0.057
80	92.1	53.1	0.339	2.48	42.7	0.048	481.	0.05	847.	0.237	0.059
85	97.4	55.7	0.319	2.46	44.9	0.046	498.	0.05	887.	0.244	0.062
90	102.7	58.2	0.300	2.45	47.1	0.045	515.	0.05	928.	0.250	0.065
95	108.0	60.7	0.281	2.43	49.2	0.043	531.	0.05	968.	0.257	0.067
100	113.1	63.2	0.264	2.42	51.2	0.041	546.	0.05	1007.	0.262	0.070
110	123.1	68.1	0.230	2.40	54.9	0.037	574.	0.05	1083.	0.273	0.075
120	132.9	73.0	0.198	2.38	58.3	0.034	598.	0.05	1158.	0.283	0.080
130	142.6	77.6	0.168	2.36	61.6	0.030	618.	0.05	1231.	0.292	0.085
140	152.4	82.1	0.140	2.34	64.9	0.028	635.	0.05	1302.	0.300	0.090
150	162.5	86.2	0.113	2.33	68.4	0.026	647.	0.04	1371.	0.308	0.094
160	172.7	89.9	0.088	2.32	72.0	0.025	656.	0.04	1438.	0.315	0.099
170	183.1	93.6	0.064	2.31	75.6	0.024	661.	0.04	1504.	0.321	0.103
180	193.5	97.2	0.041	2.30	79.3	0.023	665.	0.04	1569.	0.327	0.107
190	203.7	100.8	0.018	2.29	82.9	0.022	667.	0.04	1632.	0.332	0.112
200	213.6	104.7	-0.003	2.28	86.3	0.021	669.	0.04	1695.	0.337	0.116
210	223.2	108.8	-0.024	2.27	89.4	0.020	670.	0.04	1756.	0.342	0.120
220	232.5	113.1	-0.043	2.26	92.4	0.019	671.	0.05	1816.	0.347	0.124
230	241.5	117.5	-0.063	2.26	95.2	0.018	671.	0.05	1876.	0.351	0.128
240	250.4	121.9	-0.081	2.25	97.9	0.017	672.	0.05	1934.	0.356	0.132
250	259.1	126.3	-0.099	2.25	100.5	0.016	673.	0.05	1991.	0.360	0.135
260	267.7	130.5	-0.116	2.24	103.0	0.015	673.	0.05	2046.	0.364	0.139
270	276.2	134.6	-0.133	2.24	105.5	0.014	674.	0.05	2101.	0.368	0.143
280	284.8	138.5	-0.150	2.24	108.0	0.014	675.	0.05	2154.	0.373	0.146
290	293.3	142.1	-0.166	2.23	110.4	0.013	676.	0.05	2206.	0.377	0.149
300	301.9	145.4	-0.181	2.23	112.9	0.012	678.	0.05	2257.	0.380	0.153
310	310.6	148.4	-0.196	2.23	115.4	0.012	680.	0.05	2307.	0.384	0.156
320	319.3	151.2	-0.211	2.22	117.9	0.011	682.	0.05	2356.	0.388	0.158
330	328.0	153.7	-0.225	2.22	120.4	0.011	684.	0.05	2403.	0.392	0.161
340	336.8	156.0	-0.239	2.22	122.9	0.010	686.	0.05	2450.	0.396	0.164
350	345.7	158.1	-0.253	2.22	125.5	0.010	689.	0.05	2496.	0.399	0.167
360	354.5	160.1	-0.267	2.22	128.0	0.009	691.	0.05	2541.	0.403	0.169
370	363.3	162.0	-0.280	2.21	130.5	0.009	694.	0.05	2586.	0.406	0.172
380	372.2	163.8	-0.293	2.21	133.0	0.009	696.	0.05	2630.	0.410	0.174
390	381.0	165.6	-0.305	2.21	135.5	0.009	699.	0.05	2674.	0.413	0.177
400	389.9	167.3	-0.317	2.21	138.0	0.008	701.	0.05	2717.	0.416	0.179

Al in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	10.7	7.5	0.950	3.88	5.8	0.099	123.	0.23	108.	0.054	0.008
15	14.8	10.3	0.918	3.71	7.7	0.090	181.	0.23	146.	0.079	0.011
20	18.8	12.9	0.886	3.59	9.7	0.082	237.	0.24	183.	0.103	0.014
25	22.8	15.4	0.856	3.50	11.7	0.074	291.	0.24	218.	0.126	0.016
30	27.0	17.8	0.827	3.42	13.9	0.066	343.	0.24	254.	0.148	0.019
35	31.1	20.2	0.800	3.35	16.1	0.059	394.	0.24	288.	0.170	0.021
40	35.1	22.5	0.775	3.29	18.2	0.054	443.	0.24	323.	0.192	0.024
45	38.9	24.7	0.751	3.24	20.0	0.051	491.	0.24	357.	0.213	0.026
50	42.3	26.8	0.729	3.19	21.7	0.050	539.	0.24	390.	0.234	0.028
55	45.6	28.9	0.708	3.15	23.0	0.049	586.	0.24	422.	0.255	0.030
60	48.7	30.9	0.688	3.11	24.3	0.049	633.	0.24	454.	0.275	0.033
65	51.9	32.9	0.668	3.07	25.6	0.049	678.	0.24	486.	0.295	0.035
70	55.3	35.1	0.650	3.04	27.0	0.049	722.	0.24	518.	0.313	0.037
75	59.1	37.4	0.632	3.00	28.7	0.048	764.	0.24	550.	0.329	0.039
80	63.2	40.0	0.616	2.97	30.6	0.046	805.	0.25	582.	0.344	0.041
85	67.6	42.6	0.599	2.94	32.7	0.044	844.	0.25	614.	0.358	0.043
90	72.1	45.2	0.584	2.92	34.8	0.042	882.	0.25	646.	0.370	0.046
95	76.6	47.8	0.569	2.89	37.0	0.040	918.	0.25	678.	0.382	0.048
100	81.1	50.3	0.554	2.87	39.1	0.038	953.	0.25	710.	0.393	0.050
110	89.5	54.8	0.526	2.82	43.0	0.035	1019.	0.25	774.	0.413	0.054
120	97.4	58.9	0.500	2.78	46.4	0.034	1078.	0.25	837.	0.433	0.058
130	105.1	62.8	0.475	2.74	49.5	0.033	1131.	0.25	900.	0.450	0.063
140	112.7	66.9	0.452	2.71	52.5	0.032	1177.	0.25	962.	0.466	0.067
150	120.5	71.2	0.429	2.68	55.3	0.031	1215.	0.25	1024.	0.481	0.071
160	128.4	75.8	0.408	2.64	58.1	0.030	1247.	0.25	1085.	0.495	0.075
170	136.6	80.7	0.387	2.61	60.9	0.029	1273.	0.25	1145.	0.508	0.079
180	144.8	85.5	0.368	2.59	63.8	0.028	1296.	0.26	1205.	0.521	0.083
190	153.3	90.3	0.349	2.56	66.8	0.027	1317.	0.26	1264.	0.532	0.087
200	161.7	94.8	0.331	2.54	69.9	0.025	1336.	0.26	1324.	0.544	0.091
210	170.2	99.0	0.313	2.51	73.1	0.024	1355.	0.26	1383.	0.555	0.095
220	178.8	102.9	0.296	2.49	76.5	0.023	1373.	0.26	1442.	0.566	0.099
230	187.3	106.5	0.280	2.47	79.9	0.022	1390.	0.26	1501.	0.577	0.103
240	195.8	110.0	0.264	2.45	83.3	0.020	1406.	0.26	1559.	0.587	0.107
250	204.4	113.4	0.249	2.42	86.7	0.019	1422.	0.26	1617.	0.597	0.110
260	212.9	116.7	0.234	2.41	90.1	0.018	1436.	0.26	1675.	0.607	0.114
270	221.4	120.1	0.219	2.39	93.3	0.017	1450.	0.25	1732.	0.617	0.118
280	229.9	123.5	0.205	2.37	96.5	0.017	1463.	0.25	1789.	0.626	0.122
290	238.3	127.0	0.191	2.35	99.5	0.016	1475.	0.25	1845.	0.635	0.126
300	246.7	130.6	0.178	2.33	102.3	0.015	1486.	0.25	1901.	0.643	0.129
310	255.1	134.3	0.165	2.32	104.9	0.015	1496.	0.25	1956.	0.651	0.133
320	263.4	138.2	0.152	2.30	107.4	0.014	1506.	0.25	2010.	0.659	0.136
330	271.7	142.2	0.140	2.29	109.7	0.014	1514.	0.26	2064.	0.666	0.140
340	280.0	146.3	0.128	2.27	111.9	0.014	1522.	0.26	2118.	0.673	0.143
350	288.3	150.5	0.116	2.26	114.0	0.013	1530.	0.26	2171.	0.680	0.147
360	296.5	154.8	0.104	2.24	116.1	0.013	1538.	0.26	2224.	0.687	0.150
370	304.7	159.1	0.093	2.23	118.0	0.013	1544.	0.26	2277.	0.694	0.154
380	312.9	163.4	0.081	2.21	119.9	0.013	1551.	0.26	2329.	0.700	0.157
390	321.1	167.8	0.070	2.20	121.8	0.012	1558.	0.27	2382.	0.706	0.161
400	329.3	172.1	0.060	2.19	123.6	0.012	1564.	0.27	2433.	0.712	0.164

Mg in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**		w/o
10	11.6	8.1	0.968	3.95	6.6	0.109	121.	0.19	120.	0.053	0.009
15	16.1	11.1	0.919	3.71	8.8	0.098	177.	0.19	163.	0.078	0.012
20	20.4	13.9	0.877	3.55	11.0	0.090	232.	0.19	203.	0.102	0.015
25	24.7	16.6	0.839	3.42	13.1	0.083	284.	0.19	243.	0.125	0.018
30	29.0	19.2	0.806	3.33	15.2	0.077	334.	0.19	283.	0.147	0.021
35	33.3	21.7	0.776	3.25	17.3	0.072	383.	0.19	322.	0.168	0.024
40	37.6	24.3	0.748	3.18	19.4	0.067	431.	0.19	361.	0.189	0.026
45	42.0	26.9	0.723	3.12	21.5	0.063	476.	0.19	399.	0.209	0.029
50	46.3	29.5	0.699	3.07	23.6	0.060	521.	0.20	436.	0.230	0.031
55	50.7	32.1	0.677	3.03	25.7	0.056	564.	0.20	473.	0.250	0.034
60	55.0	34.8	0.656	2.99	27.8	0.054	607.	0.20	510.	0.269	0.036
65	59.3	37.4	0.637	2.95	29.8	0.051	649.	0.20	546.	0.288	0.039
70	63.4	39.9	0.618	2.92	31.7	0.050	690.	0.20	582.	0.305	0.041
75	67.5	42.4	0.600	2.89	33.6	0.048	731.	0.20	618.	0.322	0.044
80	71.5	44.6	0.583	2.86	35.4	0.048	771.	0.20	654.	0.337	0.046
85	75.4	46.9	0.567	2.83	37.1	0.047	811.	0.20	689.	0.350	0.049
90	79.3	49.1	0.551	2.81	38.8	0.046	849.	0.20	725.	0.363	0.051
95	83.4	51.4	0.537	2.79	40.5	0.046	885.	0.21	761.	0.375	0.053
100	87.6	53.8	0.522	2.77	42.2	0.045	919.	0.21	796.	0.385	0.056
110	96.5	59.0	0.495	2.73	45.7	0.043	980.	0.21	867.	0.405	0.061
120	105.8	64.5	0.470	2.69	49.3	0.040	1033.	0.20	936.	0.422	0.065
130	115.3	70.1	0.446	2.66	53.1	0.038	1078.	0.20	1006.	0.438	0.070
140	124.7	75.4	0.423	2.63	56.9	0.035	1117.	0.20	1075.	0.453	0.074
150	133.9	80.4	0.402	2.60	60.9	0.033	1151.	0.20	1144.	0.467	0.079
160	142.6	84.9	0.381	2.58	65.0	0.031	1180.	0.20	1213.	0.481	0.084
170	151.1	89.0	0.362	2.56	69.1	0.029	1206.	0.20	1281.	0.494	0.088
180	159.4	92.8	0.343	2.54	73.2	0.027	1229.	0.20	1349.	0.506	0.093
190	167.7	96.6	0.325	2.52	77.3	0.026	1249.	0.20	1416.	0.518	0.097
200	176.0	100.3	0.308	2.50	81.4	0.025	1268.	0.20	1483.	0.530	0.102
210	184.5	104.2	0.292	2.48	85.4	0.024	1285.	0.20	1548.	0.541	0.106
220	193.1	108.1	0.276	2.47	89.3	0.023	1301.	0.20	1613.	0.551	0.110
230	201.8	112.0	0.261	2.45	93.1	0.023	1315.	0.20	1678.	0.561	0.115
240	210.7	116.0	0.246	2.44	96.8	0.022	1328.	0.20	1741.	0.571	0.119
250	219.7	120.1	0.232	2.42	100.4	0.021	1340.	0.20	1804.	0.580	0.123
260	228.8	124.2	0.218	2.41	103.8	0.021	1352.	0.20	1866.	0.589	0.127
270	238.1	128.2	0.204	2.40	107.2	0.020	1362.	0.20	1927.	0.597	0.131
280	247.4	132.3	0.191	2.39	110.5	0.020	1372.	0.20	1988.	0.605	0.135
290	256.9	136.4	0.178	2.37	113.6	0.019	1381.	0.20	2048.	0.613	0.139
300	266.4	140.5	0.166	2.36	116.7	0.019	1389.	0.20	2108.	0.621	0.143
310	276.1	144.6	0.154	2.35	119.6	0.018	1397.	0.20	2167.	0.628	0.147
320	285.8	148.6	0.142	2.34	122.5	0.017	1404.	0.20	2226.	0.635	0.151
330	295.6	152.6	0.131	2.33	125.2	0.017	1411.	0.21	2284.	0.642	0.155
340	305.5	156.7	0.120	2.32	127.9	0.016	1417.	0.21	2341.	0.649	0.158
350	315.5	160.7	0.109	2.31	130.5	0.016	1423.	0.21	2398.	0.655	0.162
360	325.5	164.7	0.098	2.31	133.0	0.015	1429.	0.21	2455.	0.661	0.166
370	335.5	168.6	0.087	2.30	135.5	0.014	1434.	0.21	2512.	0.668	0.170
380	345.7	172.6	0.077	2.29	138.0	0.014	1440.	0.21	2568.	0.674	0.173
390	355.8	176.6	0.067	2.28	140.4	0.013	1445.	0.21	2624.	0.679	0.177
400	366.0	180.5	0.057	2.27	142.8	0.013	1450.	0.21	2679.	0.685	0.180

Si in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	9.8	6.9	0.979	3.90	5.3	0.092	122.	0.24	99.	0.053	0.008
15	13.4	9.4	0.952	3.74	7.2	0.084	178.	0.25	134.	0.077	0.010
20	16.9	11.7	0.919	3.62	8.9	0.078	233.	0.26	167.	0.100	0.013
25	20.5	13.9	0.887	3.53	10.5	0.073	286.	0.26	199.	0.123	0.015
30	24.2	16.2	0.855	3.45	12.1	0.068	338.	0.27	230.	0.145	0.017
35	27.9	18.4	0.826	3.38	13.6	0.064	388.	0.27	261.	0.167	0.019
40	31.5	20.6	0.798	3.32	15.2	0.060	437.	0.27	291.	0.187	0.021
45	34.8	22.6	0.771	3.27	16.8	0.057	484.	0.27	321.	0.208	0.023
50	37.8	24.6	0.745	3.22	18.4	0.054	530.	0.26	350.	0.228	0.025
55	40.5	26.4	0.721	3.18	20.1	0.050	575.	0.26	379.	0.248	0.027
60	43.1	28.2	0.698	3.14	21.9	0.048	618.	0.26	408.	0.267	0.029
65	45.9	30.0	0.676	3.11	23.6	0.045	661.	0.26	437.	0.285	0.031
70	49.1	32.0	0.655	3.07	25.2	0.043	702.	0.26	465.	0.302	0.033
75	52.7	34.1	0.634	3.04	26.8	0.041	743.	0.26	494.	0.318	0.035
80	56.8	36.3	0.615	3.01	28.3	0.040	783.	0.26	522.	0.332	0.037
85	61.3	38.7	0.596	2.98	29.7	0.039	822.	0.26	550.	0.346	0.039
90	65.9	41.1	0.578	2.95	31.1	0.038	859.	0.27	578.	0.358	0.041
95	70.4	43.3	0.560	2.93	32.5	0.037	897.	0.27	606.	0.370	0.043
100	74.5	45.4	0.543	2.91	34.0	0.036	933.	0.27	634.	0.381	0.045
110	81.2	49.0	0.510	2.86	37.3	0.034	1003.	0.27	690.	0.402	0.048
120	86.8	52.0	0.480	2.82	40.6	0.032	1067.	0.27	746.	0.422	0.052
130	92.0	55.1	0.450	2.78	43.8	0.030	1123.	0.28	801.	0.441	0.056
140	97.5	58.3	0.423	2.74	46.8	0.028	1170.	0.28	855.	0.457	0.060
150	103.9	62.1	0.396	2.71	49.3	0.028	1207.	0.28	908.	0.471	0.063
160	111.5	66.5	0.371	2.68	51.4	0.027	1234.	0.28	960.	0.483	0.067
170	120.1	71.2	0.347	2.65	53.2	0.027	1254.	0.27	1011.	0.493	0.070
180	129.3	76.1	0.323	2.62	55.0	0.027	1268.	0.27	1062.	0.503	0.073
190	138.9	80.9	0.301	2.59	57.0	0.026	1279.	0.27	1113.	0.511	0.077
200	148.5	85.4	0.279	2.57	59.2	0.025	1288.	0.27	1164.	0.519	0.080
210	157.9	89.3	0.258	2.54	61.9	0.024	1296.	0.27	1215.	0.526	0.084
220	167.1	92.8	0.238	2.52	65.0	0.023	1304.	0.27	1267.	0.533	0.087
230	176.0	96.0	0.219	2.50	68.3	0.022	1311.	0.27	1318.	0.540	0.090
240	184.7	98.9	0.200	2.48	71.9	0.020	1319.	0.27	1369.	0.548	0.094
250	193.0	101.6	0.181	2.46	75.7	0.019	1327.	0.27	1420.	0.555	0.097
260	201.1	104.1	0.164	2.44	79.6	0.017	1336.	0.27	1470.	0.562	0.100
270	208.8	106.7	0.146	2.42	83.5	0.016	1345.	0.27	1520.	0.569	0.104
280	216.2	109.2	0.129	2.40	87.4	0.015	1355.	0.27	1570.	0.577	0.107
290	223.2	111.7	0.113	2.38	91.3	0.014	1366.	0.27	1619.	0.584	0.110
300	229.9	114.4	0.097	2.36	95.1	0.014	1378.	0.27	1667.	0.592	0.113
310	236.3	117.1	0.081	2.35	98.8	0.013	1391.	0.27	1714.	0.600	0.117
320	242.4	120.0	0.066	2.33	102.3	0.013	1404.	0.27	1761.	0.609	0.120
330	248.3	122.9	0.051	2.32	105.7	0.013	1419.	0.27	1808.	0.617	0.123
340	253.9	126.0	0.036	2.30	109.1	0.013	1433.	0.27	1854.	0.626	0.126
350	259.3	129.1	0.022	2.29	112.3	0.013	1448.	0.27	1899.	0.634	0.129
360	264.6	132.2	0.008	2.27	115.5	0.013	1463.	0.27	1944.	0.643	0.132
370	269.7	135.3	-0.006	2.26	118.7	0.013	1479.	0.27	1989.	0.651	0.135
380	274.8	138.5	-0.019	2.24	121.8	0.013	1494.	0.28	2033.	0.660	0.138
390	279.7	141.7	-0.033	2.23	124.8	0.013	1509.	0.28	2077.	0.668	0.140
400	284.6	144.9	-0.046	2.22	127.9	0.013	1524.	0.28	2121.	0.677	0.143

P in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	8.9	6.2	0.915	3.70	4.4	0.080	118.	0.30	87.	0.050 0.007
15	12.0	8.3	0.876	3.53	6.0	0.068	172.	0.30	117.	0.073 0.009
20	15.0	10.2	0.840	3.41	7.5	0.061	225.	0.30	145.	0.096 0.011
25	17.9	12.2	0.808	3.31	8.8	0.056	275.	0.30	171.	0.117 0.013
30	20.8	14.1	0.778	3.24	10.1	0.052	324.	0.31	197.	0.137 0.015
35	23.8	16.1	0.751	3.17	11.4	0.049	371.	0.31	222.	0.157 0.016
40	26.8	18.0	0.726	3.12	12.6	0.047	416.	0.31	247.	0.177 0.018
45	30.0	19.8	0.702	3.07	13.8	0.044	460.	0.31	271.	0.196 0.020
50	33.2	21.5	0.680	3.02	14.9	0.042	503.	0.30	295.	0.214 0.021
55	36.4	23.1	0.659	2.98	16.1	0.040	545.	0.30	319.	0.233 0.023
60	39.6	24.6	0.640	2.95	17.2	0.039	585.	0.30	342.	0.251 0.025
65	42.7	26.1	0.621	2.91	18.4	0.037	625.	0.30	366.	0.268 0.026
70	45.7	27.6	0.604	2.88	19.6	0.036	664.	0.30	389.	0.284 0.028
75	48.4	29.2	0.587	2.85	20.8	0.034	703.	0.30	412.	0.299 0.029
80	50.8	30.9	0.571	2.83	22.0	0.033	741.	0.30	434.	0.312 0.031
85	53.1	32.6	0.555	2.80	23.3	0.032	778.	0.31	456.	0.324 0.032
90	55.4	34.3	0.540	2.78	24.6	0.031	815.	0.31	478.	0.336 0.034
95	57.8	36.1	0.526	2.76	25.9	0.030	849.	0.32	500.	0.346 0.035
100	60.3	37.7	0.512	2.73	27.1	0.029	882.	0.32	522.	0.356 0.037
110	65.9	41.0	0.486	2.69	29.6	0.027	942.	0.32	566.	0.374 0.040
120	72.0	44.0	0.461	2.66	31.9	0.025	995.	0.32	609.	0.390 0.043
130	78.4	47.0	0.438	2.62	34.0	0.023	1041.	0.32	652.	0.404 0.046
140	84.8	50.0	0.416	2.59	36.1	0.021	1081.	0.32	695.	0.418 0.049
150	90.9	52.9	0.395	2.56	38.0	0.020	1115.	0.31	738.	0.430 0.051
160	96.7	55.9	0.376	2.54	39.7	0.019	1144.	0.31	780.	0.442 0.054
170	102.2	59.0	0.357	2.51	41.4	0.019	1169.	0.32	822.	0.453 0.057
180	107.6	62.0	0.338	2.49	43.0	0.019	1191.	0.32	863.	0.464 0.060
190	112.9	65.0	0.321	2.47	44.7	0.018	1211.	0.32	903.	0.475 0.063
200	118.2	68.1	0.304	2.44	46.3	0.018	1229.	0.32	943.	0.485 0.065
210	123.7	71.0	0.288	2.42	48.0	0.018	1247.	0.32	981.	0.494 0.068
220	129.2	74.0	0.273	2.40	49.8	0.018	1263.	0.32	1020.	0.503 0.070
230	134.8	76.9	0.258	2.39	51.5	0.018	1279.	0.32	1057.	0.512 0.073
240	140.4	79.7	0.243	2.37	53.4	0.017	1294.	0.32	1094.	0.521 0.075
250	146.1	82.5	0.229	2.35	55.2	0.017	1308.	0.32	1131.	0.529 0.078
260	151.8	85.3	0.215	2.33	57.1	0.017	1321.	0.32	1167.	0.537 0.080
270	157.6	88.0	0.202	2.32	59.0	0.016	1334.	0.32	1204.	0.545 0.082
280	163.3	90.7	0.189	2.30	61.0	0.016	1345.	0.32	1240.	0.552 0.085
290	169.0	93.4	0.176	2.29	63.0	0.015	1356.	0.32	1276.	0.559 0.087
300	174.7	96.0	0.164	2.27	65.0	0.014	1366.	0.32	1312.	0.566 0.090
310	180.4	98.5	0.152	2.26	67.0	0.014	1375.	0.32	1348.	0.573 0.092
320	186.0	101.1	0.141	2.25	69.1	0.013	1384.	0.32	1385.	0.579 0.094
330	191.7	103.5	0.129	2.24	71.1	0.012	1392.	0.32	1421.	0.584 0.097
340	197.3	106.0	0.118	2.22	73.2	0.011	1400.	0.32	1457.	0.590 0.099
350	202.8	108.4	0.107	2.21	75.3	0.010	1407.	0.32	1494.	0.596 0.102
360	208.4	110.8	0.097	2.20	77.4	0.009	1414.	0.32	1530.	0.601 0.104
370	214.0	113.2	0.086	2.19	79.5	0.008	1420.	0.32	1566.	0.606 0.106
380	219.5	115.6	0.076	2.18	81.6	0.007	1427.	0.32	1603.	0.611 0.109
390	225.0	117.9	0.066	2.17	83.8	0.006	1433.	0.32	1639.	0.616 0.111
400	230.5	120.2	0.056	2.16	85.9	0.005	1439.	0.32	1675.	0.621 0.114

Ar in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	7.6	5.5	0.988	4.05	3.5	0.057	125.	0.40	71.	0.052	0.005
15	10.4	7.4	0.941	3.81	4.8	0.049	183.	0.41	95.	0.077	0.007
20	13.0	9.2	0.902	3.64	5.9	0.045	240.	0.41	117.	0.100	0.009
25	15.6	10.8	0.869	3.52	7.0	0.042	296.	0.41	138.	0.123	0.010
30	18.1	12.4	0.839	3.42	8.0	0.041	350.	0.40	158.	0.146	0.012
35	20.7	13.9	0.813	3.34	9.0	0.040	403.	0.40	178.	0.168	0.013
40	23.2	15.4	0.789	3.27	10.1	0.039	455.	0.40	197.	0.189	0.015
45	25.6	16.9	0.766	3.21	11.2	0.037	506.	0.40	216.	0.210	0.016
50	28.0	18.5	0.746	3.16	12.3	0.036	555.	0.40	235.	0.232	0.017
55	30.2	20.1	0.727	3.12	13.4	0.034	603.	0.40	255.	0.253	0.019
60	32.4	21.7	0.709	3.07	14.5	0.032	651.	0.40	274.	0.273	0.020
65	34.6	23.3	0.692	3.04	15.6	0.030	698.	0.40	293.	0.293	0.021
70	36.8	24.9	0.676	3.00	16.6	0.028	744.	0.41	312.	0.311	0.023
75	39.1	26.4	0.661	2.97	17.5	0.026	790.	0.41	332.	0.328	0.024
80	41.5	27.8	0.646	2.94	18.2	0.024	836.	0.41	350.	0.344	0.025
85	44.0	29.2	0.632	2.92	18.8	0.023	880.	0.42	369.	0.358	0.026
90	46.5	30.5	0.619	2.89	19.4	0.022	924.	0.42	388.	0.371	0.028
95	49.1	31.8	0.607	2.87	20.1	0.020	965.	0.42	407.	0.384	0.029
100	51.7	33.0	0.594	2.85	20.7	0.020	1005.	0.42	425.	0.395	0.030
110	56.9	35.6	0.571	2.81	22.2	0.018	1078.	0.42	462.	0.417	0.033
120	62.0	38.2	0.550	2.77	23.9	0.017	1142.	0.42	498.	0.436	0.035
130	67.2	40.8	0.530	2.74	25.7	0.017	1200.	0.42	534.	0.454	0.038
140	72.1	43.4	0.510	2.71	27.5	0.016	1250.	0.42	569.	0.470	0.040
150	77.0	46.1	0.492	2.68	29.4	0.016	1294.	0.42	604.	0.486	0.042
160	81.6	48.7	0.475	2.66	31.2	0.016	1333.	0.42	638.	0.501	0.045
170	86.2	51.4	0.459	2.63	33.0	0.015	1367.	0.42	673.	0.515	0.047
180	90.6	54.0	0.443	2.61	34.9	0.015	1399.	0.42	707.	0.528	0.049
190	95.0	56.7	0.429	2.59	36.6	0.014	1428.	0.42	740.	0.542	0.052
200	99.5	59.4	0.414	2.57	38.4	0.014	1455.	0.43	774.	0.554	0.054
210	103.9	62.0	0.401	2.56	40.1	0.013	1481.	0.43	808.	0.567	0.056
220	108.4	64.7	0.387	2.54	41.8	0.012	1506.	0.43	841.	0.579	0.058
230	113.0	67.3	0.375	2.52	43.5	0.012	1529.	0.43	875.	0.590	0.061
240	117.6	69.9	0.362	2.51	45.1	0.011	1552.	0.43	908.	0.602	0.063
250	122.4	72.5	0.350	2.50	46.8	0.010	1573.	0.43	941.	0.613	0.065
260	127.2	75.1	0.339	2.48	48.4	0.010	1593.	0.43	975.	0.623	0.067
270	132.0	77.7	0.327	2.47	50.1	0.009	1612.	0.43	1008.	0.633	0.069
280	137.0	80.2	0.317	2.46	51.7	0.009	1630.	0.43	1041.	0.643	0.072
290	142.1	82.7	0.306	2.45	53.4	0.008	1646.	0.43	1074.	0.652	0.074
300	147.3	85.2	0.296	2.43	55.0	0.008	1662.	0.43	1107.	0.660	0.076
310	152.6	87.7	0.286	2.42	56.7	0.007	1676.	0.43	1139.	0.669	0.078
320	158.0	90.1	0.276	2.41	58.4	0.007	1690.	0.43	1172.	0.677	0.080
330	163.5	92.5	0.266	2.40	60.1	0.007	1703.	0.43	1204.	0.684	0.083
340	169.1	94.9	0.257	2.39	61.8	0.007	1715.	0.42	1236.	0.691	0.085
350	174.7	97.3	0.248	2.38	63.5	0.007	1726.	0.42	1268.	0.699	0.087
360	180.4	99.7	0.239	2.38	65.2	0.007	1737.	0.42	1300.	0.705	0.089
370	186.2	102.0	0.231	2.37	66.9	0.007	1748.	0.42	1332.	0.712	0.091
380	192.0	104.3	0.222	2.36	68.6	0.007	1758.	0.42	1364.	0.718	0.093
390	197.8	106.7	0.214	2.35	70.3	0.007	1768.	0.42	1396.	0.725	0.095
400	203.7	109.0	0.206	2.34	72.1	0.007	1778.	0.41	1427.	0.731	0.097

Cr in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with ***sec/ion***	w/o
10	6.5	4.7	1.006	4.05	2.8	0.033	133.	0.49	56.	0.054	0.004
15	8.7	6.2	0.974	3.89	3.7	0.031	196.	0.49	74.	0.080	0.006
20	10.7	7.6	0.945	3.77	4.5	0.029	259.	0.50	91.	0.106	0.007
25	12.6	8.9	0.920	3.68	5.4	0.026	320.	0.50	107.	0.131	0.008
30	14.5	10.2	0.897	3.61	6.3	0.024	380.	0.50	122.	0.155	0.009
35	16.4	11.5	0.877	3.54	7.3	0.022	440.	0.50	137.	0.180	0.010
40	18.2	12.8	0.858	3.49	8.1	0.021	498.	0.50	152.	0.204	0.011
45	20.1	14.0	0.841	3.44	8.9	0.020	555.	0.50	167.	0.227	0.012
50	22.0	15.2	0.825	3.40	9.6	0.019	612.	0.50	181.	0.251	0.013
55	24.0	16.4	0.809	3.36	10.2	0.019	668.	0.50	196.	0.275	0.014
60	25.9	17.6	0.795	3.33	10.7	0.019	723.	0.50	210.	0.298	0.015
65	27.9	18.8	0.782	3.30	11.2	0.019	778.	0.50	224.	0.320	0.016
70	29.8	20.0	0.769	3.27	11.8	0.019	832.	0.50	238.	0.341	0.017
75	31.7	21.2	0.757	3.24	12.4	0.018	886.	0.50	253.	0.361	0.018
80	33.6	22.5	0.745	3.22	13.1	0.017	940.	0.50	267.	0.380	0.019
85	35.5	23.8	0.734	3.19	13.8	0.016	993.	0.50	281.	0.397	0.020
90	37.4	25.1	0.724	3.17	14.5	0.015	1045.	0.50	295.	0.413	0.021
95	39.3	26.4	0.713	3.15	15.3	0.014	1095.	0.50	309.	0.427	0.022
100	41.2	27.6	0.704	3.13	16.0	0.013	1144.	0.50	324.	0.442	0.023
110	45.3	29.9	0.685	3.09	17.5	0.011	1235.	0.50	352.	0.468	0.025
120	49.5	32.1	0.667	3.06	18.9	0.010	1317.	0.51	381.	0.492	0.027
130	53.6	34.1	0.651	3.03	20.2	0.010	1392.	0.51	410.	0.515	0.029
140	57.7	36.1	0.635	3.00	21.6	0.010	1459.	0.51	438.	0.536	0.031
150	61.5	38.1	0.621	2.97	22.9	0.010	1520.	0.51	465.	0.557	0.033
160	65.0	40.1	0.607	2.95	24.2	0.010	1575.	0.51	492.	0.577	0.035
170	68.4	42.1	0.593	2.92	25.5	0.010	1624.	0.51	519.	0.596	0.037
180	71.7	44.2	0.581	2.90	26.8	0.010	1670.	0.51	546.	0.614	0.038
190	75.1	46.3	0.568	2.88	28.2	0.010	1712.	0.51	572.	0.632	0.040
200	78.5	48.4	0.557	2.86	29.6	0.010	1751.	0.51	599.	0.649	0.042
210	82.2	50.6	0.545	2.84	31.0	0.010	1788.	0.51	626.	0.665	0.044
220	86.0	52.9	0.534	2.83	32.5	0.010	1823.	0.51	654.	0.681	0.046
230	89.9	55.2	0.524	2.81	34.0	0.009	1856.	0.51	682.	0.696	0.048
240	94.0	57.5	0.514	2.79	35.4	0.009	1888.	0.51	710.	0.710	0.049
250	98.1	59.8	0.504	2.78	36.9	0.009	1919.	0.51	738.	0.724	0.051
260	102.3	62.2	0.494	2.76	38.4	0.008	1948.	0.51	766.	0.738	0.053
270	106.5	64.5	0.485	2.75	39.8	0.008	1977.	0.51	794.	0.751	0.055
280	110.7	66.8	0.476	2.73	41.3	0.008	2005.	0.50	822.	0.764	0.057
290	115.0	69.2	0.467	2.72	42.6	0.007	2032.	0.50	849.	0.777	0.059
300	119.2	71.5	0.459	2.71	44.0	0.007	2058.	0.50	877.	0.790	0.061
310	123.4	73.7	0.451	2.69	45.3	0.007	2084.	0.50	904.	0.802	0.062
320	127.6	76.0	0.442	2.68	46.5	0.007	2109.	0.50	931.	0.814	0.064
330	131.8	78.2	0.435	2.67	47.7	0.006	2134.	0.50	958.	0.826	0.066
340	135.9	80.5	0.427	2.66	48.9	0.006	2158.	0.50	985.	0.838	0.068
350	140.0	82.7	0.419	2.65	50.0	0.006	2182.	0.50	1011.	0.849	0.070
360	144.1	84.9	0.412	2.64	51.2	0.006	2206.	0.50	1038.	0.861	0.071
370	148.2	87.1	0.405	2.63	52.3	0.005	2229.	0.50	1064.	0.872	0.073
380	152.3	89.3	0.398	2.62	53.3	0.005	2252.	0.49	1090.	0.883	0.075
390	156.4	91.4	0.391	2.61	54.4	0.005	2274.	0.49	1116.	0.894	0.077
400	160.5	93.6	0.384	2.60	55.5	0.005	2296.	0.49	1142.	0.905	0.078

Zn in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols	t with **sec/ion**	w/o
10	5.6	4.0	1.041	4.12	2.3	0.016	137.	0.55	47.	0.055	0.004
15	7.1	5.2	1.027	4.02	2.9	0.015	203.	0.55	61.	0.082	0.005
20	8.6	6.4	1.009	3.95	3.5	0.014	267.	0.56	74.	0.109	0.006
25	10.2	7.5	0.990	3.89	4.1	0.013	331.	0.56	87.	0.134	0.007
30	12.0	8.7	0.973	3.83	4.7	0.012	394.	0.55	100.	0.160	0.008
35	13.8	9.9	0.956	3.78	5.2	0.012	456.	0.55	112.	0.185	0.008
40	15.7	11.0	0.940	3.74	5.8	0.011	517.	0.55	124.	0.209	0.009
45	17.4	12.2	0.924	3.70	6.4	0.011	577.	0.55	135.	0.234	0.010
50	19.1	13.2	0.910	3.66	7.0	0.011	637.	0.55	147.	0.259	0.011
55	20.7	14.3	0.896	3.63	7.6	0.010	696.	0.55	158.	0.284	0.012
60	22.1	15.3	0.882	3.59	8.1	0.010	754.	0.56	168.	0.308	0.012
65	23.6	16.2	0.870	3.56	8.7	0.010	812.	0.56	179.	0.332	0.013
70	25.0	17.2	0.857	3.53	9.3	0.010	870.	0.56	190.	0.355	0.014
75	26.4	18.2	0.846	3.51	9.9	0.009	928.	0.56	201.	0.376	0.015
80	27.9	19.2	0.834	3.48	10.6	0.009	986.	0.56	212.	0.396	0.015
85	29.3	20.1	0.823	3.46	11.2	0.009	1044.	0.56	223.	0.414	0.016
90	30.8	21.1	0.813	3.43	11.8	0.009	1101.	0.56	234.	0.431	0.017
95	32.3	22.1	0.802	3.41	12.4	0.008	1156.	0.56	245.	0.447	0.018
100	33.8	23.0	0.793	3.39	13.0	0.008	1210.	0.56	256.	0.463	0.019
110	36.8	24.7	0.774	3.35	14.1	0.008	1312.	0.56	277.	0.492	0.020
120	39.7	26.3	0.756	3.31	15.1	0.007	1405.	0.56	299.	0.520	0.022
130	42.6	28.0	0.739	3.28	16.1	0.006	1490.	0.56	320.	0.545	0.023
140	45.5	29.7	0.723	3.24	17.0	0.006	1566.	0.55	341.	0.569	0.024
150	48.4	31.5	0.707	3.21	17.9	0.006	1635.	0.55	362.	0.592	0.026
160	51.3	33.5	0.692	3.18	18.9	0.005	1696.	0.55	384.	0.614	0.027
170	54.3	35.6	0.678	3.15	19.8	0.005	1751.	0.55	406.	0.635	0.029
180	57.2	37.7	0.665	3.13	20.8	0.005	1802.	0.55	428.	0.655	0.030
190	60.3	39.8	0.652	3.10	21.8	0.005	1849.	0.55	450.	0.674	0.032
200	63.3	41.9	0.639	3.08	22.7	0.005	1894.	0.55	471.	0.693	0.033
210	66.4	43.9	0.627	3.05	23.7	0.004	1937.	0.55	493.	0.712	0.035
220	69.6	45.9	0.615	3.03	24.7	0.004	1979.	0.55	514.	0.730	0.036
230	72.8	47.7	0.604	3.01	25.7	0.004	2020.	0.55	535.	0.747	0.038
240	76.0	49.6	0.593	2.99	26.7	0.004	2059.	0.55	556.	0.764	0.039
250	79.3	51.4	0.582	2.96	27.7	0.004	2097.	0.55	577.	0.781	0.040
260	82.6	53.1	0.571	2.94	28.8	0.004	2135.	0.55	598.	0.797	0.042
270	85.9	54.8	0.561	2.93	29.8	0.004	2171.	0.55	619.	0.813	0.043
280	89.2	56.5	0.551	2.91	30.9	0.004	2206.	0.55	640.	0.829	0.045
290	92.6	58.1	0.542	2.89	32.0	0.003	2240.	0.55	662.	0.844	0.046
300	95.9	59.7	0.532	2.87	33.2	0.003	2274.	0.55	683.	0.859	0.048
310	99.3	61.3	0.523	2.85	34.3	0.003	2307.	0.55	705.	0.874	0.049
320	102.6	62.9	0.514	2.84	35.5	0.003	2339.	0.55	726.	0.888	0.050
330	106.0	64.4	0.506	2.82	36.7	0.003	2370.	0.56	748.	0.902	0.052
340	109.4	66.0	0.497	2.80	38.0	0.003	2401.	0.56	770.	0.916	0.053
350	112.8	67.5	0.489	2.79	39.2	0.003	2431.	0.56	792.	0.930	0.055
360	116.2	69.0	0.480	2.77	40.5	0.003	2461.	0.56	814.	0.943	0.056
370	119.5	70.5	0.472	2.76	41.7	0.003	2490.	0.56	837.	0.956	0.058
380	122.9	71.9	0.464	2.74	43.0	0.003	2518.	0.56	859.	0.969	0.059
390	126.3	73.4	0.457	2.73	44.3	0.003	2546.	0.56	881.	0.982	0.061
400	129.8	74.9	0.449	2.72	45.6	0.004	2574.	0.56	903.	0.995	0.062

Ge in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols	t with **sec/ion**	w/o
10	5.4	3.9	1.008	4.00	2.1	0.011	139.	0.56	45.	0.056	0.003
15	7.2	5.1	1.000	3.96	2.7	0.010	207.	0.56	58.	0.084	0.005
20	8.8	6.2	0.987	3.92	3.2	0.009	273.	0.56	71.	0.111	0.005
25	10.4	7.3	0.973	3.88	3.8	0.008	339.	0.56	83.	0.137	0.006
30	12.0	8.4	0.959	3.84	4.3	0.008	404.	0.56	94.	0.163	0.007
35	13.6	9.5	0.945	3.81	4.9	0.008	468.	0.56	105.	0.189	0.008
40	15.1	10.5	0.932	3.77	5.4	0.008	531.	0.56	116.	0.215	0.009
45	16.6	11.5	0.919	3.74	6.0	0.007	594.	0.56	127.	0.240	0.010
50	18.1	12.4	0.907	3.70	6.5	0.007	656.	0.56	138.	0.266	0.010
55	19.5	13.4	0.896	3.67	7.0	0.007	718.	0.56	148.	0.292	0.011
60	20.9	14.3	0.884	3.64	7.6	0.006	780.	0.56	158.	0.318	0.012
65	22.2	15.2	0.874	3.62	8.1	0.006	842.	0.56	169.	0.343	0.012
70	23.5	16.0	0.863	3.59	8.6	0.006	903.	0.56	179.	0.367	0.013
75	24.8	17.0	0.853	3.56	9.0	0.005	964.	0.56	189.	0.389	0.014
80	26.1	17.9	0.843	3.54	9.5	0.005	1025.	0.56	199.	0.409	0.015
85	27.4	18.8	0.834	3.51	9.9	0.005	1085.	0.56	210.	0.428	0.015
90	28.7	19.7	0.825	3.49	10.4	0.004	1144.	0.56	220.	0.446	0.016
95	30.1	20.7	0.816	3.47	10.8	0.004	1201.	0.56	230.	0.463	0.017
100	31.5	21.6	0.808	3.45	11.4	0.004	1257.	0.56	240.	0.479	0.018
110	34.6	23.4	0.792	3.40	12.6	0.004	1362.	0.56	260.	0.510	0.019
120	37.8	25.2	0.776	3.37	13.9	0.004	1459.	0.56	280.	0.538	0.020
130	41.0	27.0	0.761	3.33	15.2	0.004	1547.	0.56	299.	0.565	0.022
140	44.1	28.9	0.747	3.29	16.3	0.004	1628.	0.56	319.	0.590	0.023
150	47.0	30.7	0.734	3.26	17.2	0.004	1702.	0.57	339.	0.615	0.024
160	49.6	32.6	0.721	3.23	17.9	0.004	1769.	0.57	360.	0.639	0.026
170	52.1	34.5	0.709	3.20	18.4	0.004	1831.	0.57	380.	0.662	0.027
180	54.6	36.4	0.697	3.17	18.8	0.004	1888.	0.57	401.	0.684	0.029
190	57.1	38.2	0.686	3.14	19.4	0.004	1941.	0.57	422.	0.706	0.030
200	59.7	40.0	0.675	3.11	20.0	0.003	1992.	0.57	443.	0.726	0.031
210	62.6	41.7	0.664	3.08	20.9	0.003	2041.	0.57	463.	0.747	0.033
220	65.6	43.4	0.654	3.06	21.9	0.003	2087.	0.57	484.	0.766	0.034
230	68.8	45.0	0.644	3.03	23.0	0.003	2132.	0.57	505.	0.785	0.036
240	72.1	46.7	0.634	3.01	24.2	0.003	2176.	0.57	525.	0.804	0.037
250	75.5	48.3	0.625	2.98	25.5	0.003	2218.	0.57	546.	0.822	0.038
260	78.9	49.9	0.616	2.96	26.9	0.002	2259.	0.57	567.	0.839	0.040
270	82.4	51.6	0.607	2.94	28.2	0.002	2299.	0.57	587.	0.857	0.041
280	85.8	53.3	0.598	2.92	29.6	0.002	2338.	0.57	608.	0.874	0.043
290	89.3	55.0	0.590	2.89	30.9	0.002	2376.	0.57	629.	0.890	0.044
300	92.7	56.8	0.581	2.87	32.2	0.002	2413.	0.57	649.	0.907	0.045
310	96.0	58.7	0.573	2.85	33.3	0.002	2450.	0.57	670.	0.923	0.047
320	99.4	60.6	0.565	2.83	34.5	0.002	2486.	0.57	691.	0.939	0.048
330	102.6	62.6	0.558	2.82	35.5	0.002	2521.	0.57	712.	0.955	0.050
340	105.9	64.6	0.550	2.80	36.5	0.002	2556.	0.57	732.	0.970	0.051
350	109.1	66.6	0.543	2.78	37.5	0.002	2590.	0.57	753.	0.986	0.052
360	112.2	68.7	0.536	2.76	38.4	0.002	2623.	0.57	774.	1.001	0.054
370	115.4	70.8	0.528	2.74	39.3	0.002	2656.	0.57	795.	1.016	0.055
380	118.5	72.9	0.522	2.73	40.1	0.002	2689.	0.57	816.	1.030	0.057
390	121.7	75.1	0.515	2.71	41.0	0.002	2721.	0.57	836.	1.045	0.058
400	124.8	77.2	0.508	2.69	41.8	0.002	2753.	0.57	857.	1.059	0.059

Se in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	5.2	3.7	0.961	3.82	1.9	0.008	139.	0.57	42. 0.056	0.003
15	6.8	4.8	0.960	3.78	2.5	0.007	206.	0.57	55. 0.083	0.004
20	8.3	5.8	0.951	3.74	3.1	0.006	271.	0.57	66. 0.110	0.005
25	9.7	6.8	0.940	3.70	3.5	0.006	336.	0.56	77. 0.136	0.006
30	11.1	7.8	0.929	3.66	3.9	0.006	400.	0.56	87. 0.162	0.007
35	12.4	8.8	0.917	3.63	4.3	0.006	464.	0.56	97. 0.187	0.007
40	13.7	9.8	0.905	3.60	4.6	0.006	527.	0.56	107. 0.213	0.008
45	15.0	10.7	0.893	3.57	5.0	0.006	589.	0.56	117. 0.238	0.009
50	16.3	11.6	0.882	3.54	5.4	0.006	651.	0.56	126. 0.264	0.010
55	17.7	12.5	0.871	3.52	5.8	0.005	712.	0.56	136. 0.289	0.010
60	19.0	13.4	0.861	3.49	6.3	0.005	773.	0.56	145. 0.315	0.011
65	20.3	14.3	0.851	3.47	6.8	0.004	834.	0.56	155. 0.339	0.012
70	21.6	15.1	0.841	3.45	7.3	0.004	895.	0.56	164. 0.362	0.012
75	22.9	15.9	0.831	3.43	7.9	0.004	955.	0.57	173. 0.384	0.013
80	24.1	16.7	0.822	3.41	8.4	0.004	1015.	0.57	183. 0.405	0.013
85	25.3	17.5	0.813	3.39	8.9	0.004	1075.	0.57	192. 0.424	0.014
90	26.6	18.3	0.804	3.37	9.4	0.004	1133.	0.57	201. 0.442	0.015
95	27.8	19.1	0.796	3.35	9.9	0.004	1191.	0.57	210. 0.459	0.015
100	29.1	19.9	0.787	3.33	10.4	0.004	1246.	0.57	219. 0.475	0.016
110	31.7	21.6	0.771	3.30	11.2	0.004	1351.	0.57	237. 0.505	0.017
120	34.5	23.4	0.756	3.27	12.0	0.003	1447.	0.57	255. 0.533	0.019
130	37.2	25.1	0.742	3.24	12.7	0.003	1536.	0.57	273. 0.560	0.020
140	39.9	26.9	0.728	3.21	13.5	0.003	1616.	0.57	291. 0.585	0.021
150	42.4	28.5	0.715	3.18	14.3	0.003	1689.	0.57	309. 0.609	0.022
160	44.7	30.0	0.702	3.16	15.2	0.003	1754.	0.57	327. 0.632	0.024
170	46.9	31.4	0.690	3.13	16.2	0.002	1814.	0.57	346. 0.654	0.025
180	49.2	32.8	0.678	3.11	17.1	0.002	1869.	0.57	364. 0.676	0.026
190	51.5	34.3	0.667	3.09	18.1	0.002	1920.	0.58	383. 0.696	0.027
200	54.1	35.8	0.656	3.07	19.1	0.002	1969.	0.58	401. 0.716	0.029
210	56.8	37.4	0.645	3.04	20.2	0.002	2016.	0.58	419. 0.736	0.030
220	59.8	39.0	0.635	3.02	21.2	0.002	2061.	0.57	437. 0.754	0.031
230	62.9	40.7	0.625	3.00	22.1	0.002	2105.	0.57	455. 0.773	0.032
240	66.1	42.5	0.615	2.99	23.1	0.002	2147.	0.57	473. 0.791	0.033
250	69.4	44.3	0.606	2.97	24.1	0.001	2188.	0.57	491. 0.808	0.035
260	72.8	46.1	0.597	2.95	25.0	0.001	2228.	0.57	509. 0.826	0.036
270	76.1	47.9	0.588	2.93	25.9	0.001	2266.	0.57	526. 0.842	0.037
280	79.5	49.6	0.579	2.92	26.7	0.001	2304.	0.57	544. 0.859	0.038
290	82.8	51.4	0.570	2.90	27.6	0.001	2341.	0.57	562. 0.875	0.039
300	86.1	53.1	0.562	2.88	28.4	0.001	2377.	0.57	580. 0.891	0.041
310	89.3	54.8	0.554	2.87	29.1	0.001	2412.	0.57	598. 0.906	0.042
320	92.4	56.4	0.546	2.85	29.8	0.001	2447.	0.57	616. 0.922	0.043
330	95.4	58.0	0.538	2.84	30.5	0.001	2481.	0.57	635. 0.937	0.044
340	98.3	59.6	0.531	2.82	31.2	0.001	2514.	0.57	653. 0.952	0.045
350	101.2	61.1	0.523	2.81	31.9	0.001	2547.	0.57	671. 0.966	0.047
360	104.1	62.7	0.516	2.80	32.5	0.001	2579.	0.57	690. 0.981	0.048
370	106.9	64.2	0.509	2.78	33.1	0.001	2610.	0.57	708. 0.995	0.049
380	109.7	65.7	0.502	2.77	33.7	0.000	2641.	0.57	727. 1.009	0.050
390	112.5	67.1	0.495	2.76	34.3	0.000	2672.	0.57	745. 1.023	0.052
400	115.3	68.6	0.488	2.74	34.9	0.000	2702.	0.57	764. 1.036	0.053

Sn in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**		w/o
10	4.1	3.0	1.012	3.89	1.3	0.001	142.	0.52	34.	0.056	0.003
15	5.3	3.9	1.010	3.89	1.7	0.001	210.	0.51	44.	0.084	0.003
20	6.5	4.7	1.003	3.89	2.0	0.002	278.	0.51	52.	0.111	0.004
25	7.5	5.5	0.995	3.87	2.4	0.002	345.	0.52	60.	0.138	0.005
30	8.6	6.2	0.985	3.85	2.7	0.001	412.	0.52	67.	0.165	0.005
35	9.6	6.8	0.976	3.83	3.0	0.001	478.	0.52	75.	0.191	0.006
40	10.5	7.5	0.967	3.81	3.3	0.000	544.	0.52	82.	0.217	0.006
45	11.5	8.1	0.958	3.79	3.6	0.000	609.	0.52	88.	0.244	0.007
50	12.3	8.8	0.949	3.77	3.8	0.000	673.	0.52	95.	0.270	0.007
55	13.1	9.5	0.941	3.75	3.9	0.000	737.	0.52	101.	0.297	0.008
60	13.9	10.1	0.933	3.73	4.1	0.001	800.	0.51	107.	0.323	0.008
65	14.7	10.7	0.925	3.71	4.2	0.001	863.	0.51	113.	0.348	0.009
70	15.5	11.3	0.918	3.69	4.4	0.001	926.	0.51	119.	0.372	0.009
75	16.3	11.9	0.910	3.67	4.7	0.001	989.	0.51	125.	0.395	0.009
80	17.1	12.4	0.903	3.66	5.0	0.001	1052.	0.51	132.	0.416	0.010
85	17.9	12.9	0.896	3.64	5.4	0.001	1114.	0.52	138.	0.436	0.010
90	18.7	13.4	0.890	3.62	5.7	0.001	1176.	0.52	144.	0.455	0.011
95	19.5	13.9	0.883	3.60	6.1	0.001	1236.	0.52	150.	0.472	0.011
100	20.4	14.4	0.877	3.59	6.4	0.001	1295.	0.52	156.	0.489	0.012
110	22.1	15.5	0.865	3.56	7.0	0.001	1407.	0.52	168.	0.521	0.013
120	23.8	16.6	0.853	3.53	7.4	0.001	1511.	0.52	180.	0.551	0.013
130	25.6	17.8	0.842	3.50	7.8	0.001	1607.	0.52	191.	0.580	0.014
140	27.3	19.0	0.831	3.47	8.2	0.001	1695.	0.52	203.	0.607	0.015
150	29.1	20.3	0.821	3.45	8.6	0.001	1774.	0.51	214.	0.632	0.016
160	30.8	21.4	0.812	3.42	9.1	0.001	1845.	0.51	225.	0.657	0.016
170	32.6	22.6	0.802	3.40	9.6	0.001	1910.	0.51	236.	0.681	0.017
180	34.2	23.7	0.793	3.38	10.2	0.000	1971.	0.51	247.	0.704	0.018
190	35.9	24.8	0.785	3.35	10.7	0.000	2027.	0.51	258.	0.726	0.019
200	37.5	25.7	0.776	3.33	11.2	0.000	2082.	0.51	269.	0.748	0.020
210	39.1	26.7	0.768	3.31	11.7	0.000	2135.	0.51	280.	0.769	0.020
220	40.6	27.5	0.760	3.29	12.2	0.000	2187.	0.51	291.	0.790	0.021
230	42.1	28.3	0.753	3.27	12.6	0.000	2237.	0.51	303.	0.811	0.022
240	43.7	29.2	0.745	3.25	13.1	0.000	2286.	0.51	314.	0.831	0.023
250	45.2	30.0	0.738	3.23	13.5	0.000	2334.	0.51	325.	0.851	0.023
260	46.8	30.8	0.731	3.22	14.0	0.000	2380.	0.51	337.	0.870	0.024
270	48.4	31.7	0.724	3.20	14.5	0.000	2426.	0.51	348.	0.889	0.025
280	50.0	32.7	0.718	3.18	15.0	0.000	2471.	0.52	359.	0.908	0.026
290	51.7	33.7	0.711	3.16	15.5	0.000	2514.	0.52	371.	0.926	0.027
300	53.4	34.7	0.705	3.15	16.1	0.000	2557.	0.52	382.	0.944	0.027
310	55.2	35.9	0.699	3.13	16.7	0.000	2599.	0.52	394.	0.962	0.028
320	57.0	37.1	0.693	3.12	17.3	0.000	2640.	0.52	405.	0.979	0.029
330	58.9	38.4	0.687	3.10	18.0	0.000	2680.	0.52	416.	0.996	0.030
340	60.9	39.7	0.681	3.08	18.6	0.000	2719.	0.52	428.	1.013	0.030
350	62.9	41.1	0.675	3.07	19.4	0.000	2758.	0.52	439.	1.030	0.031
360	64.9	42.5	0.670	3.06	20.1	0.000	2796.	0.52	450.	1.046	0.032
370	66.9	43.9	0.664	3.04	20.8	0.000	2833.	0.52	461.	1.062	0.033
380	69.0	45.4	0.659	3.03	21.6	0.000	2870.	0.52	473.	1.078	0.033
390	71.0	46.9	0.654	3.01	22.3	0.000	2906.	0.52	484.	1.094	0.034
400	73.1	48.4	0.648	3.00	23.1	0.000	2942.	0.52	495.	1.110	0.035

Te in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	4.1	3.0	1.013	3.94	1.2	0.000	142.	0.49	34.	0.056	0.003
15	5.2	3.8	1.000	3.91	1.5	0.000	211.	0.50	43.	0.084	0.003
20	6.2	4.5	0.987	3.89	1.8	0.000	279.	0.50	51.	0.111	0.004
25	7.1	5.2	0.975	3.86	2.1	0.001	347.	0.50	59.	0.138	0.005
30	8.0	5.8	0.963	3.83	2.4	0.001	414.	0.50	66.	0.165	0.005
35	8.9	6.4	0.953	3.80	2.7	0.001	480.	0.50	72.	0.191	0.006
40	9.8	7.1	0.943	3.78	3.0	0.001	545.	0.50	79.	0.218	0.006
45	10.7	7.7	0.934	3.75	3.3	0.001	610.	0.50	85.	0.244	0.007
50	11.6	8.4	0.925	3.73	3.5	0.001	675.	0.50	92.	0.271	0.007
55	12.6	9.1	0.917	3.71	3.8	0.001	739.	0.50	98.	0.297	0.007
60	13.6	9.8	0.909	3.68	4.0	0.000	803.	0.50	104.	0.324	0.008
65	14.5	10.4	0.902	3.66	4.3	0.000	867.	0.49	110.	0.349	0.008
70	15.5	11.1	0.895	3.64	4.5	0.000	930.	0.49	116.	0.374	0.009
75	16.3	11.7	0.888	3.63	4.7	0.000	994.	0.49	122.	0.397	0.009
80	17.1	12.2	0.882	3.61	5.0	0.000	1058.	0.49	128.	0.418	0.010
85	17.8	12.7	0.876	3.59	5.2	0.000	1121.	0.49	133.	0.438	0.010
90	18.6	13.2	0.870	3.57	5.4	0.000	1183.	0.50	139.	0.457	0.010
95	19.3	13.7	0.864	3.56	5.7	0.000	1245.	0.50	145.	0.475	0.011
100	20.1	14.2	0.858	3.54	5.9	0.000	1304.	0.50	151.	0.492	0.011
110	21.8	15.3	0.848	3.51	6.4	0.000	1417.	0.50	162.	0.524	0.012
120	23.6	16.4	0.838	3.48	6.8	0.000	1522.	0.50	174.	0.554	0.013
130	25.4	17.5	0.829	3.45	7.2	0.000	1618.	0.51	185.	0.582	0.014
140	27.0	18.6	0.820	3.43	7.7	0.000	1706.	0.51	196.	0.609	0.014
150	28.5	19.7	0.811	3.40	8.1	0.000	1786.	0.51	207.	0.635	0.015
160	29.8	20.6	0.803	3.38	8.5	0.000	1858.	0.50	217.	0.660	0.016
170	31.0	21.4	0.796	3.36	8.9	0.000	1924.	0.50	228.	0.684	0.017
180	32.1	22.3	0.788	3.33	9.3	0.000	1985.	0.50	238.	0.708	0.017
190	33.4	23.2	0.781	3.31	9.7	0.000	2043.	0.49	249.	0.731	0.018
200	34.8	24.1	0.774	3.29	10.2	0.000	2097.	0.49	259.	0.753	0.019
210	36.4	25.1	0.768	3.27	10.7	0.000	2149.	0.49	270.	0.774	0.020
220	38.1	26.1	0.761	3.25	11.3	0.000	2200.	0.49	280.	0.795	0.020
230	40.0	27.2	0.755	3.24	11.8	0.000	2249.	0.49	291.	0.815	0.021
240	41.9	28.4	0.749	3.22	12.4	0.000	2297.	0.49	302.	0.835	0.022
250	44.0	29.5	0.744	3.20	13.0	0.000	2344.	0.49	312.	0.854	0.023
260	46.0	30.7	0.738	3.18	13.5	0.000	2390.	0.49	323.	0.873	0.023
270	48.0	31.9	0.733	3.17	14.0	0.000	2435.	0.50	334.	0.892	0.024
280	50.0	33.1	0.727	3.15	14.6	0.000	2479.	0.50	345.	0.910	0.025
290	51.9	34.2	0.722	3.14	15.0	0.000	2522.	0.50	356.	0.929	0.025
300	53.8	35.4	0.717	3.12	15.4	0.000	2565.	0.50	366.	0.947	0.026
310	55.5	36.5	0.712	3.11	15.8	0.000	2607.	0.50	377.	0.965	0.027
320	57.1	37.5	0.707	3.09	16.1	0.000	2649.	0.50	388.	0.982	0.028
330	58.7	38.6	0.703	3.08	16.4	0.000	2691.	0.50	399.	1.000	0.028
340	60.2	39.6	0.698	3.06	16.7	0.000	2732.	0.50	410.	1.017	0.029
350	61.6	40.7	0.694	3.05	16.9	0.000	2772.	0.50	421.	1.034	0.030
360	63.0	41.7	0.689	3.04	17.1	0.000	2812.	0.50	431.	1.051	0.031
370	64.3	42.7	0.685	3.02	17.3	0.000	2851.	0.50	442.	1.068	0.031
380	65.6	43.6	0.681	3.01	17.5	0.000	2890.	0.50	453.	1.084	0.032
390	66.9	44.6	0.677	3.00	17.7	0.000	2929.	0.50	464.	1.101	0.033
400	68.1	45.6	0.673	2.99	17.8	0.000	2967.	0.50	475.	1.117	0.034

Au in GaAs

II. Vacancy, damage Distribution:

E keV	Rp nm	SigRp nm	Gamma	Beta	Latrl nm	Bcksct *********	Vacs per ion	Ion rep ********	#cols t with **sec/ion**	w/o
10	3.3	2.4	0.977	3.83	0.8	0.000	140.	0.35	30.	0.055 0.002
15	4.2	3.0	0.968	3.79	1.0	0.000	207.	0.35	37.	0.082 0.003
20	5.0	3.6	0.958	3.75	1.2	0.000	274.	0.35	43.	0.109 0.003
25	5.7	4.1	0.948	3.72	1.4	0.000	340.	0.35	49.	0.135 0.004
30	6.4	4.6	0.939	3.69	1.6	0.000	406.	0.36	54.	0.161 0.004
35	7.0	5.1	0.930	3.66	1.7	0.000	471.	0.36	59.	0.187 0.005
40	7.6	5.5	0.921	3.64	1.9	0.000	535.	0.36	64.	0.212 0.005
45	8.2	5.9	0.913	3.61	2.0	0.000	599.	0.36	69.	0.238 0.005
50	8.9	6.4	0.906	3.59	2.2	0.000	662.	0.36	73.	0.264 0.006
55	9.6	6.8	0.899	3.57	2.3	0.000	725.	0.36	78.	0.290 0.006
60	10.2	7.2	0.892	3.56	2.4	0.000	787.	0.36	82.	0.315 0.006
65	10.9	7.6	0.886	3.54	2.6	0.000	849.	0.35	86.	0.340 0.007
70	11.5	7.9	0.879	3.52	2.7	0.000	911.	0.35	91.	0.364 0.007
75	12.0	8.3	0.873	3.51	2.8	0.000	974.	0.35	95.	0.386 0.007
80	12.4	8.6	0.868	3.49	2.9	0.000	1037.	0.35	99.	0.408 0.008
85	12.7	8.9	0.862	3.48	3.1	0.000	1100.	0.35	102.	0.427 0.008
90	13.1	9.3	0.857	3.46	3.2	0.000	1162.	0.35	106.	0.446 0.008
95	13.5	9.6	0.852	3.45	3.3	0.000	1223.	0.35	110.	0.464 0.008
100	13.8	9.9	0.847	3.44	3.4	0.000	1282.	0.35	114.	0.480 0.009
110	14.7	10.5	0.837	3.41	3.6	0.000	1393.	0.35	121.	0.512 0.009
120	15.7	11.2	0.828	3.39	3.9	0.000	1495.	0.35	128.	0.541 0.010
130	16.8	11.9	0.820	3.37	4.1	0.000	1588.	0.35	135.	0.567 0.010
140	17.9	12.6	0.812	3.35	4.3	0.000	1672.	0.35	143.	0.593 0.011
150	18.9	13.3	0.804	3.33	4.5	0.000	1749.	0.35	149.	0.61 0.011
160	19.9	14.0	0.797	3.32	4.7	0.000	1818.	0.35	156.	0.641 0.012
170	20.8	14.7	0.790	3.30	4.9	0.000	1882.	0.35	163.	0.664 0.012
180	21.7	15.3	0.783	3.28	5.2	0.000	1941.	0.35	170.	0.687 0.013
190	22.7	16.0	0.777	3.27	5.4	0.000	1996.	0.36	176.	0.708 0.013
200	23.6	16.6	0.770	3.25	5.7	0.000	2049.	0.36	183.	0.730 0.014
210	24.5	17.2	0.764	3.24	5.9	0.000	2100.	0.36	190.	0.750 0.014
220	25.5	17.7	0.759	3.22	6.1	0.000	2150.	0.36	196.	0.770 0.015
230	26.5	18.3	0.753	3.21	6.4	0.000	2198.	0.36	203.	0.790 0.015
240	27.4	18.8	0.748	3.20	6.6	0.000	2245.	0.36	210.	0.809 0.016
250	28.4	19.4	0.742	3.19	6.9	0.000	2291.	0.35	216.	0.828 0.016
260	29.4	19.9	0.737	3.17	7.1	0.000	2336.	0.35	223.	0.846 0.017
270	30.4	20.5	0.732	3.16	7.3	0.000	2380.	0.35	229.	0.865 0.017
280	31.4	21.0	0.727	3.15	7.6	0.000	2423.	0.35	236.	0.882 0.017
290	32.4	21.6	0.723	3.14	7.8	0.000	2465.	0.35	242.	0.900 0.018
300	33.4	22.2	0.718	3.13	8.0	0.000	2506.	0.35	249.	0.917 0.018
310	34.4	22.9	0.713	3.12	8.2	0.000	2546.	0.35	255.	0.934 0.019
320	35.4	23.5	0.709	3.11	8.4	0.000	2586.	0.35	261.	0.951 0.019
330	36.4	24.2	0.705	3.10	8.7	0.000	2625.	0.35	267.	0.967 0.020
340	37.4	24.9	0.700	3.09	8.9	0.000	2664.	0.35	274.	0.983 0.020
350	38.4	25.6	0.696	3.08	9.1	0.000	2702.	0.36	280.	0.999 0.020
360	39.3	26.3	0.692	3.07	9.3	0.000	2739.	0.36	286.	1.015 0.021
370	40.3	27.0	0.688	3.06	9.5	0.000	2776.	0.36	292.	1.030 0.021
380	41.3	27.7	0.685	3.05	9.7	0.000	2812.	0.36	298.	1.046 0.022
390	42.3	28.4	0.681	3.04	9.9	0.000	2848.	0.36	304.	1.061 0.022
400	43.3	29.2	0.677	3.03	10.2	0.000	2883.	0.36	309.	1.076 0.023

Table III. Selected Vacancy Distributions for Specific Ions and Energies.

Table III is on following pages: pages 154 through 325.

Explanation of Table III

Item	Units	Note	Definition
Av Path	nm		Average path length
Sig.Path	nm		Straggling of path length
Rp	nm		First moment of the ion or vacancy distribution
SigmaRp	nm		Longitudinal straggling
Sig.Lat	nm		Distribution lateral straggling
Gamma	none		Normalized third moment of distribution
Beta	none		Normalized fourth moment of distribution
Depth	nm		Ion depth
Ions	/μm/ion	a	Stopped-ion concentration
Instl	ratio	b	Fraction of ions ending up as interstitials
Sig.Lat	nm	c	Ion lateral straggling as a function of depth
Damage	keV/μm		Energy deposited per μm per ion by ejecting Ga,As atoms
Ioniz	keV/μm		Energy deposited per μm per ion by ejecting electrons
Vacs	/μm/ion	d	Number of Ga+As vacancies created per μm
Sig.Lat	nm		Lateral straggling of vacancy distribution
Ions	--		Total number of ions run, and the total run without following recoils
Time	--		Meaningless
Total	keV		Integral of damage and ionization energy concentrations
Ionz/Tot	ratio		Fraction of energy lost by ejecting electrons

Notes:

a. For a dose of 10^{12}ions/cm^2, this column is the concentration in 10^{16}cm^{-3}.

b. The alternative is that the ion can end up replacing a Ga or As atom on a lattice site. The alternative ratios are given in Tabel I.

c. Assumes that the lateral distribution is Gaussian.

d. Includes vacancies created by recoil-target collisions.

Contents of Table III.

Ion and vacancy distributions and energy deposition profiles for H, He, Be, B, C, C, O, Mg, Al, Si, P, Ar, Cr, Zn, Ge,Se, Sn, and Te in GaAs. The energies vary from 10 to 400keV.

10keV H 1 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
228.286	2.699	99.410	40.018	53.692	-0.248	2.403	For ions
(nm)		67.086	36.334	32.136	0.148	2.221	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
4.00	0.7125	1.0000	60.19	1.4	80.3	16.	20.54
12.00	1.9125	1.0000	63.35	1.6	83.9	18.	22.36
20.00	2.1375	1.0000	65.84	1.9	86.3	21.	23.33
28.00	2.4500	1.0000	67.10	2.1	88.5	23.	26.24
36.00	3.3500	1.0000	61.59	2.4	90.1	25.	28.15
44.00	3.6000	1.0000	63.97	2.6	89.4	27.	32.68
52.00	4.6000	1.0000	60.29	2.7	86.7	27.	32.01
60.00	4.9125	1.0000	62.47	2.8	83.9	28.	31.92
68.00	6.0125	1.0000	60.62	2.8	79.0	28.	34.18
76.00	6.1000	1.0000	58.96	2.9	75.2	28.	35.83
84.00	7.4875	1.0000	57.68	2.9	68.9	27.	35.51
92.00	8.4375	1.0000	57.27	2.9	60.5	27.	36.32
100.00	8.1625	1.0000	54.04	2.6	51.8	23.	35.89
108.00	8.3125	1.0000	52.56	2.4	43.7	20.	37.34
116.00	8.8375	1.0000	50.96	2.1	34.6	15.	36.00
124.00	8.3000	1.0000	50.43	1.7	26.4	12.	32.65
132.00	7.8375	1.0000	45.97	1.4	19.7	9.	34.70
140.00	7.0875	1.0000	45.50	1.0	13.5	6.	33.08
148.00	5.7500	1.0000	41.01	0.7	8.2	3.	29.90
156.00	4.2375	1.0000	38.59	0.4	4.6	2.	23.91
164.00	3.0375	1.0000	37.20	0.2	2.3	0.	30.37
172.00	1.8125	1.0000	33.88	0.1	0.9	0.	23.08
180.00	0.6125	1.0000	27.52	0.0	0.3	0.	0.00
188.00	0.4125	1.0000	28.64	0.0	0.1	0.	0.00
196.00	0.0625	0.9998	24.66	0.0	0.0	0.	0.00
204.00	0.0250	0.9995	41.17	0.0	0.0	0.	0.00
212.00	0.0125	0.9990	12.79	0.0	0.0	0.	0.00
220.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
228.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
236.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
244.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
252.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
268.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
276.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,10000 TIME:		0.	TOTAL=	0.3	9.4	IONZ/TOTAL=	0.9658

25keV H 1 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
390.195	3.228	207.186	66.772	90.635	-0.621	2.918	For ions
(nm)		148.029	71.102	57.673	-0.149	2.202	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
6.00	0.2250	1.0000	145.70	0.8	112.4	9.	27.83
18.00	0.3333	1.0000	115.13	0.9	113.0	11.	37.86
30.00	0.5000	1.0000	115.75	1.0	113.7	12.	36.13
42.00	0.6333	1.0000	118.85	1.0	112.9	12.	34.98
54.00	0.9250	1.0000	108.15	1.2	113.5	13.	44.32
66.00	0.9250	1.0000	117.13	1.3	113.4	15.	48.37
78.00	1.1167	1.0000	120.55	1.4	112.5	16.	49.35
90.00	1.3250	1.0000	112.68	1.5	112.4	17.	50.69
102.00	1.4917	1.0000	113.30	1.6	111.7	18.	52.48
114.00	1.9500	1.0000	110.04	1.8	110.0	20.	55.92
126.00	2.2417	1.0000	107.02	2.0	108.6	22.	59.13
138.00	2.7417	1.0000	105.26	2.1	104.6	22.	60.30
150.00	3.0250	1.0000	107.58	2.2	100.3	24.	61.19
162.00	3.7167	1.0000	107.15	2.3	94.5	24.	65.94
174.00	3.9333	1.0000	103.65	2.4	88.4	25.	65.38
186.00	4.5000	1.0000	100.62	2.4	80.2	25.	64.93
198.00	5.1667	1.0000	93.49	2.4	72.0	24.	66.22
210.00	5.7417	1.0000	90.06	2.4	62.9	22.	66.98
222.00	5.5833	1.0000	89.95	2.2	53.1	20.	63.89
234.00	6.2250	1.0000	83.69	2.0	44.0	17.	63.01
246.00	6.1167	1.0000	80.10	1.7	33.7	15.	59.83
258.00	6.1083	1.0000	74.97	1.4	24.1	11.	60.20
270.00	5.0833	1.0000	70.58	1.1	17.0	7.	55.35
282.00	4.4833	1.0000	66.58	0.8	10.8	5.	51.04
294.00	3.4667	1.0000	62.83	0.4	5.7	2.	49.62
306.00	2.2500	1.0000	55.81	0.2	2.7	1.	45.78
318.00	1.1167	1.0000	49.25	0.1	0.9	0.	32.91
330.00	0.5000	1.0000	46.39	0.0	0.2	0.	38.46
342.00	0.0917	0.9999	59.05	0.0	0.0	0.	0.00
354.00	0.0250	0.9997	47.98	0.0	0.0	0.	0.00
366.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
378.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
390.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
402.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,10000 TIME:		0.	TOTAL=	0.5	24.4	IONZ/TOTAL=	0.9803

50keV H 1 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
603.263	3.610	374.382	94.083	137.440	-0.984	3.971	For ions
(nm)		274.813	119.025	92.746	-0.407	2.279	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
10.00	0.0650	0.9999	195.10	0.5	123.4	6.	32.78
30.00	0.1100	1.0000	158.37	0.5	124.8	5.	42.29
50.00	0.1350	1.0000	186.73	0.6	126.1	7.	44.13
70.00	0.1400	1.0000	198.61	0.6	126.9	7.	57.40
90.00	0.2400	1.0000	176.59	0.7	128.4	9.	49.06
110.00	0.2350	1.0000	198.17	0.8	130.1	10.	62.45
130.00	0.3100	1.0000	191.93	0.9	132.1	10.	73.66
150.00	0.4250	1.0000	205.54	0.8	132.2	10.	74.49
170.00	0.5200	1.0000	174.24	0.9	132.6	10.	76.53
190.00	0.6800	1.0000	195.65	1.1	133.9	13.	79.05
210.00	0.7350	1.0000	184.34	1.2	133.2	14.	91.25
230.00	1.0450	1.0000	179.80	1.4	130.9	16.	97.87
250.00	1.2050	1.0000	174.81	1.5	125.2	16.	101.27
270.00	1.5600	1.0000	179.78	1.6	120.7	17.	101.47
290.00	2.0200	1.0000	169.63	1.7	112.7	18.	107.50
310.00	2.4750	1.0000	169.51	1.9	105.8	21.	106.86
330.00	2.8800	1.0000	155.91	2.0	96.7	21.	110.58
350.00	3.4400	1.0000	147.24	2.0	86.0	21.	107.31
370.00	3.9250	1.0000	142.21	2.1	74.5	21.	104.59
390.00	4.2800	1.0000	132.54	2.0	61.5	19.	102.76
410.00	4.8550	1.0000	124.33	1.9	48.1	18.	99.73
430.00	5.2200	1.0000	113.86	1.6	34.5	14.	90.78
450.00	4.7250	1.0000	104.40	1.2	22.2	9.	84.44
470.00	3.5400	1.0000	98.53	0.7	11.9	5.	75.43
490.00	2.7650	1.0000	86.49	0.4	5.4	2.	70.33
510.00	1.4850	1.0000	68.06	0.1	1.8	1.	53.03
530.00	0.4600	1.0000	64.89	0.0	0.3	0.	42.89
550.00	0.0750	0.9999	43.44	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,10000 TIME:		0.	TOTAL=	0.6	49.2	IONZ/TOTAL=	0.9877

75keV H 1 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
803.792	3.998	534.858	114.604	182.504	-1.151	4.647	For ions
(nm)		400.814	163.587	127.870	-0.601	2.524	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.0080	0.9995	203.57	0.4	128.0	5.	31.16
37.50	0.0360	0.9999	313.70	0.4	128.7	4.	50.22
62.50	0.0720	0.9999	295.22	0.5	130.0	6.	73.10
87.50	0.0560	0.9999	259.03	0.4	131.2	5.	66.04
112.50	0.0560	0.9999	317.58	0.4	132.6	5.	52.54
137.50	0.0840	1.0000	316.77	0.5	133.7	6.	61.92
162.50	0.1440	1.0000	280.36	0.5	134.9	7.	90.28
187.50	0.1760	1.0000	242.16	0.6	136.2	6.	93.75
212.50	0.2040	1.0000	252.45	0.6	137.0	7.	90.90
237.50	0.2480	1.0000	286.77	0.7	138.9	8.	108.44
262.50	0.2840	1.0000	255.96	0.8	139.7	9.	119.76
287.50	0.4040	1.0000	249.92	0.8	141.3	10.	122.07
312.50	0.5200	1.0000	255.00	0.9	141.7	9.	132.61
337.50	0.6440	1.0000	243.80	1.1	141.3	13.	126.63
362.50	0.7720	1.0000	258.71	1.2	140.0	14.	138.19
387.50	1.0120	1.0000	243.43	1.3	136.8	16.	146.93
412.50	1.2760	1.0000	233.21	1.5	131.5	16.	150.53
437.50	1.6280	1.0000	223.49	1.6	121.8	18.	146.63
462.50	2.1840	1.0000	217.44	1.7	111.2	18.	149.69
487.50	2.7240	1.0000	205.83	1.9	100.3	20.	151.31
512.50	2.7680	1.0000	195.64	1.9	87.9	20.	145.72
537.50	3.4840	1.0000	185.28	1.9	75.2	20.	139.40
562.50	3.9400	1.0000	170.35	1.8	59.6	18.	136.92
587.50	4.1120	1.0000	156.76	1.6	44.7	15.	123.17
612.50	4.0000	1.0000	140.78	1.3	30.6	12.	115.48
637.50	3.8800	1.0000	130.56	0.9	18.1	7.	106.13
662.50	2.8360	1.0000	112.74	0.5	8.8	4.	87.40
687.50	1.5600	1.0000	102.57	0.2	2.9	1.	73.69
712.50	0.5560	1.0000	98.01	0.1	0.6	0.	62.94
737.50	0.0920	1.0000	59.27	0.0	0.0	0.	0.00
762.50	0.0040	0.9990	68.60	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,10000 TIME:		0.	TOTAL=	0.7	74.1	IONZ/TOTAL=	0.9906

100keV H 1 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1000.633	4.293	691.913	138.181	231.680	-1.338	5.415	For ions
(nm)		520.768	209.543	162.922	-0.632	2.501	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
15.00	0.0200	0.9998	320.69	0.3	128.8	4.	46.28
45.00	0.0233	0.9999	267.04	0.3	130.2	3.	58.83
75.00	0.0300	0.9999	213.11	0.4	132.0	5.	67.37
105.00	0.0433	0.9999	306.26	0.4	133.8	4.	51.97
135.00	0.0467	0.9999	272.05	0.4	134.6	5.	59.78
165.00	0.0667	1.0000	352.16	0.4	136.2	5.	73.21
195.00	0.0767	1.0000	299.24	0.4	138.0	5.	81.68
225.00	0.0900	1.0000	428.99	0.4	139.2	5.	108.44
255.00	0.1300	1.0000	343.17	0.5	140.9	6.	102.48
285.00	0.1300	1.0000	353.91	0.5	141.7	6.	122.50
315.00	0.1800	1.0000	347.41	0.6	144.0	6.	109.55
345.00	0.1867	1.0000	366.74	0.7	145.9	8.	136.64
375.00	0.2767	1.0000	339.31	0.8	146.5	9.	135.90
405.00	0.2933	1.0000	355.12	0.7	147.5	8.	161.80
435.00	0.4733	1.0000	332.69	0.9	147.2	10.	174.02
465.00	0.4967	1.0000	293.38	0.9	144.7	11.	179.17
495.00	0.7267	1.0000	337.71	1.0	143.1	11.	177.15
525.00	0.9133	1.0000	289.38	1.2	141.1	13.	190.41
555.00	1.0933	1.0000	316.92	1.3	135.5	14.	208.44
585.00	1.4067	1.0000	293.89	1.5	126.9	16.	200.88
615.00	1.8167	1.0000	262.45	1.5	115.8	17.	195.51
645.00	2.2200	1.0000	261.66	1.7	102.1	18.	193.23
675.00	2.6867	1.0000	245.39	1.8	87.9	18.	187.54
705.00	3.0333	1.0000	224.32	1.7	73.0	18.	177.57
735.00	3.4367	1.0000	210.92	1.6	57.2	16.	165.97
765.00	3.6967	1.0000	188.64	1.5	41.4	13.	150.55
795.00	3.7833	1.0000	173.85	1.1	26.6	10.	139.99
825.00	2.8167	1.0000	155.88	0.7	13.9	6.	128.03
855.00	1.9333	1.0000	130.26	0.3	5.5	2.	113.34
885.00	0.8800	1.0000	112.47	0.1	1.5	1.	93.88
915.00	0.1667	1.0000	73.15	0.0	0.1	0.	80.37
945.00	0.0067	0.9995	45.42	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,10000 TIME:		0.	TOTAL=	0.8	99.1	IONZ/TOTAL=	0.9923

150keV H 1 in GaAs 3000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1398.123	4.842	1001.456	187.486	345.315	-1.336	5.348	For ions
(nm)		769.919	296.744	254.936	-0.717	2.632	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
30.00	0.0104	0.9998	528.54	0.2	125.6	2.	108.86
90.00	0.0104	0.9998	537.16	0.2	128.6	2.	77.62
150.00	0.0125	0.9998	632.45	0.3	132.3	3.	79.08
210.00	0.0291	0.9999	668.60	0.3	134.8	4.	98.54
270.00	0.0416	1.0000	531.24	0.3	138.3	3.	147.47
330.00	0.0499	1.0000	482.32	0.3	142.4	4.	164.72
390.00	0.0583	1.0000	605.23	0.4	145.7	4.	161.45
450.00	0.1103	1.0000	530.33	0.4	148.8	5.	207.02
510.00	0.1581	1.0000	515.32	0.5	152.9	5.	213.60
570.00	0.2081	1.0000	541.13	0.5	156.7	6.	270.22
630.00	0.3038	1.0000	506.31	0.7	157.9	7.	263.99
690.00	0.3849	1.0000	488.85	0.8	156.8	8.	292.53
750.00	0.5930	1.0000	460.44	0.9	152.3	9.	304.97
810.00	0.8240	1.0000	440.09	1.1	143.5	12.	306.77
870.00	1.0882	1.0000	420.04	1.2	132.0	12.	298.55
930.00	1.5356	1.0000	395.03	1.4	114.9	14.	297.89
990.00	2.0162	1.0000	358.50	1.4	91.3	14.	278.88
1050.00	2.3970	1.0000	322.18	1.4	65.0	14.	262.65
1110.00	2.8048	1.0000	276.42	1.2	40.1	11.	226.76
1170.00	2.4969	1.0000	223.78	0.8	18.2	6.	196.07
1230.00	1.2630	1.0000	179.83	0.2	4.3	2.	155.02
1290.00	0.2164	1.0000	130.65	0.0	0.3	0.	115.31
1350.00	0.0021	0.9990	63.79	0.0	0.0	0.	0.00
1410.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1470.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1530.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2010.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2070.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2130.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2250.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2310.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2370.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2430.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2490.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2550.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 8010, 8010 TIME:		0.	TOTAL=	0.9	149.0	IONZ/TOTAL=	0.9942

200keV H 1 in GaAs 3000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1814.263	5.309	1309.257	247.341	484.091	-1.292	4.974	For ions
(nm)		1037.075	381.060	373.171	-0.782	2.817	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
30.00	0.0026	0.9990	156.60	0.2	118.4	2.	56.65
90.00	0.0052	0.9995	890.83	0.2	121.1	1.	92.05
150.00	0.0052	0.9995	650.81	0.2	124.1	2.	159.19
210.00	0.0206	0.9999	726.60	0.2	127.4	2.	143.74
270.00	0.0232	0.9999	675.25	0.2	130.9	2.	155.42
330.00	0.0232	0.9999	871.65	0.3	134.5	3.	170.06
390.00	0.0232	0.9999	923.00	0.3	139.0	3.	206.93
450.00	0.0309	0.9999	829.91	0.3	143.8	3.	279.73
510.00	0.0567	1.0000	770.59	0.3	148.7	3.	274.85
570.00	0.0722	1.0000	767.60	0.4	154.4	4.	309.96
630.00	0.1366	1.0000	813.69	0.4	158.7	4.	353.78
690.00	0.1341	1.0000	769.64	0.4	161.2	4.	362.93
750.00	0.1933	1.0000	632.10	0.5	163.8	5.	401.86
810.00	0.2449	1.0000	737.06	0.5	165.2	5.	406.24
870.00	0.2913	1.0000	691.65	0.6	163.4	6.	413.99
930.00	0.3454	1.0000	707.39	0.7	161.8	7.	435.23
990.00	0.4743	1.0000	667.74	0.8	156.8	7.	457.99
1050.00	0.5517	1.0000	669.68	0.9	149.2	9.	466.64
1110.00	0.6600	1.0000	648.05	0.9	142.1	9.	452.19
1170.00	0.9487	1.0000	579.73	1.0	130.8	10.	423.51
1230.00	1.1962	1.0000	536.10	1.1	116.1	11.	424.23
1290.00	1.5339	1.0000	486.85	1.2	101.5	11.	401.64
1350.00	1.7840	1.0000	454.54	1.2	79.5	12.	372.90
1410.00	1.9902	1.0000	415.08	1.2	57.7	11.	348.16
1470.00	2.1526	1.0000	364.77	1.0	37.3	9.	299.58
1530.00	1.9386	1.0000	311.65	0.7	19.7	6.	253.30
1590.00	1.2581	1.0000	243.65	0.3	7.0	2.	202.03
1650.00	0.4847	1.0000	192.57	0.1	1.2	0.	161.83
1710.00	0.0490	0.9999	145.12	0.0	0.0	0.	228.75
1770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2010.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2070.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2130.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2250.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2310.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2370.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2430.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2490.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2550.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6465, 6465 TIME:		0.	TOTAL=	0.9	198.9	IONZ/TOTAL=	0.9953

300keV H 1 in GaAs 4000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
2730.086	6.109	1917.452	425.554	824.885	-1.195	4.467	For ions
(nm)		1588.923	587.330	657.342	-0.729	2.715	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
40.00	0.0080	0.9997	1138.51	0.1	104.2	1.	124.60
120.00	0.0080	0.9997	1164.14	0.2	108.0	1.	236.09
200.00	0.0134	0.9998	1277.17	0.2	111.2	2.	299.90
280.00	0.0241	0.9999	1321.36	0.1	115.0	1.	358.76
360.00	0.0134	0.9998	1312.06	0.1	119.7	1.	339.88
440.00	0.0188	0.9999	1268.53	0.2	124.4	1.	294.71
520.00	0.0322	0.9999	1251.25	0.2	131.0	1.	535.11
600.00	0.0589	1.0000	1119.27	0.2	138.3	2.	442.89
680.00	0.0509	0.9999	1293.33	0.3	143.8	2.	397.73
760.00	0.0589	1.0000	1380.35	0.2	149.7	2.	560.18
840.00	0.0723	1.0000	1283.87	0.3	156.1	3.	615.62
920.00	0.1018	1.0000	1307.32	0.3	162.8	3.	646.63
1000.00	0.1072	1.0000	1307.58	0.3	166.3	3.	764.78
1080.00	0.1742	1.0000	1301.42	0.4	168.7	3.	798.22
1160.00	0.1635	1.0000	1213.84	0.4	171.2	3.	785.25
1240.00	0.1876	1.0000	1198.23	0.4	169.2	4.	773.35
1320.00	0.2760	1.0000	1207.09	0.5	171.7	4.	820.98
1400.00	0.2787	1.0000	1133.03	0.5	168.2	4.	748.29
1480.00	0.4019	1.0000	1069.98	0.6	160.8	5.	841.53
1560.00	0.4555	1.0000	1100.77	0.6	154.5	5.	826.57
1640.00	0.4930	1.0000	1029.70	0.7	146.7	6.	747.71
1720.00	0.5681	1.0000	1021.83	0.7	134.7	6.	766.45
1800.00	0.6592	1.0000	922.32	0.7	124.6	6.	727.57
1880.00	0.8280	1.0000	826.18	0.8	111.5	8.	703.52
1960.00	0.9941	1.0000	802.93	0.9	96.1	8.	673.14
2040.00	0.9727	1.0000	735.52	0.8	77.9	7.	619.72
2120.00	1.1817	1.0000	673.25	0.8	60.5	7.	555.08
2200.00	1.2138	1.0000	599.54	0.7	43.8	6.	517.63
2280.00	1.2835	1.0000	505.09	0.6	26.4	5.	454.03
2360.00	0.9620	1.0000	426.86	0.4	12.9	3.	378.52
2440.00	0.6458	1.0000	346.98	0.2	4.1	1.	288.55
2520.00	0.1527	1.0000	257.95	0.0	0.5	0.	269.15
2600.00	0.0107	0.9998	110.73	0.0	0.0	0.	185.12
2680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2840.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2920.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3000.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3080.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3160.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3240.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3320.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3400.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3480.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3560.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3640.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3720.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3800.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3880.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3960.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4665, 4665 TIME:		0.	TOTAL=	1.1	298.8	IONZ/TOTAL=	0.9964

400keV H 1 in GaAs 6000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
3771.023	7.129	2502.220	685.333	1219.537	-0.990	3.560	For ions
(nm)		2057.445	821.975	1001.181	-0.552	2.453	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
60.00	0.0069	0.9997	2122.31	0.1	94.7	1.	505.65
180.00	0.0183	0.9999	1739.95	0.1	98.9	1.	377.17
300.00	0.0274	0.9999	1393.14	0.2	104.2	1.	636.08
420.00	0.0343	0.9999	1663.88	0.1	111.1	1.	831.52
540.00	0.0388	0.9999	1721.61	0.2	119.0	1.	744.37
660.00	0.0480	1.0000	1803.85	0.2	127.4	1.	979.19
780.00	0.0525	1.0000	1855.78	0.2	137.0	2.	782.42
900.00	0.0845	1.0000	1806.07	0.2	146.3	2.	1001.49
1020.00	0.0776	1.0000	1863.06	0.3	155.3	2.	1042.26
1140.00	0.0868	1.0000	1666.53	0.3	164.5	2.	1082.87
1260.00	0.1165	1.0000	1614.66	0.3	166.8	2.	1040.25
1380.00	0.1439	1.0000	1470.76	0.4	168.9	3.	1022.81
1500.00	0.1621	1.0000	1688.99	0.3	169.2	2.	1161.86
1620.00	0.1758	1.0000	1674.56	0.4	171.5	3.	1129.08
1740.00	0.2124	1.0000	1604.93	0.4	166.9	3.	1172.27
1860.00	0.2649	1.0000	1660.25	0.5	163.1	4.	1187.40
1980.00	0.2923	1.0000	1492.90	0.4	157.4	3.	1273.62
2100.00	0.3334	1.0000	1497.85	0.5	146.8	4.	1173.96
2220.00	0.4019	1.0000	1432.34	0.6	139.1	5.	1173.59
2340.00	0.4362	1.0000	1390.37	0.5	125.4	4.	1135.31
2460.00	0.4750	1.0000	1341.97	0.5	111.7	4.	1095.62
2580.00	0.5344	1.0000	1230.00	0.6	97.4	5.	1000.05
2700.00	0.5390	1.0000	1183.25	0.6	84.5	5.	979.86
2820.00	0.7034	1.0000	1051.23	0.5	69.0	4.	895.84
2940.00	0.7080	1.0000	921.55	0.5	51.9	4.	765.46
3060.00	0.7308	1.0000	839.44	0.5	35.9	4.	711.93
3180.00	0.7559	1.0000	680.67	0.4	20.2	3.	626.86
3300.00	0.4887	1.0000	548.79	0.2	8.0	2.	449.20
3420.00	0.2489	1.0000	412.10	0.1	1.9	1.	345.59
3540.00	0.0343	0.9999	390.07	0.0	0.1	0.	272.12
3660.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3780.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
3900.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4020.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4140.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4500.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4620.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4740.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4860.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
4980.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5100.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5220.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5460.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5580.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5700.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5820.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
5940.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3649, 3649 TIME:		1. TOTAL=		1.2	397.7	IONZ/TOTAL=	0.9970

10keV He 4 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
266.251	20.254	82.454	41.530	57.035	0.298	2.512	For ions
(nm)		60.427	37.102	40.062	0.570	2.841	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
4.00	1.2750	1.0000	68.93	17.4	66.8	234.	28.85
12.00	2.5750	1.0000	64.41	21.1	72.8	300.	31.50
20.00	3.8000	1.0000	64.97	24.5	76.5	349.	34.12
28.00	4.6875	1.0000	59.32	26.4	77.0	379.	35.35
36.00	5.4375	1.0000	61.54	27.7	74.7	396.	37.72
44.00	5.9125	1.0000	60.27	28.4	71.1	402.	39.13
52.00	6.4875	1.0000	57.45	27.5	64.1	389.	40.72
60.00	6.5500	1.0000	58.50	26.8	57.4	371.	41.39
68.00	7.0000	1.0000	57.05	25.0	50.0	348.	43.12
76.00	6.8250	1.0000	59.67	23.2	42.9	324.	43.60
84.00	7.2625	1.0000	58.93	20.9	36.2	289.	45.54
92.00	6.6375	1.0000	55.55	17.5	29.3	244.	45.39
100.00	6.5625	1.0000	55.42	15.5	23.6	211.	44.88
108.00	5.8625	1.0000	55.26	12.8	18.3	177.	43.69
116.00	5.1250	1.0000	53.86	10.0	13.9	132.	45.04
124.00	4.8625	1.0000	53.47	7.9	10.5	104.	44.35
132.00	3.4875	1.0000	53.38	6.0	7.6	80.	44.54
140.00	3.2000	1.0000	51.82	4.5	5.6	59.	44.49
148.00	2.4000	1.0000	53.56	3.4	3.9	45.	42.74
156.00	2.1500	1.0000	47.58	2.1	2.4	27.	43.38
164.00	1.4625	1.0000	45.83	1.3	1.4	17.	37.27
172.00	0.9000	1.0000	42.73	0.9	0.9	11.	34.33
180.00	0.6625	1.0000	37.99	0.5	0.5	7.	35.67
188.00	0.3875	1.0000	36.41	0.3	0.2	3.	29.06
196.00	0.2375	0.9999	29.15	0.1	0.1	1.	22.48
204.00	0.0875	0.9999	34.78	0.0	0.0	0.	26.13
212.00	0.0625	0.9998	25.28	0.0	0.0	0.	17.26
220.00	0.0250	0.9995	21.02	0.0	0.0	0.	29.15
228.00	0.0250	0.9995	33.97	0.0	0.0	0.	0.00
236.00	0.0000	0.0000	0.00	0.0	0.0	0.	46.97
244.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
252.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
268.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
276.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 7645 TIME: 709. TOTAL=				2.8	6.5	IONZ/TOTAL=	0.6965

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
266.251	20.254	82.454	41.530	57.035	0.298	2.512	For ions
(nm)		60.427	37.102	40.062	0.570	2.841	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
4.00	1.2750	1.0000	68.93	17.4	66.8	234.	28.85
12.00	2.5750	1.0000	64.41	21.1	72.8	300.	31.50
20.00	3.8000	1.0000	64.97	24.5	76.5	349.	34.12
28.00	4.6875	1.0000	59.32	26.4	77.0	379.	35.35
36.00	5.4375	1.0000	61.54	27.7	74.7	396.	37.72
44.00	5.9125	1.0000	60.27	28.4	71.1	402.	39.13
52.00	6.4875	1.0000	57.45	27.5	64.1	389.	40.72
60.00	6.5500	1.0000	58.50	26.8	57.4	371.	41.39
68.00	7.0000	1.0000	57.05	25.0	50.0	348.	43.12
76.00	6.8250	1.0000	59.67	23.2	42.9	324.	43.60
84.00	7.2625	1.0000	58.93	20.9	36.2	289.	45.54
92.00	6.6375	1.0000	55.55	17.5	29.3	244.	45.39
100.00	6.5625	1.0000	55.42	15.5	23.6	211.	44.88
108.00	5.8625	1.0000	55.26	12.8	18.3	177.	43.69
116.00	5.1250	1.0000	53.86	10.0	13.9	132.	45.04
124.00	4.8625	1.0000	53.47	7.9	10.5	104.	44.35
132.00	3.4875	1.0000	53.38	6.0	7.6	80.	44.54
140.00	3.2000	1.0000	51.82	4.5	5.6	59.	44.49
148.00	2.4000	1.0000	53.56	3.4	3.9	45.	42.74
156.00	2.1500	1.0000	47.58	2.1	2.4	27.	43.38
164.00	1.4625	1.0000	45.83	1.3	1.4	17.	37.27
172.00	0.9000	1.0000	42.73	0.9	0.9	11.	34.33
180.00	0.6625	1.0000	37.99	0.5	0.5	7.	35.67
188.00	0.3875	1.0000	36.41	0.3	0.2	3.	29.06
196.00	0.2375	0.9999	29.15	0.1	0.1	1.	22.48
204.00	0.0875	0.9999	34.78	0.0	0.0	0.	26.13
212.00	0.0625	0.9998	25.28	0.0	0.0	0.	17.26
220.00	0.0250	0.9995	21.02	0.0	0.0	0.	29.15
228.00	0.0250	0.9995	33.97	0.0	0.0	0.	0.00
236.00	0.0000	0.0000	0.00	0.0	0.0	0.	46.97
244.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
252.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
268.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
276.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 7645 TIME: 709. TOTAL=				2.8	6.5	IONZ/TOTAL=	0.6965

25keV He 4 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
439.712	24.568	164.740	73.024	98.708	-0.003	2.350	For ions
(nm)		125.981	68.579	71.010	0.271	2.426	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
6.00	0.5083	1.0000	112.99	10.6	112.0	139.	52.11
18.00	1.0167	1.0000	107.86	13.3	116.0	187.	54.97
30.00	1.2333	1.0000	116.42	14.1	118.0	202.	56.26
42.00	1.5417	1.0000	108.87	16.3	119.3	232.	58.92
54.00	2.2250	1.0000	111.33	17.8	119.9	261.	62.39
66.00	2.6417	1.0000	108.47	19.8	118.8	279.	63.26
78.00	3.0000	1.0000	111.87	21.2	116.6	302.	66.78
90.00	2.9750	1.0000	106.68	22.4	110.5	320.	70.14
102.00	3.2667	1.0000	109.43	22.9	103.8	326.	72.70
114.00	3.4750	1.0000	106.43	22.2	95.9	318.	74.46
126.00	3.3500	1.0000	109.30	22.8	87.9	332.	75.73
138.00	3.9583	1.0000	103.60	21.8	78.5	316.	77.58
150.00	4.3333	1.0000	100.93	21.6	68.8	306.	74.90
162.00	4.7083	1.0000	100.13	20.2	59.5	283.	77.43
174.00	4.5833	1.0000	102.10	19.9	51.4	278.	76.84
186.00	4.4250	1.0000	95.57	17.2	42.0	237.	77.44
198.00	4.6500	1.0000	95.68	15.0	33.6	206.	78.36
210.00	3.7500	1.0000	89.58	13.2	27.3	178.	76.46
222.00	3.6417	1.0000	90.96	10.9	20.8	147.	73.33
234.00	3.4667	1.0000	84.54	9.2	16.1	128.	78.44
246.00	2.9417	1.0000	89.24	7.2	11.7	96.	76.51
258.00	2.7333	1.0000	82.02	5.5	8.5	73.	73.75
270.00	2.1667	1.0000	79.92	3.8	5.4	51.	73.86
282.00	1.6667	1.0000	80.73	2.8	3.8	38.	68.52
294.00	1.2750	1.0000	75.65	1.8	2.3	22.	62.37
306.00	0.8000	1.0000	71.52	1.0	1.2	12.	67.59
318.00	0.3250	1.0000	75.32	0.4	0.5	6.	62.56
330.00	0.2500	1.0000	56.13	0.3	0.3	3.	56.58
342.00	0.1917	1.0000	70.86	0.2	0.2	2.	70.16
354.00	0.1417	0.9999	66.90	0.1	0.1	1.	72.95
366.00	0.0500	0.9998	51.97	0.0	0.0	0.	65.18
378.00	0.0083	0.9990	7.82	0.0	0.0	0.	74.85
390.00	0.0000	0.0000	0.00	0.0	0.0	0.	40.88
402.00	0.0083	0.9990	46.48	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 6944 TIME: 1192. TOTAL=				4.5	19.8	IONZ/TOTAL=	0.8147

50keV He 4 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
621.502	26.713	275.363	105.566	138.994	-0.256	2.489	For ions
(nm)		216.690	106.113	101.846	0.009	2.288	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
10.00	0.2300	1.0000	172.58	6.9	164.2	93.	69.11
30.00	0.3900	1.0000	147.69	8.2	164.3	118.	67.76
50.00	0.6650	1.0000	155.57	9.0	162.9	131.	76.95
70.00	0.8900	1.0000	173.84	10.5	161.7	148.	83.38
90.00	0.9000	1.0000	152.46	11.6	160.9	167.	86.93
110.00	1.2650	1.0000	157.09	13.7	159.8	194.	91.76
130.00	1.4350	1.0000	168.90	15.1	155.8	216.	99.96
150.00	1.6900	1.0000	164.72	16.4	149.5	229.	100.80
170.00	2.0400	1.0000	161.98	17.4	142.1	247.	103.15
190.00	2.2250	1.0000	157.27	18.6	132.7	260.	106.95
210.00	2.4750	1.0000	159.20	19.7	121.1	274.	110.84
230.00	2.8600	1.0000	148.10	19.7	105.0	276.	109.64
250.00	2.9200	1.0000	142.89	19.8	92.0	274.	114.77
270.00	3.3000	1.0000	142.39	18.6	77.4	261.	110.95
290.00	3.4400	1.0000	137.96	17.8	64.2	250.	108.62
310.00	3.6100	1.0000	134.45	16.4	51.4	235.	110.09
330.00	3.3200	1.0000	127.41	14.3	39.3	201.	108.78
350.00	3.1750	1.0000	128.45	11.8	28.4	166.	108.39
370.00	2.9900	1.0000	118.00	9.4	19.9	137.	98.00
390.00	2.4900	1.0000	112.49	6.9	13.0	97.	97.27
410.00	1.9400	1.0000	107.40	4.8	8.1	67.	95.37
430.00	1.4450	1.0000	102.00	3.0	4.6	40.	88.50
450.00	1.0050	1.0000	101.02	1.8	2.4	23.	87.66
470.00	0.6500	1.0000	89.73	0.9	1.1	13.	87.12
490.00	0.3300	1.0000	101.52	0.4	0.5	5.	84.61
510.00	0.1550	1.0000	81.60	0.1	0.2	1.	73.94
530.00	0.0500	0.9999	50.05	0.0	0.0	0.	44.84
550.00	0.0150	0.9997	69.31	0.0	0.0	0.	67.74
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 6024 TIME: 1662. TOTAL=				5.9	43.7	IONZ/TOTAL=	0.8817

75keV He 4 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
756.765	27.523	369.743	124.239	171.663	-0.427	2.765	For ions
(nm)		292.087	133.818	126.167	-0.171	2.307	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.1040	1.0000	227.99	5.3	203.5	76.	64.03
37.50	0.2400	1.0000	220.88	5.9	201.5	82.	56.65
62.50	0.2920	1.0000	223.91	7.1	198.6	101.	86.69
87.50	0.4320	1.0000	196.20	7.6	194.9	109.	97.70
112.50	0.4920	1.0000	230.57	8.7	191.7	124.	104.20
137.50	0.6440	1.0000	212.61	9.6	188.1	141.	115.23
162.50	0.8880	1.0000	213.44	10.8	184.7	156.	113.09
187.50	1.0240	1.0000	211.51	12.2	178.7	172.	123.38
212.50	1.1360	1.0000	202.68	13.3	170.3	191.	125.11
237.50	1.4360	1.0000	203.73	14.5	161.6	205.	133.01
262.50	1.7840	1.0000	190.39	16.6	150.7	231.	136.97
287.50	2.1920	1.0000	199.25	17.1	136.5	244.	139.24
312.50	2.4160	1.0000	191.38	17.9	122.1	257.	139.99
337.50	2.7920	1.0000	179.58	18.7	106.8	263.	142.22
362.50	2.8640	1.0000	177.22	18.3	89.2	263.	142.13
387.50	3.0240	1.0000	165.18	17.0	71.4	236.	135.84
412.50	3.2040	1.0000	159.64	15.6	56.5	216.	132.00
437.50	2.9800	1.0000	152.78	13.7	42.0	192.	127.82
462.50	2.7800	1.0000	150.74	11.2	29.6	155.	124.71
487.50	2.6120	1.0000	140.09	8.6	19.2	117.	124.36
512.50	2.0520	1.0000	129.57	5.8	11.2	80.	114.07
537.50	1.4680	1.0000	130.44	3.6	6.3	50.	113.80
562.50	1.0880	1.0000	118.58	2.1	3.1	30.	107.02
587.50	0.6960	1.0000	105.35	1.0	1.3	14.	92.93
612.50	0.3240	1.0000	104.20	0.4	0.5	5.	84.06
637.50	0.0720	0.9999	66.45	0.1	0.1	1.	77.83
662.50	0.0200	0.9998	79.33	0.0	0.0	0.	59.39
687.50	0.0000	0.0000	0.00	0.0	0.0	0.	65.07
712.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 5319 TIME: 1964. TOTAL=				6.6	68.0	IONZ/TOTAL=	0.9119

100keV He 4 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
868.237	27.750	452.957	138.464	192.253	-0.594	3.068	For ions
(nm)		362.441	155.790	143.373	-0.314	2.392	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
15.00	0.0873	1.0000	256.56	4.1	237.9	58.	77.13
45.00	0.1230	1.0000	242.73	4.9	232.7	67.	103.11
75.00	0.1706	1.0000	290.74	5.2	227.8	71.	95.39
105.00	0.2976	1.0000	244.33	5.7	223.2	84.	110.50
135.00	0.3849	1.0000	228.66	6.8	218.3	100.	108.94
165.00	0.4683	1.0000	237.11	7.9	213.8	107.	120.13
195.00	0.5833	1.0000	229.51	8.9	207.7	126.	126.27
225.00	0.6865	1.0000	233.43	10.1	200.4	139.	133.61
255.00	0.7659	1.0000	244.14	11.1	193.0	155.	144.38
285.00	1.1190	1.0000	238.95	13.0	183.8	177.	146.79
315.00	1.2778	1.0000	238.83	14.0	170.4	199.	150.13
345.00	1.5794	1.0000	216.22	15.4	153.8	221.	150.94
375.00	2.0159	1.0000	210.95	16.7	138.6	231.	155.50
405.00	2.3056	1.0000	209.06	17.4	121.5	238.	163.64
435.00	2.6627	1.0000	194.09	18.0	103.2	249.	160.01
465.00	2.7738	1.0000	195.74	17.5	83.2	246.	158.50
495.00	3.0992	1.0000	180.94	15.9	63.3	219.	150.30
525.00	2.9841	1.0000	171.02	13.4	45.7	187.	148.21
555.00	2.5952	1.0000	167.74	11.2	31.0	159.	143.71
585.00	2.4087	1.0000	154.85	8.0	18.6	117.	137.18
615.00	1.8373	1.0000	140.36	5.3	10.4	75.	130.84
645.00	1.2857	1.0000	137.86	3.0	5.0	40.	120.27
675.00	0.8175	1.0000	134.46	1.4	2.0	19.	119.33
705.00	0.3532	1.0000	107.47	0.5	0.7	6.	100.04
735.00	0.0992	1.0000	81.39	0.1	0.2	2.	73.27
765.00	0.0238	0.9998	91.82	0.0	0.0	0.	77.94
795.00	0.0159	0.9998	101.37	0.0	0.0	0.	93.85
825.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
855.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
885.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
915.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
945.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 8400, 4476 TIME: 1785. TOTAL=				7.1	92.6	IONZ/TOTAL=	0.9291

150keV He 4 in GaAs 1750.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1064.779	28.131	604.457	161.727	235.058	-0.748	3.468	For ions
(nm)		488.903	193.104	178.838	-0.467	2.590	For vacs.

Depth nm	Ions /um/ion	Ist1/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
17.50	0.0370	0.9999	313.22	2.9	266.4	35.	56.54
52.50	0.0639	0.9999	271.08	3.4	265.9	42.	84.56
87.50	0.0908	1.0000	293.59	3.6	265.7	47.	100.26
122.50	0.1143	1.0000	336.67	4.0	265.8	51.	123.18
157.50	0.1513	1.0000	307.40	4.8	264.8	59.	112.69
192.50	0.1882	1.0000	311.19	5.0	262.1	64.	123.29
227.50	0.2723	1.0000	324.32	5.7	254.9	77.	148.33
262.50	0.3126	1.0000	317.83	6.3	247.0	89.	151.54
297.50	0.3899	1.0000	307.38	7.1	238.4	97.	171.47
332.50	0.5277	1.0000	291.20	8.3	230.0	109.	176.30
367.50	0.7126	1.0000	307.86	10.0	218.4	131.	188.76
402.50	0.8370	1.0000	282.51	11.0	208.0	151.	187.02
437.50	1.0992	1.0000	271.96	13.0	194.6	174.	196.30
472.50	1.3345	1.0000	276.03	14.0	176.3	186.	198.75
507.50	1.7513	1.0000	273.86	15.4	157.6	207.	206.72
542.50	1.9160	1.0000	260.09	16.0	137.1	217.	202.50
577.50	2.1345	1.0000	251.08	16.0	114.5	210.	202.01
612.50	2.3462	1.0000	235.16	15.5	91.8	206.	191.48
647.50	2.6151	1.0000	222.46	15.0	71.5	196.	190.73
682.50	2.7059	1.0000	210.38	13.1	51.9	165.	173.09
717.50	2.4672	1.0000	195.77	10.8	34.5	140.	169.04
752.50	2.2521	1.0000	188.62	8.5	21.7	115.	162.07
787.50	1.8151	1.0000	167.69	5.5	11.6	75.	149.96
822.50	1.1227	1.0000	151.19	2.8	5.1	36.	132.03
857.50	0.7193	1.0000	137.10	1.3	1.9	16.	124.89
892.50	0.2555	1.0000	125.48	0.4	0.5	5.	111.45
927.50	0.0807	1.0000	108.11	0.1	0.1	1.	97.81
962.50	0.0134	0.9998	47.89	0.0	0.0	0.	26.28
997.50	0.0000	0.0000	0.00	0.0	0.0	0.	21.69
1032.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1067.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1102.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1172.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1207.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1242.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1277.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1312.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1347.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1382.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1417.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1452.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1487.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1522.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1557.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1592.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1627.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1662.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1697.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1732.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 8500, 3904 TIME: 2023. TOTAL=				7.7	142.0	IONZ/TOTAL=	0.9487

200keV He 4 in GaAs 2000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1243.840	28.762	747.296	176.919	276.721	-0.860	3.909	For ions
(nm)		618.135	226.686	214.526	-0.685	2.890	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
20.00	0.0097	0.9997	346.34	2.5	288.0	27.	54.04
60.00	0.0195	0.9998	401.00	2.5	286.9	32.	55.86
100.00	0.0617	0.9999	398.26	3.2	285.5	32.	89.12
140.00	0.0779	1.0000	302.58	2.9	284.4	32.	117.60
180.00	0.0909	1.0000	386.05	3.3	283.5	38.	137.05
220.00	0.0942	1.0000	354.45	3.5	282.5	42.	130.93
260.00	0.1364	1.0000	365.33	4.4	281.7	48.	147.83
300.00	0.1591	1.0000	388.98	4.3	280.7	50.	165.09
340.00	0.1786	1.0000	382.20	5.2	278.5	60.	174.53
380.00	0.2662	1.0000	339.69	5.8	270.8	72.	192.37
420.00	0.3571	1.0000	399.64	6.8	259.2	87.	215.51
460.00	0.5162	1.0000	355.81	8.0	247.9	89.	227.48
500.00	0.6429	1.0000	346.81	9.1	233.9	108.	233.81
540.00	0.8896	1.0000	336.02	10.4	218.1	124.	228.59
580.00	1.0292	1.0000	340.87	11.9	198.9	145.	244.45
620.00	1.4545	1.0000	325.72	13.7	181.0	165.	256.30
660.00	1.5779	1.0000	310.52	15.3	158.4	188.	242.57
700.00	1.9091	1.0000	293.27	15.5	133.3	199.	240.93
740.00	2.2110	1.0000	282.63	15.4	106.7	192.	232.17
780.00	2.4221	1.0000	273.83	15.3	84.3	188.	228.10
820.00	2.4416	1.0000	259.75	13.6	60.7	172.	216.62
860.00	2.3604	1.0000	231.04	11.4	40.7	142.	198.37
900.00	2.2175	1.0000	210.85	8.9	24.7	115.	189.92
940.00	1.6364	1.0000	189.22	5.4	12.7	72.	176.64
980.00	1.1786	1.0000	184.61	3.0	5.7	38.	170.69
1020.00	0.6558	1.0000	168.60	1.2	2.0	14.	143.13
1060.00	0.2273	1.0000	132.48	0.4	0.5	4.	113.68
1100.00	0.0617	0.9999	106.72	0.1	0.1	1.	99.48
1140.00	0.0065	0.9995	174.16	0.0	0.0	0.	209.63
1180.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1220.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1420.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1460.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1500.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1540.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1580.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1620.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1660.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1700.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1740.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1780.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1820.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1860.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1900.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1940.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1980.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7700, 3443 TIME: 1065. TOTAL=				8.1	191.7	IONZ/TOTAL=	0.9594

300keV He 4 in GaAs 3000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1571.014	29.483	1001.222	214.526	364.563	-0.968	4.178	For ions
(nm)		851.885	282.604	299.394	-0.837	3.232	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
30.00	0.0051	0.9995	510.71	1.6	320.6	16.	72.13
90.00	0.0154	0.9998	522.07	1.7	319.2	15.	138.55
150.00	0.0256	0.9999	583.78	1.9	319.1	17.	214.51
210.00	0.0410	0.9999	583.52	2.4	319.3	20.	195.69
270.00	0.0385	0.9999	551.26	2.4	317.5	24.	183.88
330.00	0.0744	1.0000	484.47	2.9	318.0	21.	194.17
390.00	0.0795	1.0000	535.92	3.2	315.6	30.	227.11
450.00	0.1256	1.0000	547.02	4.2	316.4	43.	241.60
510.00	0.1897	1.0000	498.07	4.8	313.0	49.	278.99
570.00	0.2718	1.0000	499.18	5.4	305.9	53.	307.23
630.00	0.3513	1.0000	459.67	6.5	297.3	67.	328.32
690.00	0.5359	1.0000	469.91	7.9	275.2	78.	338.36
750.00	0.6821	1.0000	466.06	8.8	248.1	94.	360.94
810.00	0.9231	1.0000	477.02	10.4	217.5	115.	358.61
870.00	1.1051	1.0000	427.41	12.0	186.4	129.	348.66
930.00	1.4154	1.0000	397.28	12.6	150.8	139.	321.69
990.00	1.8000	1.0000	371.67	13.7	118.9	155.	308.91
1050.00	2.0410	1.0000	345.04	13.4	86.2	163.	306.57
1110.00	2.1923	1.0000	308.45	11.9	56.5	141.	275.25
1170.00	1.9641	1.0000	283.42	8.8	30.9	104.	248.20
1230.00	1.5077	1.0000	244.19	5.3	13.6	68.	217.19
1290.00	0.8487	1.0000	215.70	2.2	4.4	28.	186.64
1350.00	0.3103	1.0000	172.97	0.6	0.8	7.	163.71
1410.00	0.0564	1.0000	149.80	0.1	0.1	1.	165.19
1470.00	0.0026	0.9990	119.50	0.0	0.0	0.	55.88
1530.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2010.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2070.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2130.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2250.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2310.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2370.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2430.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2490.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2550.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6500, 2746 TIME: 1110. TOTAL=				8.7	291.1	IONZ/TOTAL=	0.9710

400keV He 4 in GaAs 3000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1868.649	29.958	1226.813	250.307	448.575	-1.046	4.462	For ions
(nm)		1050.526	337.178	377.292	-0.928	3.466	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
30.00	0.0029	0.9990	970.96	1.7	345.1	10.	195.89
90.00	0.0117	0.9998	623.20	1.5	345.8	14.	84.82
150.00	0.0175	0.9998	786.93	1.5	346.1	14.	247.30
210.00	0.0205	0.9999	754.26	1.8	346.3	14.	197.09
270.00	0.0117	0.9998	644.00	2.0	346.0	16.	138.77
330.00	0.0497	0.9999	798.74	2.1	346.2	17.	216.65
390.00	0.0439	0.9999	673.04	2.1	346.3	17.	259.23
450.00	0.0468	0.9999	754.07	2.7	345.0	20.	340.17
510.00	0.0731	1.0000	658.16	2.7	344.1	27.	321.44
570.00	0.0877	1.0000	700.83	3.1	341.7	31.	373.58
630.00	0.1404	1.0000	617.63	3.4	340.3	37.	407.12
690.00	0.2135	1.0000	602.39	4.3	338.0	38.	397.90
750.00	0.2456	1.0000	644.47	5.0	329.7	48.	396.77
810.00	0.3684	1.0000	607.10	6.4	318.3	62.	454.00
870.00	0.4298	1.0000	596.13	7.2	305.1	67.	415.47
930.00	0.5789	1.0000	540.79	8.2	279.5	84.	412.30
990.00	0.6696	1.0000	536.35	8.8	250.6	93.	432.03
1050.00	0.8713	1.0000	524.94	10.1	217.8	104.	430.49
1110.00	1.0965	1.0000	525.31	11.7	186.3	121.	432.01
1170.00	1.4327	1.0000	499.48	12.6	154.5	143.	417.46
1230.00	1.6316	1.0000	458.24	12.7	119.9	137.	384.43
1290.00	1.7778	1.0000	412.54	12.0	88.8	133.	379.09
1350.00	1.8129	1.0000	380.79	10.6	60.5	120.	335.65
1410.00	1.7924	1.0000	345.85	9.1	37.5	106.	314.51
1470.00	1.4883	1.0000	310.73	6.0	19.1	68.	277.76
1530.00	0.9942	1.0000	274.95	3.3	8.0	37.	248.78
1590.00	0.5497	1.0000	236.41	1.3	2.4	16.	206.89
1650.00	0.1667	1.0000	181.09	0.3	0.4	3.	150.32
1710.00	0.0175	0.9998	122.81	0.0	0.0	0.	60.55
1770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2010.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2070.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2130.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2250.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2310.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2370.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2430.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2490.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2550.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
2970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5700, 2251 TIME: 1165. TOTAL=				9.3	390.6	IONZ/TOTAL=	0.9768

10keV Be 9 in GaAs 175.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
105.648	15.447	39.445	20.493	26.063	0.348	2.577	For ions
(nm)		27.668	18.045	17.599	0.672	3.016	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.75	2.6286	1.0000	28.60	67.7	102.4	852.	12.33
5.25	6.0571	1.0000	28.39	81.5	112.5	1289.	12.99
8.75	8.4286	1.0000	26.02	88.0	115.8	1352.	13.28
12.25	10.0286	1.0000	27.63	96.2	117.4	1478.	13.91
15.75	11.1429	1.0000	26.20	97.7	116.7	1527.	14.63
19.25	12.6286	1.0000	27.60	97.5	113.9	1441.	16.53
22.75	13.2000	1.0000	27.30	95.4	106.8	1430.	17.23
26.25	14.6571	1.0000	27.46	91.9	97.8	1323.	17.50
29.75	14.6571	1.0000	25.87	84.4	88.6	1274.	19.53
33.25	14.5714	1.0000	26.17	82.9	79.9	1166.	19.51
36.75	14.4286	1.0000	25.76	71.7	68.7	1069.	18.82
40.25	14.0857	1.0000	26.39	63.6	58.2	942.	19.63
43.75	13.9714	1.0000	26.47	55.3	49.4	825.	19.91
47.25	14.2000	1.0000	25.09	46.5	40.3	733.	20.93
50.75	12.3143	1.0000	27.07	39.0	32.9	609.	23.57
54.25	11.6286	1.0000	25.24	32.4	26.6	516.	22.44
57.75	10.0286	1.0000	24.06	25.4	20.9	390.	22.23
61.25	8.9429	1.0000	24.51	22.0	16.6	308.	22.98
64.75	8.3714	1.0000	25.71	17.8	12.5	252.	22.54
68.25	6.5143	1.0000	24.45	12.6	9.0	178.	21.37
71.75	4.9714	1.0000	24.86	9.1	6.3	129.	23.12
75.25	4.0286	1.0000	25.05	6.4	4.4	91.	21.64
78.75	3.1429	1.0000	20.61	4.1	2.8	47.	22.57
82.25	2.6286	1.0000	24.25	3.1	1.9	43.	22.14
85.75	1.5714	1.0000	20.17	2.0	1.3	28.	19.77
89.25	1.1714	1.0000	22.41	1.3	0.8	21.	23.35
92.75	0.5143	0.9999	20.06	0.6	0.4	8.	26.16
96.25	0.2857	0.9999	26.70	0.4	0.2	10.	22.39
99.75	0.3143	0.9999	16.48	0.3	0.2	5.	18.37
103.25	0.1429	0.9998	29.78	0.1	0.1	1.	26.98
106.75	0.2286	0.9999	35.41	0.1	0.0	2.	31.42
110.25	0.1143	0.9998	14.41	0.0	0.0	1.	1.95
113.75	0.0000	0.0000	0.00	0.0	0.0	1.	3.68
117.25	0.0286	0.9990	1.52	0.0	0.0	0.	0.00
120.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
124.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
127.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
131.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
134.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
138.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
141.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
145.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
148.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
152.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
155.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
159.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
162.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
166.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
169.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
173.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2696 TIME: 187. TOTAL=				4.5	4.9	IONZ/TOTAL=	0.5201

25keV Be 9 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
203.389	23.969	85.961	40.447	51.217	0.093	2.357	For ions
(nm)		62.998	36.906	35.424	0.435	2.614	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	1.2167	1.0000	53.09	52.8	148.1	568.	24.30
9.00	2.3000	1.0000	53.90	63.3	157.6	840.	24.76
15.00	2.6167	1.0000	53.79	69.7	164.2	1019.	21.38
21.00	3.5667	1.0000	55.33	74.5	165.3	1126.	25.64
27.00	4.6333	1.0000	56.26	77.5	167.8	1189.	28.98
33.00	4.2833	1.0000	56.85	81.6	167.7	1222.	29.92
39.00	4.9333	1.0000	53.10	84.3	166.6	1217.	32.12
45.00	6.3167	1.0000	57.02	86.5	161.4	1199.	34.24
51.00	6.5333	1.0000	54.43	86.7	154.6	1256.	35.85
57.00	6.6500	1.0000	53.12	86.9	146.8	1265.	36.51
63.00	7.6500	1.0000	55.11	86.6	137.5	1337.	37.80
69.00	7.0833	1.0000	54.95	82.7	125.8	1250.	39.57
75.00	7.6333	1.0000	52.32	77.6	112.7	1207.	40.07
81.00	7.8333	1.0000	55.91	70.7	100.3	1066.	40.06
87.00	7.1000	1.0000	53.62	64.6	86.9	995.	40.28
93.00	8.5500	1.0000	48.36	59.0	76.1	900.	40.51
99.00	7.6333	1.0000	48.60	53.8	65.5	831.	40.76
105.00	7.2667	1.0000	50.39	46.4	54.1	729.	42.44
111.00	6.9000	1.0000	51.14	41.1	44.6	630.	42.71
117.00	6.4333	1.0000	49.75	33.4	36.0	535.	40.27
123.00	6.2000	1.0000	47.20	29.1	29.3	429.	40.84
129.00	5.9667	1.0000	45.24	23.2	22.7	326.	40.08
135.00	5.2500	1.0000	44.86	18.6	17.3	262.	40.21
141.00	3.9167	1.0000	43.13	13.5	12.4	226.	41.21
147.00	3.4000	1.0000	42.50	10.7	8.7	153.	37.60
153.00	2.9667	1.0000	43.04	7.2	6.0	114.	35.67
159.00	1.8667	1.0000	37.96	4.7	3.8	66.	33.31
165.00	1.2667	1.0000	41.14	3.2	2.4	44.	37.69
171.00	0.8167	1.0000	41.94	1.9	1.4	27.	37.13
177.00	0.6833	1.0000	32.64	1.1	0.8	21.	33.97
183.00	0.4667	1.0000	43.48	0.7	0.5	15.	33.23
189.00	0.2833	0.9999	48.28	0.5	0.4	10.	36.69
195.00	0.1667	0.9999	31.90	0.2	0.1	5.	33.35
201.00	0.1000	0.9998	32.86	0.1	0.1	4.	31.48
207.00	0.0333	0.9995	13.52	0.1	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0167	0.9990	8.51	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1945 TIME: 395. TOTAL=				9.0	15.3	IONZ/TOTAL=	0.6300

50keV Be 9 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
330.882	32.157	156.561	65.451	84.122	-0.150	2.378	For ions
(nm)		115.502	63.788	57.574	0.213	2.334	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
6.00	0.5500	1.0000	89.19	41.1	198.7	532.	26.62
18.00	1.0000	1.0000	97.24	49.0	207.2	749.	35.40
30.00	1.5833	1.0000	93.61	54.3	211.8	780.	45.23
42.00	1.8000	1.0000	95.85	58.1	214.9	842.	41.91
54.00	2.2167	1.0000	94.46	64.7	216.2	827.	47.29
66.00	2.3083	1.0000	91.83	68.9	215.7	952.	53.80
78.00	2.7167	1.0000	94.29	73.0	210.6	1061.	55.78
90.00	3.0917	1.0000	94.08	71.3	202.2	1024.	57.69
102.00	3.5167	1.0000	90.37	73.9	191.9	1145.	64.33
114.00	4.2000	1.0000	91.36	73.9	178.3	1148.	63.62
126.00	4.5000	1.0000	91.73	73.6	164.3	1060.	64.08
138.00	5.0750	1.0000	91.63	72.6	145.9	1120.	64.11
150.00	4.9167	1.0000	89.20	68.0	128.8	1010.	67.62
162.00	5.2917	1.0000	85.63	62.2	110.1	961.	63.50
174.00	5.4167	1.0000	78.98	55.6	90.9	785.	65.62
186.00	5.1750	1.0000	80.39	48.5	73.3	707.	63.11
198.00	4.8167	1.0000	81.34	38.7	56.2	603.	63.12
210.00	4.4083	1.0000	75.54	33.5	42.9	497.	60.38
222.00	4.5250	1.0000	73.24	25.9	31.1	395.	61.32
234.00	3.5833	1.0000	70.67	18.7	21.2	282.	57.97
246.00	2.8167	1.0000	68.22	12.8	13.6	207.	52.49
258.00	1.8833	1.0000	64.28	8.2	7.9	133.	49.02
270.00	1.3667	1.0000	61.02	4.6	4.2	67.	58.16
282.00	0.9250	1.0000	60.97	2.5	2.2	36.	55.32
294.00	0.4750	1.0000	57.24	1.1	0.9	15.	67.06
306.00	0.2583	1.0000	58.80	0.5	0.3	5.	91.78
318.00	0.0833	0.9999	43.65	0.1	0.1	6.	21.48
330.00	0.0250	0.9997	46.63	0.0	0.0	1.	6.94
342.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
354.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
366.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
378.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
390.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
402.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1328 TIME: 691. TOTAL=				13.9	35.3	IONZ/TOTAL=	0.7180

75keV Be 9 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
437.055	36.202	224.636	84.688	109.734	-0.305	2.491	For ions
(nm)		171.112	86.269	75.692	0.003	2.276	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.2075	1.0000	113.76	31.5	235.8	386.	45.92
24.00	0.6153	1.0000	138.18	38.5	242.1	556.	43.80
40.00	0.7298	1.0000	129.23	40.0	242.9	559.	45.89
56.00	0.8801	1.0000	128.27	42.5	245.1	517.	58.46
72.00	1.1878	1.0000	127.11	47.6	245.8	613.	72.61
88.00	1.4740	1.0000	129.98	53.8	248.6	690.	61.26
104.00	1.6886	1.0000	124.26	59.0	244.6	789.	63.12
120.00	2.2109	1.0000	133.91	61.9	239.2	851.	69.13
136.00	2.3039	1.0000	119.46	65.1	230.8	902.	78.81
152.00	2.4828	1.0000	126.00	67.2	221.5	1000.	78.69
168.00	2.9765	1.0000	128.84	67.7	202.9	951.	81.98
184.00	3.4201	1.0000	118.95	68.3	185.0	1019.	78.22
200.00	3.5633	1.0000	120.10	67.3	165.4	1068.	88.13
216.00	4.0570	1.0000	112.42	62.7	143.8	1002.	84.27
232.00	4.2430	1.0000	112.07	60.6	123.9	932.	84.56
248.00	4.3002	1.0000	105.03	54.5	102.2	837.	84.32
264.00	4.1142	1.0000	103.57	47.8	81.0	782.	86.77
280.00	4.2931	1.0000	96.50	39.1	60.4	627.	88.56
296.00	4.1857	1.0000	94.23	31.3	44.2	470.	83.38
312.00	3.2770	1.0000	91.67	23.0	30.6	353.	75.33
328.00	2.5830	1.0000	83.27	16.1	19.2	233.	72.72
344.00	2.3254	1.0000	79.13	10.7	11.3	141.	70.70
360.00	1.2307	1.0000	82.20	5.8	5.8	84.	79.74
376.00	0.9015	1.0000	67.17	2.8	2.6	55.	77.77
392.00	0.4365	1.0000	80.74	1.2	1.0	21.	70.27
408.00	0.1717	1.0000	64.14	0.4	0.3	6.	59.66
424.00	0.0787	0.9999	53.02	0.1	0.1	5.	53.90
440.00	0.0143	0.9995	70.72	0.0	0.0	1.	68.91
456.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 8735,	880	TIME:	825.	TOTAL=	17.1	57.2	IONZ/TOTAL= 0.7703

100keV Be 9 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
530.258	39.251	286.978	101.610	133.556	-0.404	2.601	For ions
(nm)		219.254	106.792	91.260	-0.088	2.268	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
10.00	0.2174	1.0000	152.89	27.9	266.9	328.	25.28
30.00	0.3116	1.0000	158.94	30.9	268.5	478.	24.30
50.00	0.4420	1.0000	153.87	32.6	271.4	384.	37.84
70.00	0.5652	1.0000	175.39	37.7	273.9	505.	54.11
90.00	0.8043	1.0000	159.65	41.6	278.0	689.	51.22
110.00	1.2029	1.0000	155.64	43.6	273.2	525.	72.89
130.00	1.1739	1.0000	162.94	47.0	269.5	636.	74.67
150.00	1.5145	1.0000	156.12	54.4	265.0	716.	81.31
170.00	1.5870	1.0000	167.06	57.2	253.8	760.	85.49
190.00	2.0000	1.0000	150.75	59.1	244.6	762.	101.29
210.00	2.3043	1.0000	151.43	62.9	229.9	892.	109.60
230.00	2.8986	1.0000	147.23	63.5	211.7	953.	109.16
250.00	3.1377	1.0000	141.73	63.2	188.5	947.	106.50
270.00	3.2101	1.0000	137.23	64.0	165.5	1090.	98.34
290.00	3.5072	1.0000	137.20	57.6	139.7	989.	100.73
310.00	3.4565	1.0000	127.55	52.9	114.2	788.	103.12
330.00	3.6667	1.0000	129.02	47.6	92.9	758.	104.52
350.00	3.7609	1.0000	120.60	40.9	69.9	572.	107.40
370.00	3.5797	1.0000	115.29	31.7	48.8	430.	100.88
390.00	2.9493	1.0000	111.67	22.8	32.4	340.	106.35
410.00	2.5870	1.0000	101.64	15.3	19.3	225.	96.65
430.00	1.7391	1.0000	95.76	8.8	10.5	152.	95.29
450.00	1.0870	1.0000	91.57	5.0	5.1	77.	81.93
470.00	0.6667	1.0000	89.46	2.3	2.1	47.	66.22
490.00	0.2826	1.0000	77.57	0.7	0.6	12.	33.30
510.00	0.0362	0.9998	54.23	0.1	0.1	1.	73.59
530.00	0.0290	0.9998	97.90	0.0	0.0	1.	75.16
550.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6900,	569	TIME:	806.	TOTAL=	19.4	79.9	IONZ/TOTAL= 0.8044

150keV Be 9 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
688.712	44.456	400.116	126.807	171.264	-0.585	2.944	For ions
(nm)		300.368	141.125	118.046	-0.163	2.270	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.1049	0.9999	224.45	21.0	328.5	245.	65.76
37.50	0.2164	1.0000	193.27	23.1	325.6	351.	45.86
62.50	0.2361	1.0000	242.17	28.1	324.0	281.	57.03
87.50	0.3279	1.0000	227.31	29.4	320.5	391.	70.69
112.50	0.3344	1.0000	229.77	31.6	319.1	379.	89.86
137.50	0.4393	1.0000	216.49	33.5	313.2	506.	88.86
162.50	0.6951	1.0000	204.19	36.8	310.3	491.	86.96
187.50	0.7410	1.0000	205.80	40.7	308.8	442.	138.47
212.50	0.9508	1.0000	219.19	44.2	300.2	626.	107.41
237.50	1.1541	1.0000	200.07	46.0	288.8	690.	121.08
262.50	1.3377	1.0000	200.23	51.7	281.1	803.	108.33
287.50	1.7770	1.0000	193.89	55.6	268.7	858.	128.12
312.50	1.9082	1.0000	183.10	58.7	245.6	826.	130.81
337.50	2.1705	1.0000	181.59	60.0	226.9	729.	129.31
362.50	2.3672	1.0000	180.60	61.6	203.7	798.	132.64
387.50	2.7607	1.0000	181.03	58.0	171.6	772.	135.78
412.50	3.0492	1.0000	183.34	54.9	144.9	704.	147.28
437.50	3.1541	1.0000	171.29	47.9	114.7	682.	141.12
462.50	3.1213	1.0000	159.27	40.9	87.4	533.	133.31
487.50	3.1213	1.0000	147.96	35.2	65.0	513.	122.37
512.50	2.8656	1.0000	144.96	27.7	45.1	398.	112.81
537.50	2.4656	1.0000	127.14	18.8	27.1	303.	110.74
562.50	1.8361	1.0000	122.71	11.4	15.0	128.	104.82
587.50	1.1279	1.0000	109.96	6.1	7.1	79.	82.24
612.50	0.6164	1.0000	93.65	2.5	2.5	32.	78.22
637.50	0.2754	1.0000	98.68	0.8	0.8	14.	76.78
662.50	0.0590	0.9999	84.48	0.2	0.1	2.	111.01
687.50	0.0262	0.9998	94.75	0.0	0.0	0.	0.00
712.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6100, 437		TIME: 930.	TOTAL=	23.2	126.2	IONZ/TOTAL=	0.8449

200keV Be 9 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
823.732	46.166	498.539	147.588	202.063	-0.706	3.218	For ions
(nm)		385.079	172.859	141.895	-0.297	2.281	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
15.00	0.0802	0.9999	268.79	17.6	386.5	202.	95.50
45.00	0.1728	1.0000	247.14	18.4	379.3	213.	94.59
75.00	0.1358	1.0000	255.36	21.3	373.8	252.	79.04
105.00	0.2099	1.0000	283.15	21.5	365.5	254.	84.36
135.00	0.1852	1.0000	276.22	24.8	359.5	314.	90.46
165.00	0.3272	1.0000	245.64	28.5	358.1	292.	103.54
195.00	0.4321	1.0000	259.28	30.4	348.5	361.	123.79
225.00	0.4877	1.0000	247.37	34.0	342.3	372.	137.04
255.00	0.6543	1.0000	243.91	36.6	335.5	471.	129.35
285.00	0.9321	1.0000	264.24	40.3	328.3	466.	129.31
315.00	0.9877	1.0000	248.91	47.1	318.7	521.	142.30
345.00	0.9691	1.0000	258.31	49.7	302.5	532.	164.73
375.00	1.4259	1.0000	239.87	51.1	280.3	657.	159.63
405.00	1.8333	1.0000	227.33	53.2	254.4	630.	157.21
435.00	1.8395	1.0000	229.05	54.3	232.0	626.	165.05
465.00	2.2963	1.0000	206.32	56.3	205.4	725.	156.49
495.00	2.5926	1.0000	204.15	53.7	173.9	681.	159.68
525.00	2.8395	1.0000	204.70	51.7	142.6	659.	155.17
555.00	2.5802	1.0000	189.57	45.2	110.9	598.	149.39
585.00	2.7160	1.0000	175.08	37.2	82.1	500.	151.29
615.00	2.7716	1.0000	166.75	29.5	55.8	407.	142.06
645.00	2.4259	1.0000	157.70	21.9	35.1	309.	145.85
675.00	1.9630	1.0000	140.49	13.1	17.9	197.	117.35
705.00	1.1543	1.0000	123.90	6.6	8.0	89.	110.56
735.00	0.5617	1.0000	121.81	2.6	2.7	38.	98.94
765.00	0.2531	1.0000	90.66	0.8	0.8	12.	84.86
795.00	0.0617	0.9999	87.63	0.1	0.1	1.	56.73
825.00	0.0185	0.9997	85.73	0.0	0.0	1.	76.15
855.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
885.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
915.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
945.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5400, 1000 TIME: 818. TOTAL=				25.4	174.0	IONZ/TOTAL=	0.8725

300keV Be 9 in GaAs 1750.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1048.995	49.211	676.026	173.457	252.044	-0.855	3.615	For ions
(nm)		537.074	218.735	190.930	-0.484	2.463	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
17.50	0.0357	0.9998	278.72	12.5	461.0	136.	55.88
52.50	0.0429	0.9998	347.57	10.7	457.5	94.	106.49
87.50	0.0429	0.9998	248.26	13.7	455.0	144.	92.35
122.50	0.0643	0.9999	310.09	14.5	450.6	125.	78.70
157.50	0.1357	0.9999	291.21	19.8	450.4	133.	98.21
192.50	0.2000	1.0000	339.08	17.8	441.2	190.	115.71
227.50	0.1429	1.0000	230.88	21.4	427.3	195.	122.34
262.50	0.2500	1.0000	312.99	22.6	415.6	245.	153.04
297.50	0.2857	1.0000	281.37	27.5	407.1	276.	139.14
332.50	0.2786	1.0000	357.90	26.4	396.8	308.	182.24
367.50	0.4429	1.0000	308.56	31.3	385.8	278.	161.44
402.50	0.5286	1.0000	329.96	33.9	374.8	322.	215.44
437.50	0.7214	1.0000	322.12	40.5	355.5	350.	196.26
472.50	0.8929	1.0000	321.79	41.7	336.0	398.	202.69
507.50	1.2071	1.0000	294.07	47.3	319.4	484.	202.43
542.50	1.2143	1.0000	312.43	48.1	295.7	473.	210.30
577.50	1.4357	1.0000	300.56	50.8	269.5	547.	235.59
612.50	1.6643	1.0000	264.96	51.7	240.0	530.	225.86
647.50	1.9929	1.0000	282.82	52.1	205.6	572.	225.24
682.50	2.2857	1.0000	253.20	48.7	173.0	528.	206.79
717.50	2.4571	1.0000	244.48	47.2	142.0	572.	204.45
752.50	2.4214	1.0000	229.74	41.3	105.1	505.	190.63
787.50	2.5000	1.0000	213.05	35.1	77.5	465.	195.99
822.50	2.5071	1.0000	206.97	27.4	50.7	335.	194.65
857.50	1.9357	1.0000	190.50	17.4	28.2	226.	174.00
892.50	1.3786	1.0000	146.06	9.9	14.4	131.	140.49
927.50	0.9071	1.0000	142.82	5.1	5.9	66.	132.17
962.50	0.3500	1.0000	126.38	1.5	1.3	21.	130.90
997.50	0.0643	0.9999	104.95	0.2	0.1	2.	122.15
1032.50	0.0143	0.9995	53.55	0.0	0.0	1.	67.83
1067.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1102.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1172.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1207.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1242.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1277.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1312.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1347.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1382.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1417.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1452.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1487.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1522.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1557.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1592.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1627.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1662.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1697.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1732.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4000, 1000 TIME: 652. TOTAL=				28.6	271.0	IONZ/TOTAL=	0.9045

400keV Be 9 in GaAs 2000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1251.055	51.845	833.558	199.952	304.716	-1.015	4.087	For ions
(nm)		665.328	259.801	226.318	-0.608	2.662	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
20.00	0.0227	0.9997	489.46	12.7	517.0	80.	40.62
60.00	0.0303	0.9998	308.67	12.3	512.8	114.	32.74
100.00	0.0379	0.9998	368.75	12.0	505.3	85.	54.06
140.00	0.0682	0.9999	565.71	14.3	503.4	94.	104.62
180.00	0.0758	0.9999	383.34	14.1	500.3	124.	161.44
220.00	0.0833	0.9999	410.42	14.8	495.5	163.	202.61
260.00	0.1439	0.9999	394.24	16.2	490.6	134.	194.54
300.00	0.1136	0.9999	460.34	14.8	483.5	130.	135.27
340.00	0.1742	1.0000	403.96	21.9	475.4	185.	171.34
380.00	0.2121	1.0000	448.80	20.7	462.2	176.	206.73
420.00	0.3182	1.0000	405.34	21.6	438.8	181.	195.74
460.00	0.3182	1.0000	422.38	28.2	431.1	263.	215.93
500.00	0.4318	1.0000	424.02	31.5	413.9	289.	232.02
540.00	0.4318	1.0000	355.14	31.2	399.5	263.	226.35
580.00	0.6364	1.0000	343.95	34.8	377.5	315.	248.35
620.00	0.7197	1.0000	409.30	39.9	348.2	382.	272.76
660.00	0.9167	1.0000	359.54	40.8	327.8	441.	264.51
700.00	1.2197	1.0000	353.14	45.8	300.5	473.	251.16
740.00	1.3939	1.0000	355.54	45.8	273.3	479.	257.10
780.00	1.6364	1.0000	339.14	49.3	239.7	473.	247.28
820.00	1.9621	1.0000	304.67	49.4	202.5	514.	251.77
860.00	1.9924	1.0000	298.75	46.4	164.7	495.	239.74
900.00	2.1364	1.0000	284.45	41.5	129.5	450.	230.26
940.00	2.4773	1.0000	273.95	36.6	94.9	424.	220.67
980.00	2.2727	1.0000	237.26	29.9	64.9	349.	225.76
1020.00	2.0076	1.0000	228.31	20.0	39.4	246.	202.61
1060.00	1.4773	1.0000	201.77	12.8	19.9	141.	179.78
1100.00	1.0379	1.0000	182.21	6.3	8.2	74.	165.69
1140.00	0.3788	1.0000	173.27	1.9	2.2	27.	145.41
1180.00	0.1439	0.9999	150.21	0.5	0.5	7.	100.58
1220.00	0.0152	0.9995	80.77	0.0	0.0	2.	52.17
1260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1420.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1460.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1500.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1540.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1580.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1620.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1660.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1700.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1740.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1780.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1820.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1860.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1900.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1940.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1980.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3300, 1000 TIME: 567. TOTAL=				30.7	368.9	IONZ/TOTAL=	0.9231

10keV Se 79 in GaAs 30.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
11.682	4.856	8.137	4.232	3.678	0.651	3.410	For ions
(nm)		5.189	3.697	1.882	1.001	3.939	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.30	10.5000	0.4444	2.59	873.9	77.8	3041.	1.76
0.90	20.8333	0.4720	2.92	1152.5	77.6	6651.	1.81
1.50	36.6667	0.4773	2.72	1121.1	76.7	8873.	1.93
2.10	38.8333	0.3734	2.76	1176.0	74.7	10395.	2.10
2.70	56.5000	0.3864	2.73	1131.5	71.9	11740.	2.31
3.30	65.6667	0.4518	2.96	1092.8	68.4	12913.	2.38
3.90	76.6667	0.4304	3.01	1002.3	64.2	13651.	2.49
4.50	83.1667	0.3908	3.19	966.6	60.5	13887.	2.64
5.10	84.6667	0.4468	3.00	942.4	55.8	14345.	2.75
5.70	86.3333	0.4247	3.18	865.8	50.5	14268.	2.88
6.30	90.8333	0.4275	3.70	718.9	45.1	13378.	2.93
6.90	97.0000	0.3935	3.69	666.9	40.5	12859.	3.07
7.50	101.8333	0.4632	3.53	633.8	36.1	11802.	3.18
8.10	91.6667	0.4309	3.65	540.4	31.4	11158.	3.32
8.70	88.5000	0.4331	3.87	467.9	27.0	9992.	3.52
9.30	80.8333	0.4763	3.83	385.2	23.0	8959.	3.60
9.90	80.3333	0.4025	4.08	335.5	19.6	8059.	3.76
10.50	61.6667	0.4162	4.00	298.6	16.7	7127.	3.81
11.10	51.1667	0.4072	4.22	235.1	13.9	6276.	3.78
11.70	53.5000	0.4361	4.08	199.5	11.3	5438.	3.79
12.30	46.6667	0.4429	4.11	170.5	9.5	4663.	3.90
12.90	43.5000	0.4215	4.07	143.2	7.8	4088.	3.86
13.50	36.0000	0.4722	4.21	112.7	6.2	3578.	3.95
14.10	32.8333	0.4416	3.91	88.4	5.2	2943.	4.01
14.70	26.1667	0.4395	4.93	71.2	4.1	2468.	4.01
15.30	21.6667	0.4538	4.74	56.9	3.3	2019.	4.26
15.90	16.3333	0.4286	4.84	49.9	2.5	1602.	4.32
16.50	16.0000	0.4375	4.19	37.5	2.0	1284.	4.47
17.10	12.1667	0.4110	4.87	26.3	1.5	956.	4.59
17.70	10.0000	0.5167	3.73	20.4	1.2	828.	4.43
18.30	8.1667	0.3265	4.42	17.0	0.9	632.	4.59
18.90	6.5000	0.4872	4.88	11.6	0.7	487.	4.37
19.50	5.5000	0.5454	4.97	7.9	0.5	382.	4.84
20.10	3.1667	0.4210	5.57	6.4	0.4	285.	4.78
20.70	1.6667	0.1000	4.62	3.9	0.3	222.	4.60
21.30	2.5000	0.5333	4.86	4.6	0.2	181.	5.28
21.90	2.1667	0.6153	4.04	3.7	0.2	111.	4.88
22.50	2.3333	0.2857	4.35	2.9	0.1	72.	5.41
23.10	0.3333	0.4998	5.85	1.2	0.1	58.	5.49
23.70	0.5000	0.3332	8.03	1.1	0.1	47.	4.74
24.30	0.5000	0.3332	4.02	1.1	0.1	37.	5.33
24.90	0.5000	0.0000	7.78	0.4	0.0	19.	5.10
25.50	0.5000	0.3332	4.06	0.6	0.0	18.	2.84
26.10	0.1667	0.9990	7.15	0.7	0.0	15.	4.43
26.70	0.5000	0.3332	2.78	0.3	0.0	10.	3.93
27.30	0.1667	0.0000	1.25	0.1	0.0	4.	1.75
27.90	0.0000	0.0000	0.00	0.2	0.0	2.	1.94
28.50	0.0000	0.0000	0.00	0.2	0.0	2.	0.60
29.10	0.0000	0.0000	0.00	0.1	0.0	2.	1.20
29.70	0.1667	0.0000	4.84	0.1	0.0	0.	0.00

IONS:10000, 2802 TIME: 24. TOTAL= 9.4 0.6 IONZ/TOTAL= 0.0595

10keV B 11 in GaAs 150.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
84.714	14.485	32.354	16.975	21.437	0.384	2.660	For ions
(nm)		22.660	15.013	13.797	0.728	3.127	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.50	4.3333	1.0000	22.59	100.3	110.2	1191.	8.99
4.50	7.3667	1.0000	22.49	119.6	119.7	1750.	10.73
7.50	9.9667	1.0000	21.05	125.9	126.2	1900.	11.12
10.50	12.7333	1.0000	23.33	133.5	127.0	2093.	11.13
13.50	13.8000	1.0000	21.88	134.5	123.4	2078.	12.35
16.50	14.4667	1.0000	22.84	134.5	117.4	2162.	12.77
19.50	17.2000	1.0000	21.18	129.6	110.4	1950.	13.82
22.50	18.1667	1.0000	22.32	122.6	101.2	1826.	14.70
25.50	17.9667	1.0000	22.13	110.5	89.3	1684.	15.43
28.50	17.7667	1.0000	21.86	103.1	79.2	1545.	15.01
31.50	18.2667	1.0000	21.46	91.9	68.2	1366.	15.56
34.50	18.7333	1.0000	21.92	81.8	58.3	1189.	15.15
37.50	17.0333	1.0000	21.26	70.2	48.4	1065.	16.77
40.50	14.8000	1.0000	21.95	59.2	40.0	906.	16.38
43.50	14.7667	1.0000	20.55	49.9	31.9	772.	17.71
46.50	12.3667	1.0000	20.28	38.6	24.7	593.	16.07
49.50	10.9333	1.0000	19.43	30.8	19.1	453.	16.95
52.50	9.9333	1.0000	20.28	24.5	14.7	379.	17.76
55.50	7.1000	1.0000	20.20	18.3	10.7	288.	18.64
58.50	6.5333	1.0000	20.02	13.2	7.7	200.	16.72
61.50	4.7000	1.0000	20.44	9.0	5.1	131.	18.41
64.50	4.2667	1.0000	19.59	7.3	3.7	97.	17.59
67.50	3.0667	1.0000	20.10	4.6	2.5	72.	16.87
70.50	2.0667	1.0000	19.10	3.1	1.8	53.	19.52
73.50	1.3333	1.0000	18.94	2.0	1.0	45.	21.36
76.50	1.5667	1.0000	18.63	1.4	0.6	20.	18.67
79.50	0.5000	0.9999	19.54	0.7	0.3	9.	15.60
82.50	0.4333	0.9999	16.11	0.4	0.2	3.	18.32
85.50	0.2000	0.9998	20.19	0.1	0.1	2.	13.46
88.50	0.0667	0.9995	23.76	0.1	0.0	0.	12.78
91.50	0.0333	0.9990	3.62	0.0	0.0	2.	12.66
94.50	0.0333	0.9990	10.12	0.0	0.0	0.	0.00
97.50	0.0333	0.9990	20.00	0.0	0.0	1.	20.12
100.50	0.0000	0.0000	0.00	0.0	0.0	1.	23.02
103.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
106.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
109.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
115.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
118.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
121.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
124.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
127.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
130.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
133.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
136.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
139.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
142.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
145.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
148.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2689 TIME: 279. TOTAL=				5.2	4.3	IONZ/TOTAL=	0.4560

25keV B 11 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
165.215	23.644	69.931	33.877	42.477	0.156	2.431	For ions
(nm)		50.959	31.296	28.599	0.446	2.550	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	1.8833	1.0000	37.74	85.7	162.9	1004.	17.50
9.00	3.3333	1.0000	46.68	97.5	174.2	1535.	18.06
15.00	4.2667	1.0000	41.97	110.8	181.6	1613.	21.23
21.00	4.6167	1.0000	46.59	111.9	182.1	1685.	22.65
27.00	6.3000	1.0000	44.30	122.2	182.4	1816.	25.46
33.00	6.7833	1.0000	45.50	125.0	177.8	1749.	26.61
39.00	7.2000	1.0000	45.25	129.6	170.3	1701.	27.46
45.00	8.4333	1.0000	46.32	119.8	157.9	1742.	29.43
51.00	8.8833	1.0000	45.38	120.5	148.3	1786.	30.33
57.00	8.0000	1.0000	43.86	114.9	133.4	1712.	32.20
63.00	10.0667	1.0000	44.43	103.6	115.7	1529.	33.79
69.00	9.5167	1.0000	42.78	93.9	100.7	1452.	32.83
75.00	9.4667	1.0000	42.14	84.4	84.9	1351.	32.01
81.00	9.2167	1.0000	40.80	77.6	73.4	1139.	33.25
87.00	8.6000	1.0000	41.67	64.6	59.1	1007.	34.73
93.00	8.5500	1.0000	41.92	53.7	46.2	848.	32.95
99.00	7.3167	1.0000	41.23	42.8	35.9	669.	34.08
105.00	6.2500	1.0000	40.11	33.8	26.8	575.	32.33
111.00	5.7333	1.0000	37.59	24.6	19.2	410.	32.47
117.00	4.5000	1.0000	38.28	19.6	13.5	347.	33.72
123.00	3.1333	1.0000	36.76	12.5	8.9	182.	32.53
129.00	2.8667	1.0000	37.91	8.3	5.7	101.	32.80
135.00	2.0667	1.0000	32.54	6.0	3.9	94.	35.11
141.00	1.3667	1.0000	34.48	3.5	2.3	63.	30.75
147.00	0.7167	1.0000	31.58	2.1	1.3	26.	28.75
153.00	0.5167	1.0000	36.43	1.1	0.6	15.	22.03
159.00	0.3333	1.0000	31.26	0.5	0.3	6.	25.67
165.00	0.1833	0.9999	27.91	0.3	0.1	3.	21.42
171.00	0.1000	0.9998	13.76	0.1	0.0	0.	0.00
177.00	0.0167	0.9990	4.23	0.0	0.0	0.	0.00
183.00	0.0167	0.9990	15.30	0.0	0.0	0.	0.00
189.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
195.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
201.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
207.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1776 TIME: 501.			TOTAL=	10.6	13.6	IONZ/TOTAL=	0.5617

50keV B 11 in GaAs 500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
273.911	32.430	130.561	56.326	70.805	-0.089	2.361	For ions
(nm)		94.675	53.601	48.785	0.302	2.416	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
5.00	0.6100	1.0000	81.66	65.0	217.8	783.	25.61
15.00	1.5200	1.0000	74.00	77.0	227.1	1105.	33.36
25.00	1.9400	1.0000	76.37	81.1	231.7	1178.	37.03
35.00	2.2000	1.0000	78.72	87.1	234.4	1276.	35.33
45.00	2.5400	1.0000	81.94	94.7	234.6	1367.	38.61
55.00	2.9900	1.0000	75.45	101.1	236.7	1648.	39.71
65.00	3.4300	1.0000	78.04	107.9	232.2	1576.	44.64
75.00	3.8000	1.0000	78.99	108.2	220.1	1652.	48.50
85.00	4.3700	1.0000	76.48	106.4	208.4	1628.	51.07
95.00	4.8700	1.0000	78.55	108.4	193.9	1594.	53.13
105.00	5.4000	1.0000	74.85	103.4	174.2	1506.	55.58
115.00	5.6000	1.0000	74.10	106.2	159.3	1612.	55.50
125.00	6.1000	1.0000	71.94	94.2	139.0	1456.	60.35
135.00	6.0500	1.0000	71.92	87.9	118.8	1337.	59.73
145.00	5.9700	1.0000	70.49	78.3	97.9	1160.	53.97
155.00	6.1200	1.0000	66.55	65.6	80.3	991.	57.21
165.00	5.4300	1.0000	66.80	57.3	64.9	826.	56.63
175.00	5.3900	1.0000	66.20	47.1	50.1	657.	55.10
185.00	4.8400	1.0000	64.40	37.4	36.6	539.	51.30
195.00	3.8300	1.0000	61.23	26.9	25.0	489.	49.78
205.00	3.2900	1.0000	61.30	18.5	16.6	310.	51.74
215.00	2.7500	1.0000	58.48	13.5	10.8	188.	46.41
225.00	1.9300	1.0000	56.59	8.1	6.2	104.	46.09
235.00	1.4000	1.0000	55.73	5.1	3.7	57.	46.67
245.00	0.6500	1.0000	49.35	2.5	1.6	41.	39.06
255.00	0.5200	1.0000	47.88	1.1	0.7	23.	39.76
265.00	0.1500	0.9999	50.10	0.4	0.3	8.	53.75
275.00	0.0600	0.9998	45.44	0.2	0.1	3.	27.55
285.00	0.0300	0.9997	46.67	0.1	0.0	2.	17.34
295.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
305.00	0.0100	0.9990	47.54	0.0	0.0	0.	0.00
315.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
325.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
345.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
355.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
375.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
385.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
405.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
415.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
435.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
445.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
465.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
475.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
495.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1134 TIME: 765. TOTAL=				16.9	32.2	IONZ/TOTAL=	0.6559

75keV B 11 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
364.447	38.433	185.444	73.815	93.899	-0.212	2.446	For ions
(nm)		134.863	73.533	65.056	0.194	2.303	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
8.00	0.4250	1.0000	92.30	56.7	260.4	673.	37.05
24.00	0.8063	1.0000	110.65	61.1	268.0	899.	39.85
40.00	1.1875	1.0000	107.64	67.4	268.7	1138.	51.80
56.00	1.4938	1.0000	104.49	76.2	272.8	1181.	57.50
72.00	1.8813	1.0000	101.06	85.4	272.4	1257.	60.04
88.00	2.2625	1.0000	108.34	92.0	271.2	1390.	56.49
104.00	2.6500	1.0000	103.48	97.8	260.3	1411.	61.95
120.00	3.1313	1.0000	105.51	101.1	245.9	1421.	69.53
136.00	3.4938	1.0000	106.44	101.7	228.9	1592.	68.46
152.00	3.9625	1.0000	92.34	99.7	202.1	1458.	70.96
168.00	4.4938	1.0000	97.12	98.2	179.2	1437.	70.67
184.00	4.4688	1.0000	100.52	88.2	149.9	1309.	74.57
200.00	4.6188	1.0000	95.92	81.5	123.1	1189.	78.04
216.00	5.0188	1.0000	89.68	68.4	95.8	1021.	72.89
232.00	4.8938	1.0000	88.22	57.7	71.4	839.	74.73
248.00	4.3750	1.0000	84.29	42.0	48.7	595.	73.39
264.00	3.6063	1.0000	83.29	30.3	31.8	427.	69.85
280.00	2.7250	1.0000	76.41	19.7	19.0	332.	68.61
296.00	1.8813	1.0000	75.00	11.4	10.0	204.	60.05
312.00	1.2688	1.0000	66.98	6.0	5.0	88.	68.73
328.00	0.6625	1.0000	68.48	3.0	2.2	49.	62.53
344.00	0.3813	1.0000	61.79	1.0	0.7	15.	45.13
360.00	0.1375	1.0000	59.12	0.4	0.2	1.	4.94
376.00	0.0250	0.9998	26.36	0.1	0.0	2.	11.11
392.00	0.0063	0.9990	11.62	0.0	0.0	0.	0.00
408.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
424.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
440.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
456.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS:10000, 833 TIME: 975. TOTAL= 21.5 52.6 IONZ/TOTAL= 0.7094

100keV B 11 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
445.983	42.182	238.367	88.665	116.052	-0.325	2.494	For ions
(nm)		174.438	90.539	77.864	0.081	2.291	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
8.00	0.2734	1.0000	128.55	47.4	295.5	568.	33.38
24.00	0.3359	1.0000	148.79	50.8	299.3	761.	33.81
40.00	0.7031	1.0000	144.70	56.6	302.0	815.	42.66
56.00	0.7109	1.0000	124.47	61.6	306.7	837.	46.84
72.00	0.9609	1.0000	143.44	69.3	307.2	896.	66.23
88.00	1.3359	1.0000	141.14	73.8	304.9	1121.	72.82
104.00	1.8438	1.0000	131.47	75.4	298.0	1094.	66.62
120.00	1.7813	1.0000	134.34	83.3	295.6	1120.	74.52
136.00	2.1797	1.0000	134.77	88.3	287.6	1383.	80.81
152.00	2.2031	1.0000	133.65	93.7	275.0	1343.	89.60
168.00	2.5625	1.0000	129.15	95.2	261.1	1387.	86.12
184.00	2.7422	1.0000	126.28	94.0	238.0	1343.	79.30
200.00	3.1875	1.0000	127.23	89.1	214.7	1480.	81.52
216.00	3.5391	1.0000	119.84	90.1	193.7	1445.	86.50
232.00	4.0469	1.0000	121.87	89.0	172.3	1364.	96.08
248.00	4.2109	1.0000	118.84	80.5	147.2	1234.	90.44
264.00	4.1641	1.0000	112.70	75.3	121.4	1062.	92.52
280.00	4.0938	1.0000	113.15	63.3	94.9	806.	94.69
296.00	4.2109	1.0000	106.00	54.0	74.5	733.	82.40
312.00	3.8672	1.0000	103.67	44.3	54.6	586.	77.95
328.00	3.2031	1.0000	92.89	32.3	37.8	488.	74.61
344.00	2.7266	1.0000	91.01	23.8	24.6	389.	70.75
360.00	2.1172	1.0000	81.13	15.7	14.9	211.	73.22
376.00	1.6328	1.0000	77.00	9.7	8.2	127.	65.67
392.00	0.8984	1.0000	71.51	4.3	3.7	70.	68.87
408.00	0.5469	1.0000	80.97	2.2	1.7	39.	61.89
424.00	0.1953	1.0000	73.47	0.8	0.5	16.	31.17
440.00	0.0859	0.9999	76.23	0.2	0.1	1.	27.81
456.00	0.0313	0.9998	55.87	0.1	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 8000, 1000 TIME: 981. TOTAL=				25.0	74.2	IONZ/TOTAL=	0.7477

150keV B 11 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
588.792	46.847	338.229	111.887	148.007	-0.506	2.816	For ions
(nm)		257.433	120.418	102.686	-0.154	2.267	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.1477	1.0000	153.07	34.0	355.3	352.	29.06
37.50	0.2831	1.0000	179.39	38.4	354.4	433.	50.10
62.50	0.3754	1.0000	167.49	44.1	350.9	567.	59.86
87.50	0.4369	1.0000	185.72	46.0	350.5	584.	58.63
112.50	0.5662	1.0000	177.01	56.1	353.9	650.	72.44
137.50	0.8369	1.0000	175.95	59.3	351.9	743.	83.81
162.50	1.0154	1.0000	175.85	64.7	342.5	870.	101.30
187.50	1.2492	1.0000	182.81	72.6	333.8	908.	96.94
212.50	1.6492	1.0000	173.56	76.2	316.9	980.	104.02
237.50	1.8338	1.0000	178.19	80.5	299.5	1150.	108.18
262.50	2.2892	1.0000	169.69	85.2	277.7	1219.	114.55
287.50	2.3569	1.0000	155.53	86.9	249.6	1197.	110.72
312.50	2.8431	1.0000	160.51	86.6	218.4	1155.	120.52
337.50	3.5262	1.0000	151.01	85.1	184.5	1305.	119.14
362.50	3.3969	1.0000	145.92	75.0	145.8	1123.	122.35
387.50	3.6554	1.0000	134.85	64.4	108.1	842.	111.44
412.50	3.4462	1.0000	133.38	50.7	77.7	725.	110.94
437.50	3.2000	1.0000	118.77	38.5	51.5	570.	104.59
462.50	2.4923	1.0000	112.87	25.6	30.8	340.	98.14
487.50	1.7046	1.0000	113.28	14.6	15.5	215.	96.60
512.50	1.1138	1.0000	116.27	6.7	6.3	82.	110.33
537.50	0.5108	1.0000	90.38	2.7	2.5	38.	96.58
562.50	0.2646	1.0000	75.68	0.9	0.6	10.	84.81
587.50	0.0431	0.9999	101.57	0.1	0.1	1.	71.13
612.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
637.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
662.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
687.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6500, 1000 TIME: 1044. TOTAL=				29.9	119.5	IONZ/TOTAL=	0.7999

200keV B 11 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
710.293	50.920	426.469	131.616	178.732	-0.619	3.024	For ions
(nm)		321.113	149.978	124.807	-0.222	2.278	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
12.50	0.0873	0.9999	233.11	29.7	416.9	271.	64.78
37.50	0.1382	0.9999	228.15	34.2	411.0	431.	56.88
62.50	0.2618	1.0000	215.25	35.1	406.4	424.	77.62
87.50	0.2691	1.0000	196.61	39.3	404.2	459.	72.30
112.50	0.2982	1.0000	236.04	41.9	399.4	482.	100.08
137.50	0.3564	1.0000	248.36	46.6	390.9	511.	102.75
162.50	0.5091	1.0000	222.56	51.1	389.1	602.	90.82
187.50	0.6327	1.0000	207.33	50.5	383.0	624.	113.14
212.50	0.7273	1.0000	220.75	59.8	377.4	564.	120.95
237.50	0.9164	1.0000	228.34	63.9	367.2	765.	116.82
262.50	1.2509	1.0000	203.72	66.3	355.0	712.	123.08
287.50	1.3309	1.0000	219.91	73.9	339.3	892.	124.61
312.50	1.5273	1.0000	211.64	74.7	319.0	941.	129.57
337.50	1.9636	1.0000	196.35	80.4	296.7	1082.	137.39
362.50	2.0364	1.0000	193.47	83.5	272.5	1146.	144.59
387.50	2.4582	1.0000	195.15	82.7	242.5	1022.	139.83
412.50	2.5964	1.0000	181.89	78.2	206.9	986.	144.05
437.50	2.7491	1.0000	170.17	75.1	176.1	977.	140.88
462.50	3.3527	1.0000	177.42	71.0	147.3	907.	140.47
487.50	2.9964	1.0000	171.99	59.4	111.8	735.	148.67
512.50	3.0182	1.0000	154.31	48.8	83.1	596.	135.95
537.50	2.9309	1.0000	157.66	38.8	57.2	505.	130.18
562.50	2.4727	1.0000	142.00	27.6	35.6	356.	121.21
587.50	1.9055	1.0000	127.37	17.7	20.8	221.	115.43
612.50	1.2800	1.0000	121.66	10.1	10.6	123.	94.46
637.50	0.8000	1.0000	114.56	4.9	4.5	78.	112.64
662.50	0.3200	1.0000	92.50	1.8	1.4	29.	96.58
687.50	0.1600	1.0000	86.73	0.5	0.3	7.	69.37
712.50	0.0145	0.9995	69.32	0.0	0.0	1.	98.55
737.50	0.0073	0.9990	83.38	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5500, 1000 TIME: 1062.			TOTAL=	33.7	165.7	IONZ/TOTAL=	0.8310

300keV B 11 in GaAs 1750.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
910.065	55.151	581.000	156.325	225.137	-0.763	3.424	For ions
(nm)		452.184	193.019	165.107	-0.393	2.375	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
17.50	0.0643	0.9999	239.30	25.1	526.1	214.	69.06
52.50	0.0500	0.9999	274.18	24.7	521.2	202.	83.04
87.50	0.1286	0.9999	269.52	24.5	508.7	232.	71.15
122.50	0.1071	0.9999	319.39	28.4	497.9	262.	128.97
157.50	0.1357	0.9999	340.74	34.9	484.7	340.	94.12
192.50	0.1786	1.0000	265.51	35.8	467.7	343.	89.35
227.50	0.2071	1.0000	300.60	41.2	453.0	363.	133.62
262.50	0.4571	1.0000	293.89	40.6	445.2	392.	139.11
297.50	0.4643	1.0000	291.95	49.0	434.4	453.	176.10
332.50	0.6857	1.0000	310.39	57.8	425.2	588.	177.70
367.50	0.8286	1.0000	276.14	57.3	409.4	529.	186.67
402.50	1.0214	1.0000	263.66	62.4	377.7	630.	163.18
437.50	1.3357	1.0000	267.78	70.5	355.4	738.	184.12
472.50	1.5929	1.0000	269.09	71.9	315.9	805.	182.93
507.50	1.7214	1.0000	252.74	75.4	287.8	793.	182.29
542.50	2.2071	1.0000	249.30	76.8	246.9	893.	193.98
577.50	2.1786	1.0000	224.98	70.6	207.1	815.	186.36
612.50	2.4000	1.0000	224.62	66.1	163.3	719.	178.93
647.50	2.8357	1.0000	195.13	63.5	130.6	747.	173.19
682.50	2.7857	1.0000	186.67	50.6	89.0	569.	158.13
717.50	2.3857	1.0000	173.80	37.9	57.5	480.	152.32
752.50	2.2357	1.0000	171.17	22.3	28.6	299.	166.57
787.50	1.2286	1.0000	146.10	11.1	12.6	136.	142.99
822.50	0.7571	1.0000	150.19	4.6	4.3	76.	118.89
857.50	0.2214	1.0000	120.99	1.3	1.0	16.	104.76
892.50	0.0500	0.9999	47.87	0.1	0.1	1.	63.43
927.50	0.0071	0.9990	51.94	0.0	0.0	1.	56.68
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
997.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1032.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1067.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1102.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1172.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1207.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1242.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1277.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1312.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1347.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1382.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1417.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1452.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1487.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1522.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1557.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1592.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1627.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1662.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1697.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1732.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4000, 1000 TIME: 927. TOTAL=				38.7	260.8	IONZ/TOTAL=	0.8709

400keV B 11 in GaAs 1750.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
1084.532	57.102	719.496	176.356	265.562	-0.950	3.961	For ions
(nm)		555.513	236.210	198.420	-0.479	2.377	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
17.50	0.0286	0.9997	268.87	19.4	593.4	135.	90.19
52.50	0.0476	0.9998	354.95	18.4	586.1	174.	102.99
87.50	0.0190	0.9995	196.09	21.7	580.8	194.	60.92
122.50	0.0762	0.9999	234.36	24.2	573.8	256.	91.21
157.50	0.1048	0.9999	426.14	24.5	568.0	246.	100.84
192.50	0.1143	0.9999	325.49	27.7	561.2	247.	120.63
227.50	0.1143	0.9999	280.38	31.0	553.6	283.	139.97
262.50	0.2190	1.0000	380.44	31.5	532.2	277.	163.66
297.50	0.2952	1.0000	377.79	34.7	518.1	320.	181.85
332.50	0.1810	0.9999	316.05	38.1	500.1	317.	188.88
367.50	0.2286	1.0000	391.92	37.2	486.9	345.	178.13
402.50	0.4381	1.0000	347.14	43.9	468.7	409.	205.76
437.50	0.5714	1.0000	366.62	50.7	453.2	445.	201.65
472.50	0.6857	1.0000	325.30	54.6	434.9	494.	228.91
507.50	0.7048	1.0000	331.30	53.4	406.3	503.	203.70
542.50	0.8571	1.0000	345.43	61.2	383.7	554.	226.98
577.50	1.1238	1.0000	303.66	63.2	355.8	527.	218.44
612.50	1.3429	1.0000	299.62	68.8	325.6	724.	225.80
647.50	1.6571	1.0000	284.21	69.9	293.6	759.	239.20
682.50	2.0476	1.0000	287.39	75.8	261.4	762.	230.56
717.50	2.4095	1.0000	282.69	71.1	219.3	739.	229.62
752.50	2.2952	1.0000	269.13	69.0	179.1	685.	222.06
787.50	2.5619	1.0000	229.48	59.3	138.2	623.	189.79
822.50	2.4762	1.0000	237.16	51.5	99.7	548.	192.75
857.50	2.7143	1.0000	203.69	42.7	68.2	449.	181.78
892.50	1.9714	1.0000	191.47	26.5	38.8	335.	171.40
927.50	1.4762	1.0000	191.47	15.3	19.7	187.	180.07
962.50	0.8667	1.0000	168.41	7.7	8.4	96.	124.54
997.50	0.4952	1.0000	144.64	3.1	3.0	48.	130.75
1032.50	0.1333	0.9999	99.96	0.8	0.8	9.	90.44
1067.50	0.0571	0.9998	116.72	0.2	0.2	4.	69.74
1102.50	0.0190	0.9995	52.28	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1172.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1207.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1242.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1277.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1312.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1347.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1382.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1417.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1452.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1487.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1522.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1557.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1592.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1627.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1662.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1697.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1732.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3000, 1000 TIME: 803. TOTAL=				41.9	357.5	IONZ/TOTAL=	0.8951

10keV C 12 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
69.454	12.669	27.405	14.540	17.646	0.420	2.747	For ions
(nm)		19.488	12.687	11.399	0.700	3.146	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.00	4.1000	1.0000	15.72	119.7	124.4	1100.	8.40
3.00	8.5000	1.0000	16.65	142.3	136.5	1876.	7.89
5.00	10.6500	1.0000	18.08	156.9	143.0	2218.	8.51
7.00	12.7500	1.0000	18.23	160.6	144.1	2319.	8.63
9.00	15.8500	1.0000	17.37	159.5	144.2	2491.	9.06
11.00	16.4500	1.0000	18.50	170.8	141.6	2487.	9.80
13.00	17.4000	1.0000	17.77	164.1	137.3	2559.	11.10
15.00	17.6500	0.9972	16.41	166.0	132.2	2491.	11.04
17.00	20.2500	1.0000	17.60	157.6	123.1	2371.	11.50
19.00	21.4000	1.0000	18.70	153.7	115.1	2332.	11.55
21.00	21.9000	1.0000	18.24	138.7	105.2	2206.	11.98
23.00	20.9500	1.0000	18.28	133.7	95.5	1977.	11.99
25.00	20.6000	1.0000	18.36	123.3	86.5	1814.	12.48
27.00	22.1500	1.0000	17.38	113.0	76.2	1758.	13.32
29.00	21.3500	1.0000	17.46	100.8	66.7	1586.	13.23
31.00	21.0000	1.0000	18.69	86.8	56.9	1394.	13.85
33.00	19.0500	1.0000	17.72	75.5	48.3	1299.	14.20
35.00	17.9000	1.0000	16.82	63.5	41.1	1111.	14.08
37.00	17.4000	1.0000	17.64	56.8	34.4	919.	13.70
39.00	14.6500	1.0000	17.89	44.3	28.3	769.	14.16
41.00	14.0000	0.9964	17.45	39.4	23.5	653.	14.79
43.00	11.0500	1.0000	17.96	31.8	19.4	486.	15.27
45.00	10.5000	1.0000	17.42	28.1	15.6	440.	15.50
47.00	9.4500	1.0000	15.59	21.8	12.6	340.	15.07
49.00	8.1000	1.0000	16.94	18.0	9.5	277.	13.90
51.00	6.8500	1.0000	17.71	13.3	7.1	207.	14.38
53.00	5.0500	1.0000	17.29	10.0	5.6	151.	14.90
55.00	4.5500	1.0000	19.26	7.8	4.1	133.	15.41
57.00	3.8500	1.0000	15.36	6.2	3.1	91.	16.81
59.00	3.0500	1.0000	16.04	4.6	2.2	62.	16.71
61.00	2.1500	1.0000	15.71	2.9	1.5	46.	14.99
63.00	1.9000	1.0000	16.54	2.2	1.1	27.	13.05
65.00	1.3000	1.0000	14.24	1.6	0.7	19.	17.31
67.00	1.0000	1.0000	14.20	0.7	0.4	12.	12.42
69.00	0.4500	0.9999	10.72	0.6	0.3	6.	9.12
71.00	0.2500	0.9998	10.24	0.5	0.2	5.	6.96
73.00	0.4000	0.9999	9.10	0.2	0.1	4.	8.06
75.00	0.1000	0.9995	10.29	0.2	0.1	2.	4.03
77.00	0.2500	0.9998	9.89	0.1	0.1	1.	6.94
79.00	0.1000	0.9995	11.43	0.1	0.0	4.	5.91
81.00	0.0500	0.9990	4.07	0.0	0.0	3.	6.83
83.00	0.1000	0.9995	11.75	0.1	0.0	3.	13.61
85.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
87.00	0.0500	0.9990	5.39	0.0	0.0	1.	4.29
89.00	0.0000	0.0000	0.00	0.0	0.0	0.	4.36
91.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
93.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
95.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
97.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
99.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2682 TIME: 246. TOTAL=				5.4	4.2	IONZ/TOTAL=	0.4381

25keV C 12 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
134.829	20.827	58.643	28.247	35.303	0.177	2.470	For ions
(nm)		41.824	25.574	23.359	0.530	2.763	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	2.2667	1.0000	33.85	108.0	191.0	1300.	15.02
9.00	4.0500	1.0000	39.42	129.7	205.3	1879.	16.15
15.00	5.5833	1.0000	38.15	138.2	210.8	2063.	17.99
21.00	6.6000	1.0000	36.68	157.8	212.8	2387.	19.66
27.00	8.4333	1.0000	36.79	160.8	206.8	2433.	21.07
33.00	8.7167	1.0000	35.82	159.1	193.4	2409.	22.18
39.00	9.5000	1.0000	38.68	154.5	179.5	2494.	22.83
45.00	10.6500	1.0000	34.93	148.2	159.3	2197.	24.04
51.00	11.0333	1.0000	35.14	136.7	139.9	2060.	25.70
57.00	11.4167	0.9985	35.80	122.1	118.9	1929.	27.53
63.00	11.9667	1.0000	36.38	109.1	99.0	1684.	28.42
69.00	11.5333	0.9986	36.30	90.6	76.8	1318.	30.03
75.00	10.0000	0.9983	34.98	69.7	58.4	1069.	29.80
81.00	8.9667	1.0000	34.38	54.7	43.5	782.	28.36
87.00	7.8667	1.0000	33.61	44.1	31.8	711.	26.91
93.00	6.2667	1.0000	30.79	30.7	21.9	480.	27.63
99.00	4.8500	1.0000	30.94	20.4	14.2	346.	30.13
105.00	3.7000	1.0000	29.60	12.8	8.5	214.	29.39
111.00	2.5667	1.0000	33.47	7.8	5.1	119.	27.63
117.00	1.8000	1.0000	31.27	5.0	2.8	58.	27.83
123.00	1.3667	1.0000	28.67	2.7	1.5	41.	28.34
129.00	0.4667	1.0000	29.98	1.1	0.6	34.	26.43
135.00	0.2833	0.9999	25.64	0.6	0.3	10.	27.61
141.00	0.1167	0.9999	25.08	0.2	0.1	1.	39.13
147.00	0.0333	0.9995	17.10	0.1	0.0	0.	0.00
153.00	0.0500	0.9997	38.46	0.0	0.0	0.	0.00
159.00	0.0167	0.9990	9.86	0.0	0.0	0.	0.00
165.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
171.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
177.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
183.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
189.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
195.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
201.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
207.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1633 TIME: 429. TOTAL=				11.2	13.1	IONZ/TOTAL=	0.5393

50keV C 12 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
222.810	29.257	106.709	46.560	58.040	0.001	2.396	For ions
(nm)		77.570	43.045	37.224	0.280	2.427	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
4.00	0.8000	1.0000	64.30	87.9	255.1	907.	25.91
12.00	1.2750	1.0000	68.58	101.3	265.2	1307.	22.13
20.00	2.1375	1.0000	62.40	113.7	271.9	1553.	22.11
28.00	2.9375	1.0000	64.16	121.8	277.1	1771.	25.99
36.00	2.9375	1.0000	60.53	126.6	276.6	1777.	29.37
44.00	4.2375	1.0000	61.99	133.6	274.2	1967.	28.49
52.00	4.3125	1.0000	64.42	139.3	268.4	2136.	33.34
60.00	4.9875	0.9975	62.70	141.5	258.8	2044.	36.38
68.00	5.5750	1.0000	61.97	144.6	246.4	2139.	36.08
76.00	6.2375	1.0000	62.79	148.8	232.5	2347.	40.18
84.00	6.2375	1.0000	63.77	138.9	210.6	2047.	42.65
92.00	6.5250	1.0000	60.48	132.7	190.7	2095.	39.89
100.00	6.8500	1.0000	58.84	127.1	168.5	2186.	38.83
108.00	7.5000	1.0000	58.85	115.0	146.5	1708.	43.47
116.00	7.2375	1.0000	59.98	106.4	121.9	1696.	43.40
124.00	7.0375	1.0000	54.77	91.0	100.8	1328.	44.29
132.00	7.3625	1.0000	56.13	79.7	82.4	1237.	45.61
140.00	6.5000	1.0000	55.81	65.3	63.9	1121.	48.67
148.00	6.0000	0.9979	52.08	52.2	47.9	815.	46.49
156.00	5.1375	0.9976	53.46	37.3	33.7	558.	47.02
164.00	4.1875	1.0000	49.53	28.1	24.6	429.	46.12
172.00	3.3750	1.0000	50.25	20.0	16.5	231.	47.85
180.00	2.6375	0.9953	48.71	13.4	10.8	164.	48.65
188.00	1.6375	0.9924	42.57	8.6	6.7	82.	44.02
196.00	1.5750	1.0000	46.79	6.4	4.2	62.	38.92
204.00	0.9875	1.0000	37.40	3.7	2.2	40.	43.42
212.00	0.5250	1.0000	37.53	1.5	1.0	19.	45.10
220.00	0.3625	1.0000	43.83	0.8	0.5	23.	37.37
228.00	0.1625	0.9999	35.25	0.3	0.2	2.	87.00
236.00	0.0500	0.9998	24.75	0.1	0.0	0.	0.00
244.00	0.0125	0.9990	23.31	0.0	0.0	0.	0.00
252.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
268.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
276.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 641. TOTAL=				18.3	30.9	IONZ/TOTAL=	0.6279

75keV C 12 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
298.496	34.834	152.440	62.512	76.710	-0.188	2.393	For ions
(nm)		111.127	60.814	51.494	0.223	2.323	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
6.00	0.4500	1.0000	86.50	73.2	304.9	884.	29.17
18.00	1.1833	0.9930	88.48	81.7	313.1	1109.	28.95
30.00	1.5000	1.0000	91.44	96.9	320.1	1235.	37.10
42.00	1.9333	0.9957	90.61	105.5	322.0	1556.	38.69
54.00	2.1333	1.0000	87.92	110.1	320.0	1834.	46.11
66.00	2.7000	1.0000	89.31	120.2	321.8	1571.	49.69
78.00	2.7250	1.0000	80.42	129.6	316.0	1994.	49.90
90.00	3.3333	1.0000	90.18	128.9	298.0	1988.	51.80
102.00	3.8083	1.0000	82.09	130.6	277.8	1901.	54.24
114.00	4.6833	1.0000	81.65	131.5	257.1	1918.	56.34
126.00	4.6250	1.0000	80.98	128.9	232.6	1971.	57.22
138.00	5.2417	0.9984	81.19	125.6	208.9	1819.	57.43
150.00	5.3583	1.0000	80.42	117.4	179.2	1701.	59.76
162.00	5.5250	0.9985	75.41	102.5	148.2	1469.	58.36
174.00	5.8417	1.0000	74.03	91.3	119.1	1319.	54.50
186.00	6.2167	0.9987	72.20	78.4	94.4	1227.	59.18
198.00	5.1000	1.0000	67.86	61.9	69.9	982.	59.96
210.00	4.4250	0.9981	69.10	47.5	50.0	794.	57.06
222.00	3.8583	0.9978	65.55	35.5	34.6	533.	54.56
234.00	3.2667	1.0000	63.78	24.4	22.2	376.	53.12
246.00	2.5417	1.0000	61.95	15.5	13.0	240.	59.15
258.00	1.7417	1.0000	58.05	9.0	6.8	106.	61.15
270.00	0.9833	1.0000	52.02	4.2	3.1	52.	48.72
282.00	0.4917	1.0000	48.87	1.8	1.3	35.	25.33
294.00	0.2250	1.0000	47.62	0.8	0.5	12.	39.93
306.00	0.0750	0.9999	46.96	0.2	0.1	7.	48.88
318.00	0.0250	0.9997	33.25	0.0	0.0	1.	48.30
330.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
342.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
354.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
366.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
378.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
390.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
402.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 849. TOTAL=				23.4	50.8	IONZ/TOTAL=	0.6843

100keV C 12 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
365.119	38.544	195.231	74.664	94.994	-0.278	2.508	For ions
(nm)		145.938	73.865	63.045	0.085	2.314	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.4188	1.0000	107.54	63.7	346.0	688.	25.84
24.00	0.7188	1.0000	110.76	72.4	350.1	894.	34.06
40.00	0.8938	1.0000	111.57	78.4	355.6	952.	42.67
56.00	1.2563	1.0000	107.99	90.9	358.4	1169.	45.22
72.00	1.5375	1.0000	108.38	100.8	357.3	1409.	49.31
88.00	1.9063	1.0000	111.07	111.9	352.4	1627.	54.08
104.00	2.2000	0.9972	104.78	116.8	342.8	1634.	64.47
120.00	3.0563	1.0000	106.33	122.8	329.7	1717.	66.69
136.00	3.2313	1.0000	105.10	125.2	310.4	1995.	64.93
152.00	3.7563	0.9983	104.27	127.6	283.0	1908.	67.59
168.00	4.3063	0.9985	97.19	127.1	250.4	1990.	72.41
184.00	4.2313	0.9985	99.09	116.9	211.3	1732.	68.52
200.00	4.6938	1.0000	95.26	107.9	176.2	1510.	73.87
216.00	4.8563	1.0000	97.35	93.7	144.0	1519.	73.14
232.00	5.0563	0.9988	90.68	80.9	109.6	1277.	68.75
248.00	4.6313	1.0000	85.32	65.2	79.2	965.	72.72
264.00	4.2938	0.9985	83.83	48.4	54.5	754.	69.89
280.00	3.4063	0.9945	79.62	32.7	33.6	514.	70.78
296.00	2.6563	1.0000	78.90	20.5	19.0	254.	72.37
312.00	1.6438	1.0000	70.39	11.4	9.4	183.	63.33
328.00	1.0000	1.0000	68.59	5.1	4.2	97.	60.95
344.00	0.5188	1.0000	63.56	2.2	1.6	28.	57.47
360.00	0.2313	1.0000	58.37	0.9	0.5	8.	86.27
376.00	0.0688	0.9999	52.33	0.2	0.1	0.	0.00
392.00	0.0063	0.9990	29.87	0.0	0.0	0.	0.00
408.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
424.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
440.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
456.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 1018.			TOTAL=	27.6	71.7	IONZ/TOTAL=	0.7221

150keV C 12 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
483.495	44.502	277.441	95.728	124.541	-0.479	2.708	For ions
(nm)		203.641	103.069	83.645	-0.030	2.193	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
10.00	0.1857	1.0000	143.86	56.3	418.4	608.	26.01
30.00	0.3286	1.0000	157.76	56.9	415.2	811.	38.05
50.00	0.5214	1.0000	160.40	64.9	419.5	777.	47.84
70.00	0.7000	1.0000	155.81	72.0	421.1	875.	60.23
90.00	0.7714	1.0000	158.89	73.8	413.9	1078.	57.17
110.00	1.0857	1.0000	150.14	88.7	414.8	1183.	73.59
130.00	1.3214	1.0000	141.20	91.4	405.4	1112.	79.07
150.00	1.4929	1.0000	142.05	98.1	400.0	1293.	86.25
170.00	1.7143	1.0000	152.06	107.4	376.6	1455.	84.27
190.00	2.1571	1.0000	139.53	113.7	355.6	1567.	94.82
210.00	2.5714	0.9972	140.05	113.7	327.2	1676.	92.67
230.00	2.8571	0.9975	143.86	114.5	298.0	1462.	95.82
250.00	3.2429	1.0000	132.79	114.0	262.7	1470.	95.88
270.00	3.5857	1.0000	126.24	107.0	225.6	1442.	90.16
290.00	3.9786	1.0000	121.92	98.3	183.3	1326.	94.29
310.00	4.2071	0.9983	118.90	87.5	146.1	1190.	102.09
330.00	4.0071	1.0000	113.37	74.0	110.2	1099.	90.04
350.00	3.9429	1.0000	108.49	59.0	78.6	898.	94.56
370.00	3.5214	0.9980	105.18	41.4	49.8	566.	90.37
390.00	2.8714	1.0000	97.09	26.9	28.9	463.	76.87
410.00	1.7571	1.0000	87.63	15.6	15.0	217.	81.28
430.00	1.1429	1.0000	82.78	7.3	6.4	86.	68.43
450.00	0.6286	1.0000	82.73	3.2	2.4	44.	73.82
470.00	0.2714	1.0000	82.95	0.9	0.7	19.	54.16
490.00	0.0500	0.9999	83.61	0.2	0.1	2.	68.22
510.00	0.0071	0.9990	61.87	0.0	0.0	0.	0.00
530.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
550.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7000, 1000 TIME: 959. TOTAL=				33.7	115.5	IONZ/TOTAL=	0.7739

200keV C 12 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
585.660	47.635	352.147	111.187	147.606	-0.603	2.990	For ions
(nm)		261.118	124.671	102.395	-0.139	2.161	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.1267	0.9999	166.69	40.3	482.9	428.	58.80
37.50	0.2800	1.0000	175.91	47.5	479.1	487.	62.69
62.50	0.2800	1.0000	186.40	58.4	478.2	682.	64.76
87.50	0.3067	0.9782	160.25	57.0	470.2	723.	71.46
112.50	0.6000	1.0000	178.22	64.8	463.4	821.	57.80
137.50	0.6133	1.0000	181.85	74.4	464.0	813.	83.83
162.50	0.8000	1.0000	190.16	80.7	448.4	1059.	84.24
187.50	1.0733	1.0000	176.98	85.2	437.1	970.	94.09
212.50	1.3933	1.0000	171.79	91.7	419.6	1223.	107.57
237.50	1.5933	1.0000	165.18	100.8	396.1	1218.	105.32
262.50	1.9667	1.0000	172.28	103.8	367.7	1228.	113.66
287.50	2.4467	1.0000	169.36	108.3	335.8	1245.	114.18
312.50	2.6333	1.0000	156.23	108.2	294.7	1284.	120.89
337.50	2.9867	1.0000	160.67	105.9	252.7	1389.	121.61
362.50	3.7400	0.9982	149.24	98.2	207.9	1369.	119.52
387.50	3.4933	0.9981	139.79	88.2	161.6	1168.	116.51
412.50	3.6600	1.0000	133.60	73.0	117.1	999.	116.97
437.50	3.4000	1.0000	124.52	56.2	79.8	698.	107.64
462.50	3.2000	1.0000	118.67	41.4	49.2	511.	95.75
487.50	2.2267	1.0000	116.62	23.3	25.6	282.	94.52
512.50	1.2800	1.0000	108.14	11.5	11.2	168.	95.61
537.50	0.7600	1.0000	96.30	4.7	4.1	49.	58.71
562.50	0.3400	1.0000	71.89	1.4	1.0	19.	62.34
587.50	0.0600	0.9999	87.91	0.2	0.1	0.	42.68
612.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
637.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
662.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
687.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6000, 1000 TIME: 992. TOTAL=				38.1	161.2	IONZ/TOTAL=	0.8087

300keV C 12 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
757.475	50.714	482.935	135.071	192.493	-0.834	3.576	For ions
(nm)		367.910	162.541	133.959	-0.298	2.312	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
15.00	0.1000	0.9999	248.07	31.8	618.4	243.	106.93
45.00	0.1167	0.9999	221.45	36.1	602.8	321.	102.10
75.00	0.1583	0.9999	177.86	42.2	588.5	411.	59.48
105.00	0.2167	1.0000	258.11	41.5	575.2	400.	75.85
135.00	0.2250	1.0000	264.06	50.7	560.9	421.	77.40
165.00	0.2500	1.0000	261.55	51.1	549.2	433.	105.08
195.00	0.4750	1.0000	262.23	59.5	539.7	642.	102.08
225.00	0.4833	1.0000	260.31	62.0	521.7	636.	107.74
255.00	0.5500	1.0000	248.52	70.6	506.9	733.	116.45
285.00	0.8500	1.0000	241.37	73.9	485.7	833.	129.91
315.00	0.9667	1.0000	227.50	84.8	462.3	921.	146.79
345.00	1.2000	1.0000	226.14	87.6	435.1	866.	147.09
375.00	1.5917	1.0000	207.16	95.9	401.4	970.	142.73
405.00	1.9833	1.0000	213.53	98.6	366.9	1046.	141.04
435.00	2.3333	1.0000	212.65	106.2	327.7	1182.	149.84
465.00	2.5667	1.0000	203.73	94.8	274.2	1075.	159.91
495.00	2.8500	1.0000	192.86	90.7	222.0	930.	161.57
525.00	3.1917	1.0000	192.64	88.0	178.3	1002.	152.74
555.00	3.3667	1.0000	174.92	71.0	125.0	905.	150.18
585.00	3.0833	1.0000	162.82	55.7	83.3	600.	138.56
615.00	2.7333	1.0000	153.41	39.0	49.7	444.	123.11
645.00	1.9333	1.0000	125.96	21.2	23.2	255.	116.24
675.00	1.1333	1.0000	116.26	9.4	9.1	134.	106.58
705.00	0.4583	1.0000	119.02	3.3	2.8	65.	103.12
735.00	0.1250	0.9999	102.92	0.7	0.5	13.	106.32
765.00	0.0500	0.9998	68.76	0.1	0.1	3.	78.28
795.00	0.0083	0.9990	30.80	0.0	0.0	0.	0.00
825.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
855.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
885.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
915.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
945.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4000,	800	TIME:	816.	TOTAL=	44.0	255.3	IONZ/TOTAL= 0.8530

400keV C 12 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
901.482	55.206	599.788	152.676	218.025	-0.896	3.758	For ions
(nm)		472.072	193.407	160.955	-0.420	2.390	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
15.00	0.0286	0.9997	304.60	24.9	698.4	156.	100.52
45.00	0.0762	0.9999	295.52	27.4	691.5	232.	77.77
75.00	0.0952	0.9999	317.51	29.4	682.0	185.	63.82
105.00	0.0667	0.9999	234.61	29.4	676.2	230.	25.76
135.00	0.1048	0.9999	338.82	36.7	668.7	243.	104.57
165.00	0.1429	0.9999	308.25	40.4	656.8	286.	127.40
195.00	0.1714	0.9999	239.13	41.4	635.2	464.	135.36
225.00	0.1905	1.0000	280.44	45.3	616.1	402.	69.91
255.00	0.3524	0.9729	312.54	50.4	597.6	457.	120.39
285.00	0.4000	1.0000	276.34	52.3	582.0	431.	115.37
315.00	0.4095	1.0000	297.95	58.9	565.3	519.	132.24
345.00	0.6190	1.0000	294.64	68.0	547.2	613.	139.56
375.00	0.6762	1.0000	285.54	64.9	523.5	685.	156.22
405.00	0.7619	1.0000	258.01	79.6	504.7	678.	180.56
435.00	1.1048	1.0000	270.30	89.6	476.8	741.	186.42
465.00	1.3905	1.0000	265.09	91.2	439.1	888.	191.47
495.00	1.4190	1.0000	242.09	92.1	409.8	808.	182.48
525.00	1.9810	1.0000	248.56	100.2	374.1	913.	200.61
555.00	2.0000	1.0000	227.55	95.8	324.6	824.	191.38
585.00	2.3048	1.0000	227.13	94.7	279.1	892.	182.15
615.00	2.4381	1.0000	224.36	88.8	221.7	931.	180.07
645.00	2.9810	1.0000	205.42	77.3	177.7	860.	172.35
675.00	2.8381	1.0000	186.36	71.4	141.2	813.	167.68
705.00	3.1143	1.0000	184.07	61.9	102.4	723.	156.58
735.00	2.5333	1.0000	174.21	43.0	61.8	569.	151.95
765.00	2.1810	1.0000	158.15	27.6	34.6	382.	141.69
795.00	1.6286	1.0000	150.61	14.9	16.2	204.	136.45
825.00	0.7238	1.0000	113.42	6.4	5.5	111.	118.00
855.00	0.2571	1.0000	124.37	1.6	1.4	7.	48.12
885.00	0.1524	0.9999	74.39	0.6	0.4	14.	39.19
915.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
945.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3500, 500 TIME: 753. TOTAL=				48.2	351.3	IONZ/TOTAL=	0.8794

10keV C 13 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
67.682	13.014	27.091	14.503	17.448	0.453	2.821	For ions
(nm)		19.320	12.869	11.336	0.725	3.201	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.00	3.8500	0.9870	18.23	131.3	119.5	1286.	7.58
3.00	8.3500	1.0000	16.81	153.9	129.4	2177.	7.75
5.00	11.0500	1.0000	16.65	158.9	134.3	2394.	7.77
7.00	13.9500	0.9964	18.24	173.6	137.5	2521.	8.93
9.00	15.9000	0.9969	17.55	173.9	138.7	2573.	9.46
11.00	18.8500	1.0000	17.13	176.2	134.8	2553.	9.81
13.00	18.0000	0.9972	17.14	174.7	130.3	2568.	10.49
15.00	19.7000	0.9949	17.87	171.3	123.9	2535.	11.00
17.00	20.9000	0.9928	17.00	168.1	115.9	2459.	11.19
19.00	20.9500	0.9976	17.80	159.9	109.9	2422.	11.81
21.00	21.5000	0.9953	17.92	147.8	99.3	2273.	11.96
23.00	20.8500	0.9952	17.69	133.8	88.4	2010.	12.36
25.00	21.2500	0.9976	17.77	125.1	79.7	1883.	13.09
27.00	21.4000	0.9930	18.03	114.4	70.6	1723.	13.18
29.00	20.6500	1.0000	17.78	104.4	61.5	1659.	13.52
31.00	21.0000	0.9929	17.40	91.5	54.0	1503.	13.03
33.00	20.3500	0.9926	17.65	78.3	46.0	1307.	13.82
35.00	17.6000	0.9915	17.51	67.8	38.7	1142.	13.99
37.00	17.5000	0.9971	17.15	57.6	32.6	906.	14.11
39.00	14.6000	0.9966	17.42	48.6	26.9	767.	15.20
41.00	12.6500	1.0000	17.27	39.8	21.6	694.	15.28
43.00	12.3500	0.9959	17.80	35.8	18.3	564.	15.02
45.00	11.3500	1.0000	18.31	29.8	14.4	468.	15.51
47.00	9.4500	1.0000	15.89	22.9	11.4	390.	15.02
49.00	8.0000	0.9937	15.87	16.2	8.0	299.	13.86
51.00	5.8000	0.9914	16.16	12.0	6.3	232.	16.64
53.00	4.7500	1.0000	17.11	9.7	4.9	175.	14.82
55.00	4.9500	0.9899	17.85	7.8	3.7	126.	15.67
57.00	3.1500	1.0000	16.61	5.9	2.8	81.	13.05
59.00	2.2500	1.0000	17.03	5.0	2.1	74.	13.45
61.00	2.2000	1.0000	17.48	3.0	1.5	43.	13.82
63.00	1.4500	1.0000	15.17	1.9	1.0	28.	14.16
65.00	1.0500	1.0000	14.39	1.7	0.8	19.	11.33
67.00	0.9500	0.9999	14.43	1.1	0.5	22.	14.42
69.00	0.7000	0.9999	16.39	1.0	0.4	21.	10.96
71.00	0.6500	0.9999	13.64	0.6	0.3	10.	14.10
73.00	0.4000	0.9999	19.26	0.4	0.2	7.	15.00
75.00	0.2500	0.9998	12.16	0.3	0.1	4.	4.75
77.00	0.1500	0.9997	11.87	0.1	0.1	3.	14.20
79.00	0.1000	0.9995	10.76	0.1	0.0	1.	10.38
81.00	0.0500	0.9990	0.41	0.1	0.0	1.	12.01
83.00	0.1500	0.9997	7.82	0.0	0.0	1.	26.50
85.00	0.0000	0.0000	0.00	0.1	0.0	0.	30.72
87.00	0.0000	0.0000	0.00	0.0	0.0	2.	31.88
89.00	0.0500	0.9990	28.02	0.0	0.0	0.	33.99
91.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
93.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
95.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
97.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
99.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2682 TIME: 247. TOTAL=				5.6	3.9	IONZ/TOTAL=	0.4125

25keV C 13 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
132.645	21.986	58.642	28.647	34.979	0.214	2.505	For ions
(nm)		40.952	25.891	22.523	0.536	2.744	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	2.3333	0.9929	38.10	120.8	182.5	1567.	13.08
9.00	3.9000	1.0000	36.08	138.0	196.5	2228.	15.93
15.00	6.1167	0.9945	36.30	151.1	201.2	2417.	17.40
21.00	6.9500	0.9952	36.83	163.6	200.8	2436.	18.67
27.00	7.8500	0.9915	35.37	165.7	194.4	2443.	20.70
33.00	8.9167	0.9981	36.87	171.6	186.0	2501.	21.34
39.00	10.0500	0.9950	36.76	164.7	172.1	2392.	23.64
45.00	10.5500	0.9953	37.13	154.0	151.0	2381.	23.69
51.00	11.5000	0.9957	34.57	140.4	132.1	2147.	25.84
57.00	12.0667	0.9903	36.05	130.0	113.2	1891.	26.65
63.00	11.2000	0.9940	34.49	111.2	91.5	1766.	27.90
69.00	10.4667	0.9936	35.67	90.2	73.3	1379.	27.94
75.00	10.2333	0.9951	34.27	75.9	57.4	1089.	28.32
81.00	8.4667	0.9961	33.21	59.5	42.2	913.	27.69
87.00	8.0667	0.9938	32.29	45.3	30.5	674.	27.93
93.00	6.4333	0.9974	34.58	33.0	21.2	491.	25.45
99.00	5.1167	0.9935	32.87	22.3	14.2	302.	25.87
105.00	3.5167	0.9953	30.25	15.0	9.1	196.	26.84
111.00	3.0000	0.9944	29.10	9.4	5.4	157.	28.28
117.00	1.7500	1.0000	30.95	5.6	3.0	74.	20.69
123.00	1.2833	1.0000	31.06	2.8	1.4	32.	21.28
129.00	0.6500	1.0000	25.69	1.4	0.8	21.	21.68
135.00	0.2333	0.9999	38.24	0.7	0.4	5.	16.48
141.00	0.2667	0.9374	28.19	0.4	0.2	2.	39.20
147.00	0.1500	0.9999	25.34	0.2	0.1	3.	27.09
153.00	0.0500	0.9997	33.88	0.1	0.0	3.	32.70
159.00	0.0000	0.0000	0.00	0.0	0.0	0.	48.48
165.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
171.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
177.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
183.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
189.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
195.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
201.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
207.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1633 TIME: 431. TOTAL=				11.8	12.5	IONZ/TOTAL=	0.5133

50keV C 13 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
221.461	30.926	107.709	47.202	58.229	0.005	2.391	For ions
(nm)		76.491	44.215	39.802	0.328	2.444	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
4.00	0.7125	1.0000	68.10	101.4	245.9	1050.	20.80
12.00	1.4000	0.9821	57.21	110.6	254.4	1697.	21.79
20.00	2.3125	1.0000	63.38	115.1	259.4	1726.	25.86
28.00	2.6875	1.0000	61.63	128.2	265.9	1859.	31.99
36.00	2.9250	1.0000	58.38	134.6	264.1	2125.	30.05
44.00	4.0375	0.9969	65.58	138.7	261.3	2183.	35.56
52.00	4.2750	0.9971	64.94	146.9	255.6	2200.	37.38
60.00	5.1250	1.0000	58.19	148.1	246.3	2190.	37.22
68.00	5.2250	0.9976	61.77	153.8	236.0	2122.	39.51
76.00	5.8125	0.9978	65.42	152.3	220.6	2108.	41.60
84.00	6.2875	0.9920	62.43	144.5	201.1	2133.	43.90
92.00	6.4250	0.9981	60.95	145.1	181.9	2373.	44.24
100.00	7.0375	1.0000	60.00	134.7	162.5	2177.	45.62
108.00	7.0125	0.9947	61.61	122.5	141.0	1876.	46.45
116.00	7.8125	0.9952	60.42	112.9	118.5	1670.	47.26
124.00	6.9625	1.0000	58.65	92.6	97.3	1462.	49.94
132.00	6.5375	0.9962	52.17	79.9	79.2	1257.	50.94
140.00	6.4250	0.9981	55.03	69.3	63.5	996.	47.59
148.00	5.6375	0.9933	55.23	56.3	48.0	776.	49.04
156.00	5.4125	0.9908	52.10	43.8	36.2	665.	45.66
164.00	4.4125	1.0000	51.76	32.3	25.2	500.	48.57
172.00	3.7125	1.0000	49.56	24.1	17.7	301.	49.72
180.00	2.9750	0.9958	49.83	16.6	11.7	231.	39.50
188.00	1.9000	1.0000	47.55	10.7	7.6	155.	38.69
196.00	1.3875	1.0000	40.08	6.6	4.4	65.	33.52
204.00	0.9250	1.0000	46.28	4.2	2.5	43.	32.97
212.00	0.8750	0.9857	42.44	2.6	1.4	29.	36.21
220.00	0.4125	0.9697	45.24	1.1	0.6	7.	27.67
228.00	0.1375	0.9999	37.20	0.4	0.2	2.	21.15
236.00	0.0625	0.9998	25.37	0.1	0.1	5.	38.54
244.00	0.0250	0.9995	35.10	0.0	0.0	1.	23.23
252.00	0.0125	0.9990	4.18	0.1	0.0	4.	2.71
260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.82
268.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
276.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 645.			TOTAL=	19.4	29.7	IONZ/TOTAL=	0.6042

75keV C 13 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
298.071	37.101	153.785	63.173	77.773	-0.176	2.403	For ions
(nm)		112.649	61.570	53.886	0.212	2.322	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
6.00	0.5250	0.9682	91.22	77.8	292.3	879.	23.45
18.00	1.0333	0.9839	80.53	87.8	299.7	1228.	29.90
30.00	1.5167	0.9890	76.90	102.7	306.6	1448.	34.70
42.00	1.8417	0.9955	86.78	109.9	308.9	1484.	37.01
54.00	2.1083	1.0000	87.12	116.7	309.9	1633.	39.75
66.00	2.5750	1.0000	88.61	131.9	309.6	1877.	49.20
78.00	2.9250	0.9915	89.26	130.9	300.0	1945.	53.82
90.00	3.4083	0.9976	87.82	138.3	287.0	2105.	55.65
102.00	3.8000	0.9912	82.18	139.0	270.4	2145.	56.08
114.00	4.3417	0.9923	86.04	142.3	247.4	2062.	58.72
126.00	4.4917	0.9981	83.55	134.3	224.6	2090.	59.87
138.00	5.3167	0.9922	82.04	133.1	201.1	1779.	64.91
150.00	5.3333	0.9922	81.33	120.7	173.8	1707.	60.31
162.00	5.5333	0.9910	82.27	113.9	146.8	1772.	63.47
174.00	5.6250	0.9956	74.97	98.2	116.9	1559.	60.41
186.00	5.7083	0.9985	75.00	84.8	93.8	1245.	62.70
198.00	5.3333	0.9922	68.55	68.2	72.0	1057.	62.58
210.00	4.4667	0.9944	69.81	53.3	50.9	930.	60.22
222.00	4.1333	0.9939	65.94	40.1	35.4	626.	61.27
234.00	3.6167	0.9908	67.94	27.9	23.5	397.	58.61
246.00	2.4750	1.0000	61.36	18.3	13.9	256.	53.68
258.00	1.6667	0.9900	57.23	9.6	7.4	119.	59.18
270.00	1.0750	0.9922	58.90	5.5	3.8	84.	44.46
282.00	0.7000	0.9881	47.31	2.7	1.8	61.	46.84
294.00	0.2333	1.0000	50.43	1.1	0.7	22.	35.35
306.00	0.1417	0.9999	49.99	0.4	0.2	7.	41.02
318.00	0.0250	0.9997	49.99	0.1	0.1	0.	0.00
330.00	0.0167	0.9995	35.39	0.0	0.0	0.	0.00
342.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
354.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
366.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
378.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
390.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
402.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 860. TOTAL=				25.1	49.2	IONZ/TOTAL=	0.6623

100keV C 13 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
366.221	41.370	198.078	75.818	95.653	-0.264	2.524	For ions
(nm)		142.991	76.739	64.860	0.096	2.215	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.4250	1.0000	119.18	68.0	332.4	829.	44.35
24.00	0.6938	0.9820	113.46	77.7	338.5	1205.	48.37
40.00	0.8063	0.9845	110.51	88.6	342.4	1447.	48.10
56.00	1.2750	0.9853	106.90	99.8	345.4	1384.	49.71
72.00	1.5375	0.9959	108.75	105.6	343.9	1502.	45.88
88.00	1.8625	0.9866	99.18	118.1	339.7	1578.	57.94
104.00	2.0688	0.9940	109.54	123.3	330.7	1699.	66.13
120.00	2.7813	0.9865	109.07	127.5	315.0	1804.	63.73
136.00	3.2063	0.9942	106.99	132.6	297.3	1832.	68.55
152.00	3.5125	0.9911	109.28	134.2	271.8	2030.	68.00
168.00	4.3688	0.9957	99.38	134.2	243.0	2101.	67.75
184.00	4.2125	0.9911	103.99	124.2	208.8	1851.	73.00
200.00	4.8188	0.9948	94.27	113.2	173.5	1712.	74.25
216.00	4.4938	0.9944	95.39	98.6	141.4	1451.	77.80
232.00	4.8563	0.9961	89.61	89.8	111.0	1355.	73.99
248.00	4.8313	0.9871	87.70	72.1	81.5	1076.	79.15
264.00	4.2625	0.9927	86.41	53.3	56.2	815.	76.27
280.00	3.4063	1.0000	78.76	37.9	36.5	654.	73.39
296.00	2.7625	0.9887	79.95	25.0	21.3	347.	76.51
312.00	1.9250	0.9903	75.72	14.1	11.5	150.	62.00
328.00	1.1625	1.0000	69.65	7.5	5.5	75.	54.44
344.00	0.6563	0.9905	64.74	3.1	2.1	39.	37.17
360.00	0.2813	1.0000	59.80	1.4	0.9	20.	39.68
376.00	0.1563	0.9600	52.88	0.4	0.2	3.	64.56
392.00	0.0250	0.9998	54.14	0.1	0.0	4.	65.30
408.00	0.0063	0.9990	25.61	0.0	0.0	0.	0.00
424.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
440.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
456.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 1036. TOTAL=				29.6	69.6	IONZ/TOTAL=	0.7016

150keV C 13 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
488.113	48.675	283.261	98.799	125.711	-0.467	2.694	For ions
(nm)		208.830	105.901	84.259	-0.036	2.143	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
10.00	0.1867	1.0000	156.76	57.3	399.6	566.	35.47
30.00	0.3933	1.0000	154.60	69.1	403.5	802.	43.55
50.00	0.5133	1.0000	139.71	69.8	404.7	940.	39.62
70.00	0.6000	1.0000	136.63	78.4	400.9	930.	52.54
90.00	0.8200	0.9919	159.76	83.9	405.5	1196.	60.35
110.00	1.0067	0.9934	155.19	94.3	399.4	1258.	60.01
130.00	1.2667	0.9895	144.77	97.7	390.8	1214.	73.57
150.00	1.3667	0.9951	150.05	99.6	374.7	1291.	74.13
170.00	1.8600	0.9928	156.63	104.3	358.6	1366.	90.23
190.00	1.9733	0.9899	139.82	115.2	342.3	1475.	91.66
210.00	2.4067	0.9945	138.32	115.3	320.7	1517.	95.49
230.00	2.5933	1.0000	144.71	120.6	289.2	1452.	98.25
250.00	3.0400	0.9978	131.66	116.1	256.5	1605.	97.35
270.00	3.5733	0.9925	127.92	115.1	224.2	1745.	100.47
290.00	3.8200	0.9948	127.97	106.2	190.6	1502.	104.11
310.00	3.9067	0.9966	126.09	94.6	151.6	1443.	97.54
330.00	3.7800	0.9982	119.57	81.5	116.1	1181.	93.26
350.00	3.9867	0.9983	112.48	68.5	85.8	1051.	94.76
370.00	3.7733	0.9929	105.91	51.8	58.1	679.	83.95
390.00	2.8267	0.9976	104.15	33.4	36.1	446.	87.18
410.00	2.1400	0.9938	88.36	22.0	20.4	288.	74.12
430.00	1.5933	0.9916	83.35	12.4	10.5	191.	80.73
450.00	0.9467	1.0000	86.75	5.4	4.2	87.	74.42
470.00	0.3667	1.0000	69.98	2.0	1.4	39.	47.12
490.00	0.1333	1.0000	62.90	0.7	0.4	8.	49.07
510.00	0.0267	0.9998	61.34	0.0	0.0	0.	0.00
530.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
550.00	0.0067	0.9990	10.35	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7500, 1000 TIME: 1039. TOTAL=				36.3	112.9	IONZ/TOTAL=	0.7567

200keV C 13 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
592.725	52.105	358.906	114.016	149.105	-0.564	2.928	For ions
(nm)		267.867	128.432	102.916	-0.130	2.218	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.1267	0.9999	153.36	47.2	463.9	465.	36.96
37.50	0.2067	1.0000	173.80	50.7	458.9	535.	51.46
62.50	0.3467	1.0000	179.85	54.4	454.6	644.	69.91
87.50	0.2933	1.0000	183.26	61.5	450.9	723.	69.19
112.50	0.5067	1.0000	180.51	70.3	446.9	831.	64.28
137.50	0.5600	1.0000	203.71	80.2	443.4	884.	71.08
162.50	0.9133	0.9927	181.31	83.1	437.4	1017.	85.83
187.50	1.1267	1.0000	175.76	97.5	428.0	1130.	96.19
212.50	1.2800	0.9844	179.10	98.8	411.1	1128.	113.30
237.50	1.6067	0.9958	177.69	107.0	388.6	1141.	110.05
262.50	1.8000	0.9963	180.56	114.2	362.9	1329.	119.14
287.50	2.1400	0.9875	159.66	112.7	327.8	1390.	115.99
312.50	2.6200	0.9975	173.85	116.7	290.9	1445.	112.83
337.50	3.0533	0.9956	151.79	110.0	250.7	1355.	121.18
362.50	3.2800	0.9980	155.10	109.4	210.4	1415.	123.41
387.50	3.4200	0.9961	145.46	92.2	165.3	1278.	116.75
412.50	3.6600	1.0000	133.09	82.3	125.3	1057.	110.36
437.50	3.5467	0.9981	130.47	62.3	85.6	831.	106.96
462.50	3.0067	0.9933	120.98	46.6	56.7	626.	111.71
487.50	2.5733	0.9896	113.38	31.7	32.9	389.	98.48
512.50	1.5867	0.9958	103.34	16.6	16.0	225.	88.44
537.50	1.1533	1.0000	101.84	8.2	6.9	124.	83.68
562.50	0.4333	1.0000	82.30	2.8	2.2	40.	78.44
587.50	0.1333	1.0000	104.69	0.8	0.5	25.	71.40
612.50	0.0667	0.9999	92.57	0.2	0.1	7.	116.21
637.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
662.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
687.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6000, 1000 TIME: 1017. TOTAL=				41.4	157.9	IONZ/TOTAL=	0.7922

300keV C 13 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
771.320	57.429	494.911	138.881	189.263	-0.751	3.380	For ions
(nm)		383.543	166.287	135.180	-0.375	2.375	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
15.00	0.0833	0.9999	272.25	41.1	590.2	281.	54.19
45.00	0.0750	0.9999	277.38	36.5	575.9	350.	48.81
75.00	0.1250	0.9999	241.41	48.4	562.8	332.	59.08
105.00	0.1417	0.9999	214.12	48.9	550.4	407.	73.46
135.00	0.2917	1.0000	255.32	52.5	538.3	440.	94.56
165.00	0.3917	1.0000	211.10	57.8	525.4	571.	103.58
195.00	0.3083	0.9729	223.39	53.6	509.0	525.	102.75
225.00	0.4250	1.0000	225.30	66.9	496.6	540.	110.68
255.00	0.5750	1.0000	228.09	70.9	492.2	634.	126.33
285.00	0.7417	0.9888	268.98	78.9	473.7	776.	132.25
315.00	1.0250	0.9919	247.32	87.0	458.1	825.	137.94
345.00	1.1000	1.0000	234.97	92.6	433.8	976.	142.48
375.00	1.5000	0.9889	228.44	100.3	402.2	1042.	150.14
405.00	1.7833	0.9813	217.88	110.5	367.2	1176.	156.39
435.00	2.2333	1.0000	205.74	107.7	323.8	1123.	153.29
465.00	2.4333	1.0000	204.91	108.1	280.3	1181.	153.87
495.00	2.6750	1.0000	193.06	98.4	234.3	1149.	155.82
525.00	2.8083	0.9970	184.32	91.5	184.2	1052.	151.76
555.00	3.4667	0.9952	169.12	80.2	144.5	1043.	148.90
585.00	2.6333	0.9937	159.25	66.7	101.0	798.	138.41
615.00	2.8333	0.9971	150.59	48.2	64.6	589.	129.13
645.00	2.3583	0.9965	134.17	32.4	36.3	397.	127.85
675.00	1.5167	1.0000	137.56	16.7	16.7	205.	125.85
705.00	0.9167	1.0000	115.43	7.6	6.9	102.	115.28
735.00	0.4083	1.0000	106.13	2.8	1.8	36.	102.91
765.00	0.0833	0.9999	116.30	0.4	0.2	4.	135.28
795.00	0.0250	0.9997	124.61	0.1	0.0	1.	169.50
825.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
855.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
885.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
915.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
945.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4000, 1000 TIME: 874. TOTAL=				48.2	251.1	IONZ/TOTAL=	0.8390

400keV C 13 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
920.645	62.224	613.060	162.312	228.793	-0.886	3.627	For ions
(nm)		470.165	198.507	160.461	-0.328	2.309	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
15.00	0.0222	0.9995	106.68	33.3	675.5	209.	82.79
45.00	0.0667	0.9998	235.68	28.9	668.1	206.	54.72
75.00	0.0667	0.9998	296.94	33.2	661.5	208.	87.22
105.00	0.0889	0.9999	274.85	37.0	659.5	305.	112.20
135.00	0.1667	0.9999	203.64	36.2	641.2	290.	86.55
165.00	0.2111	0.9999	364.29	44.7	631.3	376.	125.30
195.00	0.2111	0.9999	220.50	48.6	617.0	445.	134.96
225.00	0.2556	1.0000	277.19	50.6	596.7	420.	118.62
255.00	0.2778	0.9600	287.11	61.7	577.4	567.	96.15
285.00	0.4667	1.0000	310.02	64.1	562.0	578.	117.72
315.00	0.3111	1.0000	286.69	65.3	547.5	574.	111.49
345.00	0.5778	1.0000	334.58	69.2	537.4	688.	158.56
375.00	0.6222	1.0000	257.62	74.0	509.2	770.	161.25
405.00	0.7889	0.9859	284.02	79.1	488.1	794.	158.54
435.00	0.9222	1.0000	290.48	86.6	466.5	864.	181.26
465.00	1.2667	1.0000	282.15	96.3	440.8	962.	182.69
495.00	1.3444	1.0000	270.18	93.9	398.8	792.	188.52
525.00	1.3889	1.0000	265.89	101.1	360.3	949.	195.89
555.00	2.0111	0.9889	260.19	96.4	329.1	985.	186.25
585.00	2.0778	0.9946	241.60	93.0	280.5	875.	196.30
615.00	2.3333	1.0000	237.04	95.1	242.3	952.	186.61
645.00	2.5889	1.0000	219.93	89.8	200.8	915.	171.69
675.00	2.6222	1.0000	213.48	81.2	156.2	844.	170.68
705.00	2.8333	1.0000	200.00	69.9	116.1	838.	165.50
735.00	2.9111	0.9924	186.88	55.2	81.0	669.	151.80
765.00	2.3889	1.0000	174.75	38.0	50.2	456.	158.97
795.00	1.8444	1.0000	156.88	24.0	28.2	258.	129.15
825.00	1.2556	1.0000	149.12	14.2	14.2	151.	140.29
855.00	0.8222	1.0000	129.12	6.2	5.3	91.	114.34
885.00	0.2111	0.9999	110.77	1.8	1.4	18.	69.12
915.00	0.0889	0.8749	94.36	0.5	0.3	8.	104.27
945.00	0.0222	0.9995	21.32	0.1	0.0	2.	41.09
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3000,	900	TIME:	749.	TOTAL=	53.1	346.3	IONZ/TOTAL= 0.8671

10keV O 16 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
51.315	11.741	21.401	11.833	13.757	0.514	2.891	For ions
(nm)		15.018	10.126	8.673	0.798	3.348	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.00	7.3500	0.9728	13.00	197.3	130.0	1832.	6.24
3.00	12.9500	0.9575	13.44	241.5	141.4	3118.	6.15
5.00	17.1000	0.9532	12.32	249.6	146.9	3686.	6.48
7.00	21.6000	0.9398	13.18	262.1	145.5	3883.	6.92
9.00	21.1500	0.9456	13.57	246.6	138.9	3812.	7.54
11.00	23.2500	0.9441	13.41	239.3	131.7	3727.	8.02
13.00	27.0500	0.9464	13.00	236.9	122.6	3660.	8.49
15.00	28.4500	0.9490	13.83	215.7	110.8	3387.	8.83
17.00	27.0000	0.9537	14.22	201.2	99.7	3255.	9.44
19.00	28.8000	0.9635	13.19	180.9	89.0	2942.	9.65
21.00	26.6000	0.9492	13.72	167.1	76.5	2565.	10.37
23.00	25.1500	0.9563	14.44	140.5	64.2	2233.	10.45
25.00	23.1500	0.9503	14.02	114.6	53.4	1873.	10.60
27.00	23.2500	0.9505	13.87	101.0	43.8	1609.	10.86
29.00	21.3500	0.9508	13.85	83.7	36.1	1343.	11.40
31.00	18.3500	0.9619	14.73	70.4	28.2	1075.	11.97
33.00	15.9000	0.9843	14.66	51.9	21.8	897.	12.18
35.00	13.0500	0.9617	14.53	43.4	17.2	728.	12.01
37.00	11.3500	0.9383	13.61	32.1	13.1	541.	12.02
39.00	9.7500	0.9385	13.62	24.4	10.0	385.	12.86
41.00	8.2500	0.9697	14.06	18.2	7.2	286.	13.28
43.00	6.4500	0.9457	14.88	13.0	5.0	204.	12.99
45.00	4.2000	0.9405	14.43	9.1	3.6	143.	12.23
47.00	3.5500	0.9577	15.31	6.8	2.6	110.	11.51
49.00	2.6000	0.9231	11.42	4.8	1.8	77.	11.88
51.00	1.9000	0.9473	14.52	3.5	1.3	55.	12.00
53.00	1.5000	1.0000	14.14	2.1	0.8	33.	10.90
55.00	1.0500	0.9047	10.08	1.7	0.5	16.	9.07
57.00	1.0500	1.0000	12.57	0.9	0.3	13.	14.38
59.00	0.4500	0.9999	10.19	0.8	0.2	5.	11.34
61.00	0.4000	0.9999	14.27	0.2	0.1	3.	14.40
63.00	0.2000	0.9998	11.70	0.2	0.1	3.	9.02
65.00	0.1000	0.9995	19.14	0.0	0.0	2.	13.31
67.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
69.00	0.1000	0.9995	8.41	0.0	0.0	0.	0.00
71.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
73.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
75.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
77.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
79.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
81.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
83.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
85.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
87.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
89.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
91.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
93.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
95.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
97.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
99.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS:10000, 5000 TIME: 64. TOTAL= 6.3 3.3 IONZ/TOTAL= 0.3421

25keV O 16 in GaAs 175.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
101.220	20.497	45.498	23.473	27.228	0.326	2.533	For ions
(nm)		32.223	20.716	17.105	0.664	3.009	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.75	2.1714	0.9605	31.08	181.8	195.7	1752.	10.96
5.25	5.6286	0.9340	26.15	220.6	208.3	2843.	11.56
8.75	6.5714	0.9478	25.89	226.3	216.7	3369.	11.99
12.25	8.2571	0.9446	28.06	244.4	217.0	3667.	13.01
15.75	10.3143	0.9474	25.95	262.3	217.2	3872.	13.76
19.25	10.2857	0.9500	27.75	263.6	213.0	3841.	15.80
22.75	11.6857	0.9584	27.33	258.4	206.0	3910.	16.07
26.25	12.5429	0.9453	27.33	256.1	195.6	3879.	16.91
29.75	13.4571	0.9363	28.15	244.0	186.3	3761.	17.88
33.25	12.7143	0.9506	28.31	239.5	169.1	3517.	18.51
36.75	14.2571	0.9379	27.90	215.1	151.3	3231.	18.35
40.25	14.2000	0.9618	28.47	199.9	135.8	3060.	19.42
43.75	13.6571	0.9644	27.12	185.5	119.8	2938.	18.96
47.25	13.7714	0.9585	29.07	161.3	103.0	2586.	20.39
50.75	13.0000	0.9275	28.11	147.2	90.2	2440.	21.60
54.25	13.8571	0.9464	28.33	131.3	75.5	2030.	21.23
57.75	11.4857	0.9652	26.15	106.6	63.0	1551.	21.48
61.25	11.1429	0.9641	27.29	89.3	52.0	1351.	21.89
64.75	9.9143	0.9510	25.52	79.1	43.6	1155.	21.63
68.25	8.6571	0.9571	27.20	63.9	34.0	1015.	21.78
71.75	7.6000	0.9361	25.50	51.9	26.2	854.	19.38
75.25	7.2000	0.9603	23.91	39.5	20.2	692.	21.16
78.75	6.6000	0.9480	24.82	32.5	15.7	552.	21.99
82.25	5.0286	0.9375	27.53	23.2	11.4	403.	23.03
85.75	4.5143	0.9430	27.48	18.1	8.6	281.	26.64
89.25	3.2000	0.9553	27.82	12.6	5.8	160.	21.47
92.75	2.2571	0.9494	24.13	9.8	4.3	145.	22.20
96.25	1.9714	0.9565	24.10	6.3	2.8	106.	21.03
99.75	1.3714	0.9375	26.27	4.3	1.8	70.	20.87
103.25	1.0000	0.9714	20.94	2.9	1.2	43.	23.46
106.75	0.6571	0.9130	17.54	1.8	0.7	25.	19.36
110.25	0.5143	0.9999	24.83	1.2	0.5	28.	18.97
113.75	0.2571	0.9999	23.49	0.7	0.3	16.	13.91
117.25	0.2571	0.9999	12.37	0.4	0.1	5.	26.19
120.75	0.0286	0.9990	55.46	0.1	0.0	0.	56.60
124.25	0.0286	0.9990	7.90	0.1	0.0	2.	53.77
127.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
131.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
134.75	0.0286	0.9990	16.45	0.0	0.0	0.	0.00
138.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
141.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
145.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
148.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
152.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
155.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
159.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
162.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
166.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
169.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
173.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2000 TIME: 201.			TOTAL=	13.9	10.5	IONZ/TOTAL=	0.4291

50keV O 16 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
170.753	29.849	83.187	38.660	45.864	0.105	2.431	For ions
(nm)		58.992	35.643	29.398	0.488	2.712	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
4.00	1.2625	0.9208	46.63	161.5	268.0	1814.	16.92
12.00	3.0125	0.9336	48.04	186.1	281.5	2643.	18.55
20.00	3.6125	0.9689	47.17	211.3	289.2	3178.	20.58
28.00	4.5000	0.9500	46.92	221.5	290.4	3440.	24.14
36.00	5.0125	0.9601	49.56	231.7	283.6	3445.	25.03
44.00	6.3625	0.9470	47.57	242.3	273.0	3415.	27.18
52.00	7.6750	0.9463	48.39	242.1	259.1	3816.	28.55
60.00	7.3750	0.9559	46.94	234.7	235.8	3544.	31.08
68.00	8.1500	0.9586	46.02	225.3	210.1	3449.	32.65
76.00	8.6500	0.9552	49.00	199.7	176.8	3012.	33.86
84.00	8.4750	0.9440	47.26	179.5	151.2	2656.	35.01
92.00	8.4750	0.9322	46.67	156.4	122.1	2322.	37.25
100.00	8.4375	0.9644	45.13	130.0	95.4	1952.	36.75
108.00	7.6375	0.9525	44.18	105.4	73.6	1609.	38.57
116.00	7.1625	0.9529	45.88	82.8	55.0	1283.	37.77
124.00	6.0000	0.9542	43.55	61.3	38.3	943.	37.07
132.00	4.6250	0.9730	40.86	43.8	25.7	635.	36.36
140.00	4.1250	0.9606	39.49	31.4	17.0	431.	33.66
148.00	2.7250	0.9312	40.32	18.8	10.0	237.	33.68
156.00	1.9750	0.9683	38.02	10.8	5.7	188.	34.00
164.00	0.9250	0.9730	40.53	4.9	2.6	84.	32.38
172.00	0.5125	1.0000	33.46	2.6	1.3	49.	28.36
180.00	0.4000	0.8750	36.70	1.8	0.7	37.	37.07
188.00	0.2500	1.0000	36.00	0.7	0.3	14.	36.92
196.00	0.0875	0.9999	40.41	0.3	0.1	3.	32.23
204.00	0.0375	0.9997	26.50	0.1	0.1	4.	29.91
212.00	0.0000	0.0000	0.00	0.0	0.0	1.	47.60
220.00	0.0250	0.9995	29.43	0.0	0.0	1.	14.12
228.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
236.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
244.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
252.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
268.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
276.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2000 TIME: 335. TOTAL=				23.9	25.3	IONZ/TOTAL=	0.5146

75keV O 16 in GaAs 500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
233.364	36.905	120.532	52.392	62.357	-0.039	2.422	For ions
(nm)		86.628	50.395	40.473	0.382	2.464	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
5.00	0.8500	0.9765	60.51	144.7	322.0	1441.	24.08
15.00	1.4500	0.9379	61.68	161.1	330.5	2061.	26.92
25.00	2.0900	0.9617	66.74	182.4	337.8	2571.	25.86
35.00	2.7700	0.9603	67.77	188.4	341.7	2847.	32.37
45.00	3.0800	0.9610	71.74	208.9	341.6	3080.	34.06
55.00	3.5700	0.9580	67.94	207.5	332.2	3188.	34.59
65.00	4.1300	0.9419	65.79	228.5	320.3	3445.	38.00
75.00	4.2600	0.9530	67.82	221.0	299.5	3369.	41.40
85.00	5.3400	0.9663	67.02	212.2	278.8	3205.	42.67
95.00	5.6900	0.9473	64.47	215.5	255.2	3057.	44.44
105.00	6.4200	0.9564	63.84	205.0	224.1	2789.	46.21
115.00	6.4700	0.9567	63.13	182.2	192.5	2686.	47.08
125.00	6.6400	0.9503	64.37	164.5	162.8	2411.	49.54
135.00	6.6100	0.9395	65.19	147.9	135.2	2152.	50.88
145.00	6.3700	0.9325	62.39	129.9	108.5	1930.	49.40
155.00	6.5700	0.9543	56.66	106.6	82.0	1720.	47.72
165.00	5.5500	0.9513	58.13	81.0	60.7	1420.	49.17
175.00	4.4900	0.9532	58.00	60.9	43.2	958.	45.66
185.00	3.6600	0.9535	56.87	43.9	29.1	667.	47.81
195.00	2.9000	0.9655	53.94	28.6	18.6	518.	45.13
205.00	2.3100	0.9567	51.82	19.5	11.4	302.	44.42
215.00	1.5700	0.9618	49.25	11.8	6.7	200.	39.23
225.00	1.1500	0.9826	43.58	6.8	3.5	116.	36.60
235.00	0.4700	1.0000	37.40	2.7	1.6	52.	40.31
245.00	0.4000	1.0000	41.79	1.6	0.8	36.	45.05
255.00	0.1200	0.8333	28.72	0.5	0.2	10.	35.27
265.00	0.0500	0.9998	24.79	0.2	0.1	6.	30.75
275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
295.00	0.0100	0.9990	27.75	0.0	0.0	0.	0.00
305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
315.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
325.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
345.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
355.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
375.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
385.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
405.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
415.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
435.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
445.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
465.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
475.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
495.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2000 TIME:		452.	TOTAL=	31.6	42.4	IONZ/TOTAL=	0.5727

100keV O 16 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
290.382	42.951	156.512	64.467	77.787	-0.156	2.448	For ions
(nm)		113.069	63.175	51.216	0.269	2.385	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
6.00	0.5250	1.0000	82.52	127.9	367.4	1243.	23.72
18.00	1.0750	0.9535	86.34	151.9	377.2	1766.	30.87
30.00	1.5917	0.9633	91.67	156.4	378.8	2194.	34.33
42.00	1.5917	0.9738	86.57	169.1	382.8	2450.	36.17
54.00	2.1083	0.9447	89.08	187.1	382.0	2547.	36.75
66.00	2.3000	0.9384	86.81	189.3	372.3	2650.	41.61
78.00	2.6000	0.9744	86.03	194.0	363.3	2821.	48.39
90.00	3.0917	0.9542	91.23	199.2	348.8	2974.	53.44
102.00	3.8250	0.9586	85.83	208.4	331.0	3027.	54.66
114.00	4.3167	0.9614	85.34	205.8	307.8	3148.	58.63
126.00	4.7667	0.9441	82.61	211.5	279.8	3321.	55.13
138.00	5.0917	0.9394	82.35	192.0	245.7	2867.	57.73
150.00	5.3083	0.9466	78.72	180.4	213.5	2479.	58.45
162.00	5.5250	0.9472	76.65	161.4	180.4	2237.	60.66
174.00	5.7750	0.9351	75.76	147.9	149.0	2076.	60.38
186.00	5.1083	0.9380	75.25	126.3	118.4	2111.	61.47
198.00	5.4667	0.9512	70.85	100.7	90.4	1590.	60.48
210.00	4.6000	0.9529	73.06	81.0	68.3	1196.	62.36
222.00	4.3167	0.9440	69.28	63.4	48.5	1042.	60.51
234.00	3.3250	0.9424	65.25	45.6	31.9	668.	55.56
246.00	2.5917	0.9518	60.94	29.4	20.1	439.	53.21
258.00	1.9167	0.9565	63.04	19.3	12.1	348.	59.51
270.00	1.4000	0.9583	55.98	10.7	6.4	200.	50.39
282.00	0.9250	0.9459	58.21	5.5	3.2	100.	54.46
294.00	0.4333	0.9808	52.23	3.1	1.6	53.	56.74
306.00	0.2250	0.9629	50.83	1.3	0.6	24.	60.78
318.00	0.1250	0.9333	43.97	0.5	0.2	7.	51.15
330.00	0.0083	0.9990	13.34	0.1	0.0	3.	27.69
342.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
354.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
366.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
378.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
390.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
402.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS:10000, 1000 TIME: 630. TOTAL= 38.0 61.0 IONZ/TOTAL= 0.6159

150keV O 16 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
392.449	50.157	225.033	82.778	104.168	-0.305	2.573	For ions
(nm)		162.480	86.156	68.358	0.077	2.235	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	-- Damage keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.1667	0.9374	118.84	100.3	438.2	1004.	35.00
24.00	0.5313	0.9412	104.59	127.1	444.8	1529.	34.08
40.00	0.6979	0.9254	129.60	119.3	442.3	1706.	39.73
56.00	1.0104	0.9484	123.58	137.6	445.3	1691.	46.54
72.00	1.0729	0.9514	119.67	141.6	444.1	1887.	55.01
88.00	1.3854	0.9323	121.25	157.2	437.8	2043.	57.32
104.00	1.5417	0.9189	118.19	166.4	433.6	2241.	64.08
120.00	1.8438	0.9604	114.77	175.9	422.7	2379.	67.31
136.00	2.4792	0.9706	116.28	186.7	405.1	2477.	69.77
152.00	2.7604	0.9585	114.36	186.2	379.0	2409.	71.08
168.00	3.3021	0.9432	116.03	195.8	351.5	2616.	73.52
184.00	3.3229	0.9718	110.59	194.2	327.9	2756.	76.56
200.00	3.9688	0.9475	112.43	189.5	289.9	2599.	79.60
216.00	4.0625	0.9641	109.80	182.0	251.6	2430.	75.77
232.00	4.4792	0.9628	106.33	163.1	208.3	2236.	80.50
248.00	4.3542	0.9545	102.75	141.3	169.6	2072.	83.26
264.00	4.6458	0.9417	100.20	129.0	136.0	1791.	78.10
280.00	4.6354	0.9640	96.73	101.4	100.3	1452.	77.70
296.00	3.7813	0.9614	88.66	80.3	71.6	1148.	77.45
312.00	3.5000	0.9554	92.03	56.7	46.2	842.	78.84
328.00	2.5000	0.9542	76.37	35.9	28.1	507.	79.70
344.00	1.8229	0.9429	83.26	22.8	16.5	321.	70.35
360.00	1.5313	0.9592	77.30	15.1	9.0	179.	75.02
376.00	0.7396	0.9577	77.53	6.4	3.9	122.	76.21
392.00	0.5208	0.9600	65.07	3.1	1.8	38.	61.01
408.00	0.1563	0.9333	61.87	1.1	0.6	12.	60.32
424.00	0.0521	0.7998	61.38	0.2	0.1	5.	78.50
440.00	0.0104	0.9990	42.80	0.0	0.0	0.	0.00
456.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6000, 1500 TIME: 424. TOTAL=				48.3	100.9	IONZ/TOTAL=	0.6764

200keV O 16 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
483.911	56.621	290.765	99.543	126.230	-0.446	2.725	For ions
(nm)		213.608	104.711	86.251	-0.044	2.263	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
10.00	0.1800	1.0000	121.74	92.3	505.9	710.	29.90
30.00	0.2867	0.9535	150.37	101.5	503.6	936.	57.46
50.00	0.4400	0.9697	166.17	105.2	501.5	1236.	54.89
70.00	0.5800	0.9885	144.62	111.6	498.2	1488.	52.01
90.00	0.7400	0.9640	156.51	126.4	494.7	1311.	47.66
110.00	1.0067	0.9404	146.99	127.5	490.8	1328.	62.14
130.00	0.9867	0.9730	147.34	144.6	484.6	1479.	73.01
150.00	1.2867	0.9585	146.40	159.7	476.0	1870.	80.91
170.00	1.6533	0.9435	155.03	171.4	455.9	2147.	89.48
190.00	2.0133	0.9437	146.32	166.1	429.6	2066.	86.95
210.00	2.2867	0.9563	136.16	179.2	404.3	2073.	95.63
230.00	2.5867	0.9459	143.79	185.2	376.4	2137.	87.72
250.00	3.0667	0.9565	128.54	183.0	327.3	2540.	102.37
270.00	3.2533	0.9488	137.72	173.7	285.2	2300.	93.58
290.00	3.8600	0.9568	119.72	164.9	241.9	2321.	91.57
310.00	3.8467	0.9584	124.86	144.1	200.1	1891.	99.20
330.00	3.8933	0.9469	119.53	127.1	157.8	1725.	100.24
350.00	3.7800	0.9647	118.72	107.1	119.4	1124.	120.00
370.00	3.4333	0.9592	111.62	83.6	83.5	990.	106.31
390.00	3.2533	0.9447	110.75	62.0	55.5	818.	101.83
410.00	2.6533	0.9648	101.91	42.2	33.2	506.	94.08
430.00	1.7867	0.9552	93.82	20.9	16.8	228.	90.98
450.00	1.1133	0.9401	92.45	12.4	8.5	132.	63.52
470.00	0.5733	0.9767	90.63	5.2	3.5	98.	73.04
490.00	0.2400	1.0000	66.96	1.8	1.1	22.	89.47
510.00	0.1200	0.9444	87.08	0.7	0.3	7.	35.39
530.00	0.0133	0.9995	21.41	0.1	0.1	0.	0.00
550.00	0.0133	0.9995	104.78	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7500, 500 TIME: 810. TOTAL=				56.0	143.1	IONZ/TOTAL=	0.7188

300keV O 16 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
641.357	63.263	404.829	125.008	165.519	-0.587	2.974	For ions
(nm)		301.905	145.414	112.900	-0.135	2.232	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.0522	0.8332	174.94	62.0	631.0	658.	26.14
37.50	0.1565	0.9444	176.46	74.2	618.2	690.	63.97
62.50	0.2174	0.9200	224.44	80.1	610.2	612.	48.53
87.50	0.3391	0.9743	181.87	83.0	605.6	704.	43.18
112.50	0.3565	1.0000	203.80	101.5	600.6	885.	52.33
137.50	0.4522	0.9615	203.52	115.2	590.4	1085.	68.79
162.50	0.6522	0.9733	185.63	113.0	579.6	1180.	55.24
187.50	0.6696	0.9740	193.83	129.6	572.2	1157.	77.75
212.50	0.9043	0.9711	203.44	139.1	553.8	1085.	91.59
237.50	1.1391	0.9618	213.21	140.3	532.4	1398.	115.05
262.50	1.3130	0.9536	209.64	150.4	506.5	1470.	113.17
287.50	1.4609	0.9286	203.00	155.6	478.5	1747.	129.12
312.50	1.9217	0.9412	188.29	169.7	441.1	1825.	128.74
337.50	2.0783	0.9331	190.13	166.0	396.5	1818.	145.98
362.50	2.5304	0.9313	175.27	164.6	354.6	1687.	140.53
387.50	2.8609	0.9422	174.89	161.2	306.2	1509.	137.79
412.50	3.1304	0.9361	163.70	157.6	258.5	1396.	130.85
437.50	3.2348	0.9382	156.42	136.5	201.9	1463.	135.39
462.50	3.2957	0.9367	150.77	116.4	158.1	1281.	133.40
487.50	3.2609	0.9600	148.62	94.3	113.9	1071.	118.20
512.50	2.9043	0.9491	141.53	73.0	77.5	965.	112.47
537.50	2.3739	0.9597	127.47	49.7	46.7	620.	124.51
562.50	1.8261	0.9381	120.59	31.9	26.7	414.	117.29
587.50	1.2435	0.9440	106.16	16.4	12.5	260.	112.96
612.50	0.7217	0.9277	94.42	6.6	4.8	100.	113.99
637.50	0.2870	0.8485	97.64	2.7	1.8	27.	89.98
662.50	0.1043	0.9166	73.02	0.9	0.5	25.	74.89
687.50	0.0261	0.9997	53.39	0.2	0.1	1.	51.02
712.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4600,	500	TIME:	625.	TOTAL=	67.3	232.0	IONZ/TOTAL= 0.7752

400keV O 16 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
770.601	68.525	504.257	144.898	192.547	-0.756	3.298	For ions
(nm)		389.870	167.280	137.984	-0.321	2.272	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
15.00	0.0571	0.9998	195.73	58.5	761.2	314.	53.78
45.00	0.0952	0.9999	208.01	59.4	743.2	395.	55.22
75.00	0.1619	0.9411	175.21	65.2	722.2	407.	53.32
105.00	0.2190	1.0000	200.94	71.4	701.6	551.	75.95
135.00	0.2000	1.0000	233.14	80.5	687.6	597.	96.02
165.00	0.4381	0.9565	266.35	95.8	669.8	776.	99.66
195.00	0.2952	0.9032	222.32	93.4	651.3	948.	99.12
225.00	0.4571	0.9375	222.05	112.9	635.9	922.	100.51
255.00	0.5714	0.9667	215.80	118.4	617.0	945.	112.33
285.00	0.8286	0.9770	236.13	124.6	598.8	952.	134.26
315.00	1.0381	0.9816	252.37	139.1	573.6	1151.	152.48
345.00	1.0952	0.9826	245.37	147.2	539.0	1286.	135.41
375.00	1.1905	0.9680	232.79	152.2	507.8	1542.	134.65
405.00	1.5429	0.9691	232.60	154.3	464.1	1520.	152.76
435.00	1.6952	0.9607	217.24	150.8	409.5	1330.	167.41
465.00	2.4000	0.9643	201.96	158.4	364.8	1359.	171.51
495.00	2.3905	0.9522	198.67	158.8	314.5	1653.	151.83
525.00	3.0667	0.9441	202.53	151.5	260.2	1931.	156.07
555.00	2.9810	0.9329	182.07	129.5	198.4	1464.	157.05
585.00	3.0095	0.9399	172.64	111.5	145.9	1101.	151.73
615.00	2.7143	0.9263	158.65	83.5	97.6	929.	148.99
645.00	2.6476	0.9245	142.20	60.9	60.6	662.	146.36
675.00	1.9524	0.9658	138.01	36.1	30.7	402.	143.33
705.00	1.1429	0.9417	123.35	15.7	12.8	168.	109.20
735.00	0.5905	0.9839	114.75	7.1	4.9	56.	102.30
765.00	0.1810	0.9999	104.45	1.9	1.4	16.	121.34
795.00	0.0667	0.7142	95.10	0.6	0.3	5.	100.35
825.00	0.0286	0.9997	80.25	0.1	0.1	1.	92.34
855.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
885.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
915.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
945.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3500, 500		TIME: 537.	TOTAL=	76.2	323.2	IONZ/TOTAL=	0.8093

10keV Mg 24 in GaAs 80.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
35.647	10.797	16.242	9.529	10.332	0.678	3.120	For ions
(nm)		11.559	8.092	6.557	0.961	3.868	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.80	9.0625	0.8138	9.45	340.0	84.9	2618.	4.58
2.40	19.0625	0.7836	8.93	409.6	92.2	4798.	4.67
4.00	26.5000	0.8090	9.32	439.0	94.4	5837.	4.83
5.60	31.9375	0.7965	9.52	420.1	92.1	6400.	5.30
7.20	33.7500	0.7815	9.46	439.8	88.7	6568.	5.66
8.80	36.3125	0.7849	9.75	405.3	82.0	6299.	6.21
10.40	35.7500	0.7885	9.97	377.9	75.1	5904.	6.63
12.00	39.5625	0.7867	10.34	339.9	67.3	5683.	6.94
13.60	35.1875	0.7726	9.79	316.9	60.2	5429.	7.14
15.20	34.4375	0.7822	10.49	280.4	53.0	4662.	7.46
16.80	34.2500	0.7628	10.39	241.8	44.4	3974.	7.77
18.40	30.8750	0.7895	10.53	204.5	37.3	3459.	8.15
20.00	27.4375	0.7677	10.45	166.5	30.2	2914.	8.55
21.60	24.6250	0.8096	11.26	144.3	25.0	2426.	9.10
23.20	23.2500	0.7715	10.59	113.9	20.2	1905.	9.81
24.80	20.9375	0.7851	11.36	95.2	16.5	1610.	9.77
26.40	16.6250	0.7669	11.33	81.6	13.4	1305.	10.19
28.00	17.0625	0.8205	11.55	59.4	10.1	1033.	10.08
29.60	12.5625	0.8060	11.03	49.1	7.7	800.	10.65
31.20	10.6875	0.8187	11.01	35.3	5.9	559.	9.74
32.80	8.0625	0.7984	10.99	26.2	4.6	449.	8.89
34.40	6.6875	0.7196	11.06	23.2	3.7	345.	8.91
36.00	4.9375	0.7215	12.09	15.4	2.6	291.	11.01
37.60	4.4375	0.7746	11.47	11.7	1.9	233.	10.33
39.20	3.8125	0.7705	11.64	8.9	1.4	151.	10.68
40.80	2.4375	0.7436	12.48	6.7	1.0	110.	10.71
42.40	2.4375	0.7949	10.72	5.9	0.8	78.	9.19
44.00	1.5000	0.8333	10.67	3.8	0.5	52.	9.82
45.60	1.1250	0.7777	9.85	1.9	0.3	27.	8.95
47.20	0.7500	0.9166	11.46	1.4	0.2	18.	8.18
48.80	0.3125	0.7998	8.49	0.7	0.1	16.	5.19
50.40	0.1250	0.9995	7.40	0.5	0.1	5.	5.66
52.00	0.2500	0.7498	14.23	0.3	0.0	4.	5.65
53.60	0.1250	0.9995	3.36	0.3	0.0	6.	6.42
55.20	0.1250	0.9995	9.64	0.1	0.0	3.	8.30
56.80	0.0625	0.9990	1.41	0.1	0.0	0.	0.00
58.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
60.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
61.60	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
63.20	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
64.80	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
66.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
68.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
69.60	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
71.20	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
72.80	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
74.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
76.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
77.60	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
79.20	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS:10000, 2665 TIME: 210. TOTAL= 8.1 1.6 IONZ/TOTAL= 0.1673

25keV Mg 24 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
71.545	20.607	34.086	18.959	20.689	0.547	2.930	For ions
(nm)		24.667	16.604	13.087	0.870	3.594	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.25	4.0000	0.7300	20.45	354.1	130.4	2681.	8.35
3.75	8.0800	0.7525	19.91	416.1	139.4	4587.	8.85
6.25	9.6400	0.7884	18.04	441.7	143.2	5788.	8.55
8.75	11.6000	0.7586	20.50	463.3	144.6	6319.	9.16
11.25	14.0000	0.8000	19.45	480.7	143.0	6917.	10.86
13.75	14.8800	0.7742	21.15	481.1	141.8	7297.	11.20
16.25	16.0400	0.7855	20.18	477.7	137.8	7493.	11.42
18.75	16.7600	0.7924	20.03	452.5	129.3	7279.	11.87
21.25	17.1600	0.7995	20.93	444.1	121.9	6770.	12.93
23.75	18.9200	0.8076	20.82	426.4	113.2	6461.	13.09
26.25	17.7200	0.8014	19.22	394.9	103.4	6051.	13.59
28.75	18.3200	0.7991	19.73	364.7	94.2	5798.	14.64
31.25	19.0800	0.8071	20.45	344.2	86.7	5569.	15.36
33.75	18.6000	0.7935	21.11	300.8	75.1	4925.	15.99
36.25	18.0400	0.7805	20.88	268.6	65.6	4321.	16.53
38.75	15.4000	0.7922	21.02	246.5	57.6	3962.	16.80
41.25	14.9200	0.7936	20.67	228.9	50.7	3495.	16.69
43.75	15.7600	0.7868	21.36	186.1	42.2	3092.	16.98
46.25	12.7600	0.8339	20.00	162.4	35.5	2663.	16.58
48.75	10.9200	0.7839	20.64	135.4	30.4	2203.	16.95
51.25	10.6400	0.7895	20.75	117.9	25.9	1830.	17.31
53.75	10.8800	0.7757	22.10	100.5	21.2	1550.	18.57
56.25	8.1600	0.7402	21.59	83.7	17.3	1313.	19.61
58.75	7.6800	0.7604	23.29	67.1	14.0	1110.	19.45
61.25	6.5200	0.8159	19.60	54.3	11.3	874.	19.87
63.75	5.3200	0.7594	22.20	44.7	8.8	753.	19.01
66.25	4.5200	0.7788	21.85	35.2	7.0	632.	18.73
68.75	4.2800	0.8318	22.81	29.7	5.7	497.	21.09
71.25	3.4400	0.7325	24.15	23.7	4.5	401.	20.19
73.75	2.8800	0.7500	23.40	18.0	3.4	305.	19.39
76.25	2.4800	0.7258	21.75	14.1	2.6	227.	18.14
78.75	1.6400	0.6829	18.16	10.4	2.0	160.	17.66
81.25	1.4400	0.7778	21.37	8.0	1.5	142.	18.12
83.75	1.0000	0.8400	17.42	5.1	1.0	102.	22.03
86.25	1.0000	0.8400	22.23	4.3	0.7	85.	17.85
88.75	0.4400	0.7272	26.35	3.2	0.5	65.	20.44
91.25	0.7600	0.8947	17.99	2.7	0.4	55.	20.56
93.75	0.4800	0.8333	26.32	1.9	0.3	27.	25.89
96.25	0.4000	0.6999	20.93	1.4	0.1	25.	29.73
98.75	0.0400	0.9990	2.78	1.1	0.1	12.	19.40
101.25	0.1600	0.9998	19.80	0.2	0.0	6.	15.25
103.75	0.0400	0.9990	28.48	0.5	0.0	8.	20.16
106.25	0.0000	0.0000	0.00	0.1	0.0	7.	17.11
108.75	0.0400	0.9990	12.05	0.2	0.0	2.	10.74
111.25	0.0400	0.0000	1.21	0.0	0.0	2.	5.20
113.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
116.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
118.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
121.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
123.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS:10000, 3000 TIME: 501. TOTAL= 19.2 5.3 IONZ/TOTAL= 0.2155

50keV Mg 24 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
127.078	33.790	63.948	33.021	36.540	0.352	2.653	For ions
(nm)		46.327	29.484	23.634	0.661	3.063	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	2.2167	0.7368	33.53	339.4	182.2	3180.	14.08
9.00	4.2833	0.7977	33.48	386.4	191.3	4788.	15.64
15.00	5.3500	0.8162	33.87	428.1	196.2	5822.	16.14
21.00	6.5667	0.7766	35.82	451.8	197.4	6489.	18.23
27.00	8.2333	0.8482	35.18	474.2	191.9	6978.	19.13
33.00	8.8333	0.7641	36.15	456.5	184.9	6908.	20.63
39.00	8.7667	0.7624	35.75	467.4	172.9	6865.	22.70
45.00	10.1167	0.7875	36.49	423.5	157.4	6573.	24.01
51.00	11.0000	0.7712	36.29	403.4	140.2	6118.	25.18
57.00	9.8500	0.7885	36.32	367.6	124.2	5770.	27.26
63.00	9.2333	0.7978	37.77	331.4	108.1	4962.	27.98
69.00	10.9000	0.7920	36.87	289.4	90.1	4487.	29.41
75.00	9.3000	0.8100	38.46	243.9	75.0	3795.	29.95
81.00	9.6333	0.8235	37.61	211.3	61.1	3320.	31.96
87.00	7.8167	0.7868	37.67	171.0	48.0	2649.	30.65
93.00	7.1667	0.7977	36.45	129.1	36.0	2245.	31.23
99.00	6.0167	0.8033	36.18	106.6	28.0	1653.	33.82
105.00	5.4000	0.7809	39.88	88.2	21.5	1288.	33.33
111.00	3.9500	0.8059	36.10	62.2	15.6	972.	32.43
117.00	3.6167	0.7788	37.34	45.2	10.9	712.	34.25
123.00	2.6167	0.7898	34.19	32.8	7.3	426.	35.48
129.00	1.8667	0.7679	39.08	20.8	4.7	275.	34.37
135.00	1.1667	0.7571	32.26	14.2	2.9	237.	29.83
141.00	1.0500	0.8095	39.00	9.4	1.9	156.	31.00
147.00	0.6167	0.8378	31.33	4.7	1.1	110.	29.52
153.00	0.5333	0.8750	31.58	3.7	0.7	58.	34.14
159.00	0.3500	0.6666	45.34	2.3	0.4	28.	34.91
165.00	0.1000	0.6666	37.97	1.3	0.2	14.	35.47
171.00	0.0667	0.7498	10.13	0.3	0.1	4.	28.46
177.00	0.0500	0.9997	36.52	0.4	0.0	9.	36.05
183.00	0.0167	0.9990	1.13	0.1	0.0	5.	29.33
189.00	0.0167	0.9990	28.36	0.2	0.0	1.	3.86
195.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
201.00	0.0167	0.9990	52.11	0.1	0.0	0.	0.00
207.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 3000 TIME: 909.			TOTAL=	35.8	13.5	IONZ/TOTAL=	0.2740

75keV Mg 24 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
178.969	45.326	93.922	46.314	51.283	0.251	2.562	For ions
(nm)		67.505	42.353	33.611	0.607	2.885	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
4.00	1.4250	0.7982	44.86	322.1	219.3	2969.	18.14
12.00	2.6500	0.8208	49.38	356.7	229.2	4868.	22.51
20.00	3.3125	0.8038	48.78	395.1	234.1	5451.	24.02
28.00	3.9625	0.7886	49.27	424.0	235.0	5959.	22.11
36.00	4.6000	0.8043	54.83	436.5	233.6	6425.	27.73
44.00	5.4375	0.8069	50.71	447.4	228.8	6556.	30.11
52.00	5.8125	0.8000	51.63	441.8	217.8	6737.	34.00
60.00	6.6875	0.7850	54.30	440.7	202.9	6531.	33.99
68.00	6.6500	0.7914	48.62	429.5	186.2	6094.	34.95
76.00	7.4000	0.8024	53.31	403.5	167.5	6403.	37.42
84.00	7.8375	0.7863	52.46	361.0	147.7	5324.	37.53
92.00	7.3625	0.7419	54.08	328.2	128.3	4988.	40.83
100.00	7.7750	0.7862	51.63	294.3	111.7	4260.	42.22
108.00	6.7000	0.7761	51.32	256.2	91.7	3535.	42.60
116.00	7.1000	0.7905	51.64	231.2	76.3	3568.	39.59
124.00	5.9500	0.7941	50.94	179.8	59.1	2883.	38.96
132.00	5.3125	0.7765	49.94	146.0	46.6	1960.	40.67
140.00	4.9625	0.7733	50.22	114.8	36.0	1589.	44.87
148.00	4.0500	0.7901	50.16	91.5	26.9	1441.	52.39
156.00	3.1625	0.7747	50.08	70.5	20.4	1174.	50.74
164.00	3.0000	0.8125	50.28	52.2	14.4	739.	41.74
172.00	2.5125	0.8010	49.84	42.2	10.2	633.	42.73
180.00	1.7250	0.8696	51.29	25.3	6.5	565.	36.51
188.00	1.3375	0.7663	47.68	16.7	4.3	390.	41.49
196.00	0.7500	0.7667	42.97	10.6	2.5	228.	41.06
204.00	0.6250	0.7800	54.69	6.3	1.5	110.	31.23
212.00	0.3125	0.7600	45.63	3.5	0.9	45.	35.62
220.00	0.2250	0.8333	43.60	2.2	0.5	11.	21.00
228.00	0.1625	0.7692	52.46	1.4	0.3	8.	66.68
236.00	0.0750	0.9998	38.46	0.7	0.2	2.	71.01
244.00	0.0375	0.6664	60.69	0.2	0.0	0.	0.00
252.00	0.0125	0.0000	68.36	0.1	0.0	0.	0.00
260.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
268.00	0.0250	0.9995	6.06	0.0	0.0	0.	0.00
276.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 716. TOTAL=				50.7	23.5	IONZ/TOTAL=	0.3171

100keV Mg 24 in GaAs 500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
230.110	55.913	124.230	59.515	65.402	0.172	2.530	For ions
(nm)		87.577	53.795	42.185	0.526	2.763	For vacs.

Depth nm	Ions /um/ion	Ist1/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
5.00	0.9800	0.8061	62.49	301.6	252.0	2802.	23.53
15.00	1.9100	0.8534	67.21	355.9	261.1	4383.	23.57
25.00	2.5000	0.7880	67.01	372.4	267.1	5296.	32.14
35.00	2.6500	0.7321	67.07	398.4	267.1	5786.	34.54
45.00	3.4800	0.7529	63.54	409.9	270.3	6081.	36.93
55.00	3.6000	0.8111	65.14	433.0	261.3	6080.	36.76
65.00	4.1100	0.8175	63.08	433.9	251.6	6438.	37.55
75.00	4.6400	0.7931	67.06	418.4	235.1	6682.	39.56
85.00	5.3200	0.7932	70.12	419.8	221.7	5820.	41.88
95.00	5.3400	0.7903	69.52	392.9	200.4	5751.	45.51
105.00	5.3700	0.7858	64.55	363.0	178.6	5729.	48.53
115.00	5.6300	0.7549	65.62	348.3	160.6	5295.	51.85
125.00	5.8300	0.8045	68.13	315.9	137.4	4697.	54.88
135.00	5.9100	0.7953	64.66	277.7	117.0	4240.	53.12
145.00	5.9100	0.7766	66.53	247.5	96.2	3614.	48.87
155.00	5.6400	0.7766	64.18	208.0	80.1	2951.	52.98
165.00	4.7200	0.7712	62.20	172.6	63.8	2506.	48.95
175.00	4.6100	0.7614	68.28	145.0	50.4	2211.	46.93
185.00	3.5500	0.8141	60.77	108.0	38.0	1687.	50.58
195.00	3.5000	0.7571	63.32	88.9	28.0	1120.	51.12
205.00	2.7700	0.8231	66.00	65.2	19.8	877.	61.25
215.00	1.9800	0.7626	66.33	43.3	13.6	580.	64.63
225.00	1.6200	0.7284	62.96	33.8	9.8	515.	54.77
235.00	1.3200	0.7954	57.74	21.6	6.3	298.	46.47
245.00	0.9700	0.7526	55.68	13.7	4.0	191.	53.70
255.00	0.5900	0.7796	58.95	9.0	2.5	110.	67.55
265.00	0.3700	0.7297	60.48	6.2	1.7	56.	47.36
275.00	0.2300	0.8695	49.86	3.1	0.9	41.	26.76
285.00	0.2100	0.8095	53.29	2.6	0.6	61.	19.55
295.00	0.1100	0.8181	47.83	1.2	0.3	13.	25.19
305.00	0.1000	0.9999	49.34	0.6	0.2	6.	46.03
315.00	0.0200	0.9995	25.76	0.2	0.0	1.	40.47
325.00	0.0100	0.9990	11.91	0.0	0.0	0.	0.00
335.00	0.0100	0.0000	64.43	0.0	0.0	0.	0.00
345.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
355.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
375.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
385.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
405.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
415.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
435.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
445.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
465.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
475.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
495.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 888. TOTAL=				64.1	35.0	IONZ/TOTAL=	0.3529

150keV Mg 24 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
328.608	72.852	183.947	82.103	93.435	0.025	2.472	For ions
(nm)		133.852	80.407	60.885	0.389	2.468	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
8.00	0.6125	0.8673	90.02	264.8	304.5	2574.	26.81
24.00	1.2438	0.8090	93.96	297.5	314.4	3934.	32.19
40.00	1.4313	0.7773	90.99	343.5	321.2	4306.	36.58
56.00	1.8188	0.7869	93.75	355.8	320.3	4459.	42.92
72.00	2.1250	0.7882	94.21	371.4	316.5	4861.	44.64
88.00	2.4625	0.7386	97.53	385.9	308.0	5088.	52.78
104.00	2.8063	0.7951	102.50	406.4	297.1	4992.	56.88
120.00	3.1500	0.7956	93.16	387.1	273.3	4990.	58.08
136.00	4.0250	0.7826	99.45	385.6	253.1	5083.	63.46
152.00	3.9813	0.8226	96.54	364.5	226.0	4864.	69.97
168.00	4.3188	0.8032	97.00	349.4	199.8	4419.	72.39
184.00	4.1813	0.7997	90.63	307.6	166.2	4398.	70.70
200.00	4.2125	0.8131	97.09	282.4	140.4	3626.	72.78
216.00	4.2500	0.8088	92.73	236.2	112.2	3268.	78.14
232.00	3.7688	0.7612	93.77	192.6	87.6	2629.	79.74
248.00	3.8813	0.7858	92.38	161.2	67.7	2295.	84.70
264.00	3.1938	0.7886	90.50	124.1	48.7	1878.	84.66
280.00	2.6063	0.8297	88.18	92.0	33.8	1492.	84.97
296.00	2.2000	0.7699	82.18	64.3	21.5	1232.	78.04
312.00	1.3563	0.7558	87.41	36.2	12.6	664.	80.92
328.00	1.0375	0.8012	84.91	26.3	8.2	364.	67.76
344.00	0.7063	0.7965	81.28	14.6	4.6	249.	56.01
360.00	0.4938	0.8354	75.62	9.4	2.7	129.	62.31
376.00	0.3313	0.6981	83.53	5.7	1.4	76.	72.86
392.00	0.1438	0.6521	78.76	2.0	0.5	43.	58.42
408.00	0.0750	0.7499	83.27	0.8	0.2	30.	37.50
424.00	0.0313	0.5999	65.45	0.4	0.1	1.	89.19
440.00	0.0063	0.9990	12.21	0.1	0.0	0.	0.00
456.00	0.0063	0.9990	77.56	0.0	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 1179. TOTAL=				87.5	61.5	IONZ/TOTAL=	0.4127

200keV Mg 24 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
424.245	87.285	247.443	102.315	121.795	-0.069	2.505	For ions
(nm)		175.994	100.340	81.397	0.317	2.477	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
10.00	0.3769	0.8163	118.42	229.0	347.2	1929.	39.97
30.00	0.5615	0.7671	107.07	266.6	355.0	3082.	43.83
50.00	0.8462	0.7727	126.64	266.9	356.8	3097.	44.11
70.00	1.0846	0.8227	127.66	318.4	362.6	3726.	60.68
90.00	1.5000	0.8359	129.86	323.6	358.6	3674.	59.90
110.00	1.5923	0.8309	129.18	340.8	355.0	4155.	65.68
130.00	2.0769	0.8074	133.65	369.2	348.0	4430.	77.74
150.00	2.2077	0.8188	136.65	379.2	327.3	4503.	81.93
170.00	2.5769	0.7791	124.88	374.1	302.4	4415.	80.58
190.00	2.9692	0.7668	131.91	357.3	281.6	4575.	89.92
210.00	3.1692	0.7791	131.43	348.7	246.5	4274.	98.25
230.00	3.2308	0.8119	123.15	330.8	215.8	3821.	96.82
250.00	3.8615	0.7928	127.05	309.7	185.2	3638.	96.99
270.00	3.6231	0.7919	118.34	258.3	147.5	3305.	106.09
290.00	3.4462	0.7969	118.31	229.1	118.2	2837.	96.28
310.00	3.2846	0.7377	116.23	186.4	90.9	2275.	98.51
330.00	2.9692	0.8187	115.16	146.4	66.9	1792.	95.84
350.00	2.5154	0.7798	118.16	106.9	46.3	1333.	107.88
370.00	2.0077	0.7931	112.29	78.0	32.6	911.	100.17
390.00	1.6615	0.7824	105.06	56.8	21.6	688.	97.44
410.00	1.1615	0.8079	104.18	33.4	13.0	354.	92.77
430.00	0.8846	0.7478	100.54	24.3	8.0	284.	74.06
450.00	0.4692	0.7869	89.40	11.7	3.9	156.	80.18
470.00	0.3846	0.8800	87.75	7.9	2.3	106.	105.79
490.00	0.2077	0.7407	98.32	3.1	0.8	43.	88.19
510.00	0.0385	0.2000	75.46	1.0	0.2	21.	89.51
530.00	0.0308	0.9998	56.52	0.3	0.1	5.	71.58
550.00	0.0154	0.9995	48.89	0.1	0.0	5.	47.47
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
590.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 6500, 1000 TIME: 1089. TOTAL=				107.2	91.9	IONZ/TOTAL=	0.4616

300keV Mg 24 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
601.076	107.780	364.752	137.677	170.214	-0.217	2.508	For ions
(nm)		266.413	140.496	116.687	0.198	2.393	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.1360	0.7647	157.16	173.3	423.5	1211.	30.68
37.50	0.3120	0.7692	178.51	203.1	425.7	1521.	34.55
62.50	0.3600	0.8889	191.48	221.8	430.5	2055.	57.44
87.50	0.5040	0.7778	198.18	245.2	435.7	2327.	75.84
112.50	0.7360	0.7717	189.17	262.8	434.5	2512.	79.85
137.50	0.8880	0.7207	207.79	301.2	428.5	2568.	92.33
162.50	1.1120	0.8057	175.09	295.0	423.5	2735.	113.48
187.50	1.2400	0.8516	213.32	328.3	417.2	3445.	113.89
212.50	1.4960	0.7861	187.28	336.7	402.1	3566.	104.21
237.50	1.6720	0.7273	185.02	361.3	382.9	3707.	118.73
262.50	1.8080	0.7965	173.78	337.2	353.9	3716.	123.31
287.50	2.1360	0.7715	178.31	328.9	314.9	3406.	137.12
312.50	2.2880	0.7762	184.03	318.4	287.8	3305.	139.41
337.50	2.3360	0.7877	180.49	301.9	252.3	3109.	144.69
362.50	2.7280	0.7742	184.72	290.4	219.2	3134.	143.41
387.50	2.6320	0.7812	169.21	264.4	186.6	2640.	130.58
412.50	2.6960	0.7952	168.54	232.1	154.4	2439.	148.09
437.50	2.6160	0.7859	162.78	204.3	121.7	1828.	132.23
462.50	2.5920	0.7994	155.57	166.0	89.5	1783.	133.17
487.50	2.1600	0.8222	147.48	130.3	67.8	1379.	127.26
512.50	2.0000	0.7920	146.55	102.8	48.2	1187.	130.02
537.50	1.7200	0.8326	141.41	71.8	31.1	775.	125.14
562.50	1.0800	0.8815	128.64	47.1	19.5	417.	110.32
587.50	0.8720	0.8349	128.46	29.4	11.0	414.	114.69
612.50	0.4800	0.8500	128.73	15.6	5.7	214.	113.99
637.50	0.2960	0.8108	106.05	9.0	2.9	88.	102.29
662.50	0.2240	0.6071	125.29	4.6	1.4	47.	92.99
687.50	0.0960	0.8333	100.18	1.9	0.6	33.	121.79
712.50	0.0320	0.7498	140.38	0.7	0.1	12.	88.45
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0080	0.9990	21.97	0.1	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5000, 600 TIME: 1002. TOTAL=				139.6	159.3	IONZ/TOTAL=	0.5329

400keV Mg 24 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
761.363	121.713	479.230	167.611	207.067	-0.379	2.717	For ions
(nm)		366.000	180.487	142.782	0.033	2.331	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	-- Damage keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
15.00	0.0571	0.8332	259.75	145.5	507.6	811.	29.38
45.00	0.2000	0.8571	213.03	178.7	507.0	1046.	69.08
75.00	0.3333	0.7428	209.47	169.3	501.9	1320.	86.34
105.00	0.3143	0.8182	186.44	212.3	497.6	1545.	68.69
135.00	0.4762	0.8600	214.32	199.9	493.3	1630.	96.72
165.00	0.4667	0.8775	247.26	247.4	492.9	1700.	80.54
195.00	0.6286	0.8636	244.60	239.7	491.2	2065.	85.71
225.00	0.6286	0.8182	224.53	279.1	482.6	2176.	101.92
255.00	0.8000	0.7976	231.23	301.0	473.6	2633.	131.00
285.00	1.1333	0.8403	241.43	300.9	438.0	2809.	136.82
315.00	1.2762	0.7463	231.28	305.3	418.0	2813.	147.78
345.00	1.4667	0.7987	245.21	306.5	393.8	2324.	157.67
375.00	1.6571	0.7184	241.50	326.4	364.0	2738.	177.70
405.00	1.6571	0.8448	209.21	306.1	329.0	2970.	168.90
435.00	1.8286	0.7604	217.79	300.4	294.2	2732.	150.19
465.00	2.4381	0.7773	219.27	300.1	259.2	2860.	160.58
495.00	2.2857	0.7875	205.83	264.8	217.6	2860.	162.44
525.00	2.3524	0.7368	207.90	239.1	177.8	2430.	175.33
555.00	2.2857	0.7542	196.31	211.4	145.5	1989.	171.43
585.00	2.1810	0.7773	187.87	194.9	114.5	1831.	184.96
615.00	2.2000	0.8009	200.54	153.5	82.7	1734.	178.30
645.00	1.7905	0.7766	173.34	101.6	53.3	1070.	161.92
675.00	1.4952	0.8217	163.89	76.9	38.1	704.	140.88
705.00	1.0095	0.8113	163.54	51.2	23.1	523.	155.79
735.00	0.8190	0.7791	150.59	32.8	13.2	393.	120.08
765.00	0.5619	0.8135	147.05	19.2	6.8	279.	123.32
795.00	0.3048	0.7187	147.57	8.0	2.9	181.	159.86
825.00	0.1810	0.5789	119.31	4.8	1.5	131.	154.73
855.00	0.0571	0.6666	157.19	1.6	0.4	40.	122.52
885.00	0.0095	0.9990	21.72	0.6	0.2	16.	30.91
915.00	0.0095	0.9990	68.95	0.2	0.1	0.	0.00
945.00	0.0000	0.0000	0.00	0.1	0.1	0.	0.00
975.00	0.0095	0.9990	163.50	0.1	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3500,	500	TIME:	884.	TOTAL=	164.4	234.7	IONZ/TOTAL= 0.5880

10keV Al 27 in GaAs 60.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
31.963	10.041	15.141	8.761	9.495	0.651	3.167	For ions
(nm)		10.663	7.522	5.801	0.939	3.743	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.60	9.0000	0.7870	7.71	355.3	85.3	2610.	3.56
1.80	17.6667	0.7689	8.78	447.4	91.6	4735.	3.73
3.00	26.0000	0.7468	8.30	458.7	94.1	5928.	4.15
4.20	31.8333	0.7408	8.67	486.1	93.9	6698.	4.31
5.40	31.5833	0.7546	8.75	480.9	92.1	6949.	4.59
6.60	34.2500	0.7153	8.69	473.1	88.9	7128.	5.21
7.80	38.3333	0.7674	8.93	445.2	84.6	7039.	5.49
9.00	38.3333	0.7370	9.14	446.3	79.4	7010.	5.68
10.20	40.6667	0.7152	9.43	397.0	72.6	6510.	5.94
11.40	38.7500	0.7032	9.50	372.7	66.4	6056.	6.28
12.60	40.7500	0.7444	9.46	346.7	58.9	5467.	6.46
13.80	39.7500	0.7400	9.52	302.4	53.4	5037.	6.85
15.00	38.0000	0.7193	9.75	276.0	47.3	4547.	7.13
16.20	38.5000	0.7468	9.40	253.5	42.1	4159.	7.15
17.40	31.7500	0.7270	9.06	216.9	36.3	3817.	7.52
18.60	30.4167	0.7589	9.73	191.4	31.3	3175.	7.72
19.80	29.7500	0.7395	10.21	153.9	25.7	2721.	8.03
21.00	27.2500	0.7676	10.11	135.0	22.1	2422.	8.10
22.20	23.5000	0.7340	9.85	122.3	19.2	2041.	8.52
23.40	21.2500	0.7843	9.57	105.8	15.8	1735.	8.90
24.60	21.0000	0.7222	10.54	81.4	12.7	1512.	8.60
25.80	17.8333	0.7103	9.95	73.3	10.8	1299.	9.25
27.00	16.0833	0.8135	9.88	55.2	8.5	1030.	8.97
28.20	12.0833	0.7724	11.09	46.9	6.7	745.	9.59
29.40	10.8333	0.7231	10.33	35.6	5.6	663.	9.29
30.60	9.1667	0.7454	9.02	27.8	4.1	527.	9.32
31.80	7.7500	0.7097	10.16	25.8	3.6	451.	10.30
33.00	6.0000	0.6944	11.14	16.4	2.7	315.	10.06
34.20	3.9167	0.6383	12.40	15.4	2.1	213.	10.57
35.40	3.8333	0.7609	10.52	11.8	1.7	160.	9.58
36.60	4.2500	0.7255	10.49	10.6	1.3	122.	8.60
37.80	2.2500	0.6666	10.36	6.9	0.9	94.	7.51
39.00	2.5000	0.7333	10.38	4.3	0.6	61.	8.76
40.20	1.5000	0.6111	12.56	3.0	0.4	40.	8.79
41.40	1.1667	0.4285	11.67	2.2	0.3	30.	9.33
42.60	0.5000	0.8332	8.15	1.9	0.3	41.	8.73
43.80	0.9167	0.8181	11.66	1.2	0.2	32.	8.64
45.00	0.6667	0.7499	13.07	0.9	0.1	22.	9.67
46.20	0.7500	0.8888	8.14	0.7	0.1	13.	8.92
47.40	0.0833	0.9990	2.01	0.8	0.1	5.	6.91
48.60	0.1667	0.9995	4.42	0.4	0.0	5.	9.44
49.80	0.1667	0.4998	4.66	0.2	0.0	6.	8.88
51.00	0.1667	0.9995	13.38	0.2	0.0	3.	5.17
52.20	0.0000	0.0000	0.00	0.1	0.0	2.	10.79
53.40	0.0833	0.0000	18.68	0.1	0.0	6.	10.27
54.60	0.0000	0.0000	0.00	0.0	0.0	1.	16.42
55.80	0.0833	0.0000	11.07	0.0	0.0	0.	0.00
57.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
58.20	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
59.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2671 TIME: 204. TOTAL=				8.3	1.5	IONZ/TOTAL=	0.1550

25keV Al 27 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
63.937	19.226	31.714	17.448	18.569	0.525	2.924	For ions
(nm)		22.818	15.365	11.714	0.898	3.830	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.25	4.2800	0.7290	15.47	388.9	132.7	3088.	7.63
3.75	8.9200	0.7489	16.01	459.9	140.0	4990.	7.14
6.25	11.2000	0.7643	17.48	511.6	143.4	5851.	7.52
8.75	12.7600	0.7492	17.44	503.8	143.1	7076.	7.85
11.25	14.6000	0.7671	17.01	528.3	142.1	7705.	8.35
13.75	18.0400	0.7317	17.27	530.3	138.1	7631.	9.60
16.25	17.1200	0.7570	17.27	530.6	133.6	7879.	10.60
18.75	18.2800	0.7593	18.42	510.0	125.3	7760.	11.04
21.25	18.6800	0.7623	16.71	474.4	115.7	7865.	11.98
23.75	20.7200	0.7239	18.23	436.7	105.9	7895.	12.10
26.25	21.0400	0.7414	17.99	419.5	96.2	6983.	13.04
28.75	20.5200	0.7466	18.80	391.5	84.9	5902.	13.46
31.25	20.4000	0.7176	18.41	331.7	73.7	5115.	14.19
33.75	17.8400	0.7399	18.17	290.8	64.7	4756.	14.38
36.25	16.5200	0.7385	19.82	257.8	55.9	4331.	15.11
38.75	16.9600	0.7241	20.10	222.5	48.0	3690.	15.38
41.25	14.8000	0.7378	20.61	201.5	41.9	3214.	15.61
43.75	15.6800	0.7398	19.90	171.7	35.1	2728.	16.01
46.25	13.0800	0.7768	19.80	150.1	29.0	2425.	16.16
48.75	11.9200	0.7450	19.82	117.4	22.9	2070.	17.06
51.25	9.8000	0.7388	19.29	101.5	19.2	1856.	16.88
53.75	8.8000	0.7500	19.47	78.8	15.5	1315.	18.04
56.25	7.3200	0.7158	19.63	64.9	12.4	961.	17.79
58.75	6.1600	0.7338	18.61	50.6	9.6	805.	19.20
61.25	5.0400	0.8095	17.38	40.8	7.3	677.	21.38
63.75	4.8000	0.6917	21.72	29.0	5.5	469.	21.11
66.25	3.1200	0.7179	19.58	25.6	4.4	390.	24.72
68.75	2.8800	0.7361	20.70	19.3	3.2	267.	22.03
71.25	2.1600	0.6852	23.42	15.0	2.3	189.	21.06
73.75	2.1600	0.7222	19.89	9.6	1.6	111.	16.76
76.25	1.1600	0.7931	17.03	7.0	1.3	103.	19.69
78.75	1.2400	0.8064	14.46	6.6	1.0	82.	12.99
81.25	1.1200	0.7143	19.55	3.8	0.7	98.	19.96
83.75	0.4800	0.8333	18.31	3.4	0.5	93.	20.38
86.25	0.3600	0.7777	14.97	1.6	0.3	64.	17.08
88.75	0.2400	0.8332	17.11	1.2	0.2	33.	16.12
91.25	0.0400	0.9990	35.45	0.5	0.1	24.	25.61
93.75	0.0800	0.9995	18.32	0.4	0.1	15.	16.98
96.25	0.0400	0.9990	20.59	0.2	0.1	16.	6.88
98.75	0.0400	0.0000	6.46	0.2	0.1	24.	9.19
101.25	0.0800	0.9995	9.38	0.3	0.0	12.	11.26
103.75	0.0000	0.0000	0.00	0.2	0.0	12.	13.40
106.25	0.0000	0.0000	0.00	0.0	0.0	6.	13.03
108.75	0.0800	0.9995	7.46	0.2	0.0	2.	12.48
111.25	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
113.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
116.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
118.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
121.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
123.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1232 TIME: 298. TOTAL=				19.7	4.9	IONZ/TOTAL=	0.1988

50keV Al 27 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
112.820	31.848	58.700	30.802	32.795	0.385	2.638	For ions
(nm)		42.344	26.843	21.654	0.686	3.100	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	2.8167	0.7101	29.89	397.5	186.2	3547.	13.62
9.00	4.5833	0.7345	28.90	463.2	195.1	5377.	14.02
15.00	6.3333	0.7421	31.47	492.3	199.1	6665.	14.48
21.00	8.6167	0.7195	31.11	519.1	195.9	7548.	16.18
27.00	9.2000	0.7735	31.38	534.2	191.5	7803.	19.65
33.00	10.1167	0.7545	32.04	533.8	180.6	7735.	21.80
39.00	9.9167	0.6958	33.73	497.5	164.0	7617.	23.42
45.00	11.6500	0.7482	33.97	465.7	146.2	7715.	23.58
51.00	11.8500	0.7468	31.83	427.5	127.8	6869.	24.17
57.00	10.7333	0.7220	33.88	364.7	106.1	5743.	25.85
63.00	11.3000	0.7463	33.20	310.7	88.8	4771.	23.97
69.00	9.8167	0.7351	32.18	258.2	70.5	4149.	25.74
75.00	8.8667	0.7519	33.14	212.7	57.5	3659.	26.87
81.00	8.8333	0.7792	33.16	181.2	46.7	2965.	28.09
87.00	7.3000	0.7534	32.31	142.8	35.0	2054.	31.75
93.00	6.2667	0.7314	35.17	110.7	26.7	1574.	31.65
99.00	5.1667	0.7742	33.73	94.8	19.0	1341.	30.29
105.00	4.0833	0.7551	35.97	59.4	13.2	980.	34.04
111.00	3.5833	0.7674	30.93	41.6	9.5	739.	32.06
117.00	2.5333	0.7566	36.18	31.1	6.0	419.	32.28
123.00	1.5667	0.7128	32.65	17.5	3.8	272.	29.44
129.00	1.2500	0.8133	36.11	11.5	2.2	167.	26.69
135.00	0.8333	0.7800	33.29	7.1	1.3	105.	27.35
141.00	0.4667	0.7143	32.96	5.0	0.9	37.	17.86
147.00	0.2833	0.7058	26.25	2.1	0.4	15.	8.83
153.00	0.3000	0.8333	40.65	1.2	0.2	3.	6.20
159.00	0.0500	0.9997	47.20	0.8	0.1	9.	8.35
165.00	0.0833	0.7998	18.10	0.2	0.0	11.	10.01
171.00	0.0000	0.0000	0.00	0.1	0.0	3.	8.02
177.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
183.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
189.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
195.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
201.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
207.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 487.			TOTAL=	37.0	12.4	IONZ/TOTAL=	0.2515

75keV Al 27 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
159.260	42.514	85.567	42.080	46.823	0.272	2.608	For ions
(nm)		59.067	37.436	28.654	0.623	2.942	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	1.4667	0.7386	41.27	374.5	223.6	3155.	15.51
9.00	2.3167	0.7626	41.64	406.9	231.4	4981.	16.81
15.00	3.0833	0.7622	45.62	455.5	238.4	6550.	17.13
21.00	3.6833	0.7647	44.36	475.4	239.7	6760.	18.97
27.00	4.6167	0.7256	46.24	475.7	237.1	7204.	21.94
33.00	5.4000	0.6883	46.40	497.3	234.4	7434.	26.66
39.00	5.7167	0.7289	43.38	505.3	229.2	7789.	26.04
45.00	6.4000	0.7370	49.04	512.9	221.5	7538.	28.46
51.00	7.2000	0.7824	47.55	511.6	213.1	8195.	29.85
57.00	8.1000	0.7284	47.03	485.3	199.5	7332.	30.66
63.00	7.2667	0.7110	49.22	487.9	185.4	7381.	32.33
69.00	8.2167	0.7444	47.54	443.0	169.7	7376.	31.52
75.00	8.4167	0.7564	47.24	443.7	155.2	6684.	31.83
81.00	7.8833	0.7400	45.34	388.1	136.2	5801.	34.35
87.00	8.0500	0.7412	47.80	346.9	119.1	5308.	35.33
93.00	8.0000	0.7229	49.75	312.9	104.1	4959.	33.51
99.00	7.9167	0.7326	45.07	289.7	90.5	4149.	36.02
105.00	7.2667	0.7523	48.83	259.0	76.6	3525.	37.36
111.00	6.6833	0.7307	48.72	212.8	63.2	2924.	36.96
117.00	6.2500	0.7520	45.16	181.7	53.1	2520.	36.80
123.00	6.0500	0.7796	46.75	159.3	43.5	2256.	36.93
129.00	5.3667	0.7888	48.65	123.3	33.9	1830.	36.72
135.00	4.7000	0.7660	48.23	111.2	27.6	1376.	38.96
141.00	4.3333	0.6923	43.24	84.1	21.7	957.	38.38
147.00	3.4667	0.7692	44.64	66.1	16.7	828.	40.23
153.00	2.5667	0.7922	45.77	48.0	12.0	734.	42.32
159.00	2.0167	0.7851	45.05	33.9	8.2	620.	40.16
165.00	1.5500	0.7742	44.45	24.0	5.8	334.	38.05
171.00	1.3667	0.7073	50.00	18.5	4.3	291.	36.17
177.00	1.0167	0.7049	45.51	15.0	3.0	258.	40.85
183.00	0.7333	0.7045	43.84	8.5	2.0	163.	39.41
189.00	0.5833	0.8857	45.63	7.2	1.6	105.	32.48
195.00	0.3333	0.7500	46.32	4.8	1.0	16.	59.00
201.00	0.2667	0.8124	41.54	3.3	0.6	7.	22.34
207.00	0.2333	0.8571	43.84	2.1	0.3	15.	8.64
213.00	0.0333	0.4998	82.44	0.9	0.1	9.	5.55
219.00	0.0833	0.7998	32.67	0.3	0.1	0.	0.00
225.00	0.0000	0.0000	0.00	0.2	0.1	0.	0.00
231.00	0.0000	0.0000	0.00	0.1	0.1	0.	0.00
237.00	0.0500	0.6664	17.57	0.2	0.1	0.	0.00
243.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0167	0.9990	35.75	0.1	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0167	0.9990	56.57	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 682. TOTAL=				52.7	21.6	IONZ/TOTAL=	0.2911

100keV Al 27 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
204.485	53.024	112.862	54.283	59.430	0.201	2.509	For ions
(nm)		81.064	50.301	39.149	0.575	2.853	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
4.00	0.8750	0.6286	55.58	362.4	257.6	2838.	22.25
12.00	1.8375	0.7619	53.60	373.9	264.1	4676.	19.84
20.00	2.5125	0.7363	58.07	423.4	269.2	5571.	23.40
28.00	2.8125	0.7600	58.67	450.2	271.7	5986.	27.24
36.00	3.4375	0.7564	57.66	471.4	272.3	6492.	29.17
44.00	3.9750	0.7421	53.67	476.3	267.0	7441.	32.54
52.00	4.5250	0.7514	58.77	491.4	264.5	7090.	34.47
60.00	5.6875	0.7451	59.60	514.5	256.0	6947.	35.08
68.00	4.7000	0.7606	61.34	478.2	238.4	7164.	37.75
76.00	5.1875	0.7277	57.74	484.7	225.7	7167.	40.45
84.00	5.8250	0.7575	59.45	465.4	208.6	6561.	41.24
92.00	6.1375	0.7393	60.22	435.9	188.9	6584.	44.48
100.00	6.5750	0.6920	62.11	418.7	171.6	6139.	43.83
108.00	6.7000	0.7369	62.25	374.6	153.6	5686.	45.24
116.00	6.3750	0.7353	60.44	349.3	134.5	5107.	46.23
124.00	6.1625	0.7424	63.29	311.8	116.0	4727.	49.69
132.00	6.0750	0.7263	62.04	276.8	99.8	4271.	47.79
140.00	5.7125	0.7352	58.96	240.6	82.4	3619.	53.64
148.00	5.8375	0.7323	60.78	200.9	66.9	2738.	55.69
156.00	4.5875	0.7221	55.57	166.8	54.0	2469.	53.96
164.00	4.3625	0.7421	55.96	147.1	44.0	2240.	53.07
172.00	4.1875	0.7373	59.11	117.9	34.5	1949.	51.76
180.00	3.8125	0.7410	61.19	92.3	26.8	1638.	49.94
188.00	2.6375	0.7678	60.58	73.8	20.3	997.	52.53
196.00	2.3000	0.7337	62.62	53.0	15.1	783.	54.59
204.00	2.2625	0.7348	53.96	40.8	10.5	683.	51.23
212.00	1.5625	0.7120	56.10	28.6	7.2	489.	49.01
220.00	1.0250	0.8049	58.04	18.9	4.7	306.	60.66
228.00	0.8250	0.6667	57.66	12.5	3.3	296.	48.26
236.00	0.5875	0.7659	49.32	8.3	1.9	185.	45.06
244.00	0.3750	0.7333	59.57	5.9	1.3	116.	46.39
252.00	0.2875	0.7391	53.17	3.7	0.9	83.	46.36
260.00	0.2000	0.5625	53.15	3.3	0.6	70.	58.37
268.00	0.1375	0.8181	59.85	1.2	0.3	42.	55.87
276.00	0.0875	0.5713	33.29	0.9	0.2	6.	58.24
284.00	0.0250	0.4998	13.73	0.4	0.1	0.	0.00
292.00	0.0250	0.4998	55.91	0.2	0.0	0.	0.00
300.00	0.0250	0.4998	43.63	0.2	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 842. TOTAL=				67.0	32.3	IONZ/TOTAL=	0.3251

150keV Al 27 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
293.519	69.089	168.932	74.530	84.429	0.077	2.515	For ions
(nm)		120.459	71.156	55.296	0.390	2.590	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
6.00	0.5250	0.6667	84.80	312.8	311.4	2740.	30.66
18.00	0.9833	0.7881	77.91	336.3	318.7	3908.	29.16
30.00	1.2917	0.7677	80.48	346.7	323.7	4621.	29.16
42.00	1.5500	0.7419	90.81	380.1	325.6	5105.	31.53
54.00	1.8417	0.7783	96.24	416.8	325.7	4850.	39.86
66.00	2.6250	0.7111	90.47	447.0	322.3	5299.	48.46
78.00	2.8750	0.7275	79.78	454.8	316.9	6088.	49.30
90.00	2.8917	0.7781	86.51	451.3	304.8	6028.	51.26
102.00	3.4833	0.7560	87.69	460.5	291.1	6495.	55.22
114.00	3.8750	0.7269	88.01	459.8	271.5	6011.	54.65
126.00	4.1000	0.7785	85.90	453.3	253.4	6259.	60.69
138.00	4.3583	0.7533	85.22	433.6	231.1	5891.	62.40
150.00	4.6750	0.7255	85.29	393.5	206.1	5280.	64.15
162.00	4.8083	0.7106	87.57	381.6	182.0	5196.	67.79
174.00	4.7167	0.7526	85.32	337.5	159.4	4761.	66.36
186.00	4.9333	0.7416	85.44	307.1	134.5	4385.	71.63
198.00	4.8333	0.7569	84.31	268.0	110.8	3738.	73.99
210.00	4.3333	0.7442	83.80	233.6	93.1	3547.	69.56
222.00	4.0000	0.7479	83.71	195.3	74.2	2833.	69.62
234.00	3.5083	0.7292	82.24	158.1	57.3	2104.	70.87
246.00	3.2750	0.7099	83.01	125.7	43.5	1702.	69.38
258.00	2.5083	0.7674	79.11	94.5	31.4	1454.	65.31
270.00	2.2083	0.7132	79.38	72.2	22.8	1037.	67.08
282.00	1.8917	0.7445	77.17	50.3	15.8	621.	72.93
294.00	1.4500	0.7988	77.67	39.6	11.3	373.	67.70
306.00	1.0917	0.7786	70.46	25.0	7.1	299.	67.73
318.00	0.7417	0.6966	77.94	15.8	4.5	275.	64.25
330.00	0.5333	0.7656	70.98	9.9	2.7	130.	67.66
342.00	0.3583	0.8837	86.79	6.6	1.7	98.	63.24
354.00	0.1917	0.6087	74.28	4.0	1.0	31.	68.80
366.00	0.1500	0.7777	53.93	2.3	0.5	59.	59.81
378.00	0.0667	0.6249	69.71	1.0	0.2	41.	52.73
390.00	0.0500	0.6666	78.11	0.3	0.1	1.	56.77
402.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
414.00	0.0250	0.9997	69.92	0.2	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 1120. TOTAL=				92.1	57.1	IONZ/TOTAL=	0.3826

200keV Al 27 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
378.803	84.134	223.792	95.188	109.099	-0.006	2.505	For ions
(nm)		161.724	94.836	69.897	0.377	2.472	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.3661	0.6585	108.89	279.6	356.8	2081.	27.89
24.00	0.7500	0.7619	97.12	315.0	363.4	3032.	31.32
40.00	0.9107	0.7255	105.83	330.1	368.6	3627.	39.08
56.00	1.1607	0.6692	113.49	355.3	372.0	4316.	42.52
72.00	1.4911	0.7665	105.81	398.5	369.0	4894.	46.42
88.00	1.6875	0.7831	126.64	400.8	364.7	4723.	53.49
104.00	1.9821	0.7432	111.10	439.0	360.1	5043.	59.94
120.00	2.1875	0.7551	111.87	421.1	345.1	4972.	61.16
136.00	2.6518	0.7340	112.15	416.8	326.7	4740.	64.58
152.00	2.6339	0.7559	116.20	411.6	308.4	4711.	73.90
168.00	3.2946	0.7290	116.93	433.3	287.5	4927.	73.37
184.00	3.5982	0.7345	117.93	417.3	264.3	4812.	83.75
200.00	3.8661	0.7182	109.93	384.2	237.0	4435.	83.87
216.00	3.3304	0.7480	104.36	358.7	205.0	4110.	84.50
232.00	3.9554	0.7472	116.49	350.0	175.0	3921.	87.25
248.00	4.0536	0.7225	111.41	283.3	145.2	3700.	92.74
264.00	3.5893	0.7065	110.04	252.3	118.4	3208.	93.56
280.00	3.5357	0.7121	111.95	214.0	95.9	3023.	90.80
296.00	3.1161	0.7335	106.12	175.5	73.6	2590.	87.13
312.00	2.7143	0.7434	102.89	141.5	55.8	1798.	87.96
328.00	2.5089	0.7616	98.38	104.5	39.9	1254.	86.32
344.00	1.9554	0.7397	94.82	79.3	28.3	1103.	88.45
360.00	1.4375	0.7764	86.06	56.2	19.3	736.	90.09
376.00	1.3482	0.7417	103.43	41.0	12.9	654.	77.85
392.00	1.1696	0.5572	95.20	28.4	8.9	452.	81.30
408.00	0.5982	0.8209	96.84	16.9	5.1	218.	80.29
424.00	0.4464	0.6600	80.60	10.8	2.9	192.	89.90
440.00	0.2679	0.8000	94.34	5.6	1.6	115.	89.94
456.00	0.1250	0.7857	75.32	3.1	0.8	56.	108.24
472.00	0.0804	0.7777	87.35	1.6	0.3	45.	93.15
488.00	0.0625	0.7142	67.16	0.7	0.2	15.	112.20
504.00	0.0446	0.7998	84.36	0.3	0.0	7.	92.26
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7000, 1000 TIME: 1090. TOTAL=				114.0	85.0	IONZ/TOTAL=	0.4271

300keV Al 27 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
540.943	105.184	336.727	126.529	152.583	-0.223	2.597	For ions
(nm)		246.728	130.583	102.280	0.184	2.396	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	-- Damage keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
12.50	0.2000	0.7500	180.32	228.4	432.0	1455.	42.70
37.50	0.3800	0.7368	153.40	244.8	433.8	1852.	53.59
62.50	0.4000	0.7000	179.71	270.8	438.5	2420.	68.27
87.50	0.6500	0.8000	174.78	284.2	440.1	2712.	70.75
112.50	0.8200	0.7561	147.78	323.8	442.6	2740.	70.71
137.50	0.9000	0.8000	152.27	335.3	432.4	2883.	74.12
162.50	1.1800	0.7627	172.28	351.3	424.6	3858.	85.30
187.50	1.4500	0.7724	150.54	392.9	414.4	4177.	100.60
212.50	1.7600	0.7500	163.93	391.5	388.8	3964.	108.52
237.50	1.9800	0.7020	177.15	390.0	365.0	3921.	117.98
262.50	2.4600	0.7195	161.36	410.2	334.3	4060.	109.59
287.50	2.6300	0.7110	147.35	413.3	298.5	4297.	115.84
312.50	2.6100	0.7510	156.05	362.0	254.1	3748.	114.57
337.50	2.7700	0.7256	150.95	321.0	210.7	3360.	117.39
362.50	3.1400	0.7580	161.43	305.8	180.6	2960.	123.58
387.50	3.0800	0.7792	150.00	262.2	144.1	2928.	125.91
412.50	2.7200	0.7243	146.16	204.6	105.5	2225.	122.99
437.50	2.4500	0.7469	152.97	163.2	77.1	1704.	120.12
462.50	2.1800	0.7706	139.46	126.6	54.9	1302.	119.79
487.50	1.8800	0.7340	142.09	93.6	38.5	1226.	121.29
512.50	1.3900	0.7050	131.64	61.7	22.6	728.	121.54
537.50	1.0100	0.7228	127.46	36.0	12.7	454.	117.46
562.50	0.6700	0.7015	119.41	20.7	6.5	253.	115.73
587.50	0.4000	0.8000	108.81	9.8	3.1	77.	82.91
612.50	0.1800	0.6666	96.48	3.4	1.1	69.	124.72
637.50	0.0300	0.9997	111.37	1.9	0.6	38.	95.57
662.50	0.0500	0.7998	144.73	0.7	0.2	31.	128.50
687.50	0.0100	0.9990	87.68	0.4	0.1	12.	98.01
712.50	0.0100	0.9990	67.13	0.0	0.0	0.	0.00
737.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4000,	800	TIME: 928.	TOTAL=	150.3	148.9	IONZ/TOTAL=	0.4978

400keV Al 27 in GaAs 1500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
692.278	126.751	442.470	160.462	186.904	-0.306	2.675	For ions
(nm)		329.292	172.134	123.582	0.045	2.243	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
15.00	0.1619	0.9411	190.91	200.9	513.5	1222.	66.36
45.00	0.2286	0.7500	189.30	219.6	512.4	1552.	71.27
75.00	0.2857	0.8000	191.14	244.0	506.7	1862.	65.75
105.00	0.3714	0.6666	140.04	257.0	505.3	2111.	67.70
135.00	0.6000	0.6032	204.63	277.4	499.6	2214.	62.02
165.00	0.5619	0.6949	203.38	305.7	493.5	2275.	75.04
195.00	0.8190	0.7791	213.08	309.8	482.0	2303.	98.62
225.00	0.8286	0.7011	201.30	344.5	474.5	2816.	112.49
255.00	1.3714	0.7292	209.02	339.3	449.9	2668.	115.78
285.00	1.2095	0.6929	213.99	346.0	431.1	3106.	129.14
315.00	1.5238	0.7562	214.16	352.1	401.1	2998.	139.82
345.00	1.5333	0.7640	209.08	367.1	374.0	3254.	147.58
375.00	2.1333	0.7232	208.46	354.9	336.1	3350.	148.68
405.00	2.0000	0.7714	195.25	343.1	293.1	3064.	149.03
435.00	2.3048	0.6942	183.79	319.5	252.6	3187.	141.43
465.00	2.5619	0.7286	192.54	307.4	213.5	2870.	145.84
495.00	2.4286	0.7373	192.89	259.1	170.6	2644.	152.31
525.00	2.2571	0.6878	173.11	226.8	137.8	2276.	145.18
555.00	2.3238	0.7664	176.09	183.1	101.1	1898.	141.25
585.00	2.0095	0.7156	170.77	140.6	72.6	1440.	141.18
615.00	1.5524	0.7423	146.22	104.8	47.8	1054.	140.56
645.00	1.4762	0.7032	140.41	73.3	30.3	879.	129.62
675.00	0.9048	0.7368	169.28	45.4	17.6	513.	141.46
705.00	0.6095	0.7969	142.66	21.2	8.8	279.	153.72
735.00	0.3429	0.8333	129.78	13.6	5.0	139.	130.64
765.00	0.2952	0.6451	165.93	7.5	2.5	84.	137.13
795.00	0.1524	0.6875	68.62	3.7	1.0	61.	91.98
825.00	0.0476	0.3999	119.62	1.1	0.4	27.	132.75
855.00	0.0190	0.4998	177.97	0.2	0.1	6.	210.71
885.00	0.0095	0.0000	1.00	0.1	0.0	0.	0.00
915.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
945.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
975.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1005.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1035.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1065.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1095.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1125.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1155.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1185.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1215.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1245.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1275.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 3500,	500	TIME: 848.	TOTAL=	179.1	220.0	IONZ/TOTAL=	0.5513

10keV Si 28 in GaAs 60.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
29.180	9.268	13.991	8.103	8.717	0.680	3.202	For ions
(nm)		9.788	6.933	5.318	0.971	3.791	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.60	9.9167	0.7395	7.87	394.6	98.7	2793.	3.89
1.80	21.4167	0.7354	7.98	488.8	105.1	4966.	3.85
3.00	27.3333	0.7469	7.88	487.7	106.0	6178.	3.93
4.20	34.7500	0.7458	8.08	511.9	106.6	7218.	4.23
5.40	34.0000	0.6740	7.49	520.6	104.6	7627.	4.41
6.60	38.9167	0.7345	7.94	508.1	101.1	7931.	4.70
7.80	45.0000	0.7278	7.63	473.9	94.0	7610.	5.11
9.00	43.6667	0.7137	7.90	451.4	85.7	7070.	5.49
10.20	45.3333	0.7426	8.67	422.0	78.6	6735.	5.51
11.40	45.0833	0.7227	8.20	371.7	69.7	6068.	6.15
12.60	41.3333	0.7177	8.61	341.1	62.7	5574.	6.50
13.80	43.0000	0.7364	9.26	296.1	54.1	5102.	6.59
15.00	40.2500	0.7143	8.73	262.2	47.6	4702.	6.86
16.20	38.5000	0.7532	9.20	231.3	40.4	3901.	7.08
17.40	34.7500	0.7482	9.01	198.6	34.0	3366.	7.47
18.60	29.5833	0.7380	8.70	160.9	28.5	2741.	7.66
19.80	27.0000	0.7315	8.84	132.2	23.5	2236.	7.37
21.00	24.7500	0.7205	9.56	116.7	19.8	1859.	7.54
22.20	19.5833	0.7234	9.95	97.2	16.1	1738.	7.64
23.40	17.4167	0.6746	9.20	81.0	12.9	1372.	8.19
24.60	18.5000	0.7883	10.37	62.4	10.4	1150.	8.13
25.80	15.5833	0.7273	9.51	52.5	8.4	949.	8.65
27.00	10.4167	0.8000	10.46	40.0	6.5	759.	8.81
28.20	10.4167	0.7040	10.00	31.0	5.1	597.	8.97
29.40	8.3333	0.7000	9.82	22.7	3.8	467.	9.34
30.60	6.0000	0.8333	8.99	21.0	3.1	314.	8.82
31.80	7.2500	0.7356	9.70	16.2	2.3	266.	9.17
33.00	4.5833	0.8182	9.75	11.9	1.7	227.	10.35
34.20	3.4167	0.6829	9.44	9.5	1.3	181.	10.63
35.40	2.1667	0.7692	10.12	6.3	1.0	106.	10.02
36.60	2.6667	0.6562	9.86	5.0	0.7	60.	9.14
37.80	1.6667	0.8500	10.96	2.9	0.5	42.	13.80
39.00	1.0833	0.6153	13.21	2.6	0.4	41.	13.69
40.20	1.2500	0.6000	11.12	1.9	0.3	23.	10.23
41.40	0.2500	0.3332	12.45	1.1	0.1	15.	6.30
42.60	0.2500	0.9997	7.58	0.3	0.1	14.	6.96
43.80	0.2500	0.6664	10.79	0.6	0.1	8.	9.02
45.00	0.1667	0.4998	9.90	0.2	0.0	7.	9.24
46.20	0.2500	0.3332	12.63	0.4	0.0	2.	8.30
47.40	0.1667	0.9995	8.06	0.1	0.0	2.	0.00
48.60	0.0833	0.0000	5.30	0.1	0.0	0.	0.00
49.80	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
51.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
52.20	0.0833	0.9990	4.12	0.0	0.0	0.	0.00
53.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
54.60	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
55.80	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
57.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
58.20	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
59.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

25keV Si 28 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
58.219	17.741	29.404	16.273	16.963	0.541	2.981	For ions
(nm)		20.494	13.930	10.518	0.900	3.710	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.00	4.0000	0.7000	16.62	413.6	153.1	2978.	7.47
3.00	8.6000	0.6977	15.29	520.2	160.7	5224.	7.64
5.00	10.6500	0.7653	13.85	552.6	164.9	6464.	7.52
7.00	15.1000	0.6821	15.75	549.9	165.6	7564.	8.74
9.00	15.5500	0.7010	15.51	572.9	165.4	8160.	8.86
11.00	17.8500	0.7199	15.54	575.6	160.8	8251.	8.67
13.00	17.0000	0.7088	15.53	557.7	156.1	8955.	9.30
15.00	18.7000	0.6845	16.23	553.0	149.9	8507.	10.04
17.00	19.5000	0.6667	16.92	517.2	141.8	8517.	10.00
19.00	22.0000	0.7409	15.70	516.0	133.0	8219.	10.47
21.00	19.8000	0.7020	16.49	485.3	123.6	7878.	11.46
23.00	21.6000	0.7083	15.88	449.2	113.8	7554.	11.38
25.00	21.4500	0.7110	17.36	397.4	102.7	6378.	12.07
27.00	21.3500	0.7237	17.13	397.3	94.3	6050.	12.42
29.00	21.5500	0.7355	17.51	358.8	85.5	5691.	12.84
31.00	20.6000	0.7282	18.18	317.8	74.9	5095.	13.15
33.00	18.4500	0.7344	17.40	286.3	66.3	4809.	12.98
35.00	18.8000	0.7154	17.16	263.7	58.1	4058.	13.22
37.00	18.0500	0.7230	17.52	235.6	51.4	3519.	13.78
39.00	15.8000	0.7373	17.30	195.5	44.2	3254.	14.34
41.00	16.8500	0.7300	18.17	181.2	38.1	2939.	14.83
43.00	14.3500	0.7282	18.22	148.7	32.3	2398.	15.80
45.00	13.0500	0.6552	17.66	123.8	26.4	1911.	14.31
47.00	10.2000	0.7549	17.59	106.8	22.5	1667.	14.29
49.00	9.4000	0.7128	15.90	89.9	18.3	1474.	16.02
51.00	8.6500	0.6590	18.63	79.4	15.6	1293.	16.52
53.00	8.2500	0.7515	18.10	67.9	12.6	1069.	15.52
55.00	6.3000	0.6508	17.75	52.8	9.7	833.	14.88
57.00	5.5500	0.7838	17.86	38.1	7.6	555.	15.96
59.00	4.2500	0.7059	21.15	31.4	6.5	433.	18.86
61.00	4.1000	0.7927	17.77	28.2	5.1	359.	19.01
63.00	3.6000	0.7083	18.72	20.3	3.8	284.	17.14
65.00	2.8000	0.6250	17.44	15.4	3.0	246.	17.21
67.00	1.9500	0.7949	16.51	11.6	2.2	189.	14.17
69.00	1.9000	0.7631	19.22	9.4	1.8	130.	18.11
71.00	1.1500	0.6087	19.51	7.1	1.4	109.	17.10
73.00	1.2000	0.7916	18.71	5.6	1.2	74.	19.62
75.00	0.7000	0.5714	20.12	4.0	0.7	57.	20.48
77.00	0.8000	0.8124	15.80	3.8	0.6	91.	20.20
79.00	0.8000	0.7500	21.33	2.3	0.4	76.	15.57
81.00	0.2500	0.7998	16.68	1.6	0.3	54.	12.09
83.00	0.4000	0.7499	18.95	1.3	0.2	25.	10.44
85.00	0.2000	0.4999	9.84	0.7	0.2	33.	10.76
87.00	0.1000	0.9995	3.75	0.5	0.1	11.	20.69
89.00	0.1500	0.9997	19.61	0.3	0.1	12.	26.61
91.00	0.1500	0.0000	26.76	0.4	0.1	13.	29.48
93.00	0.1000	0.9995	11.77	0.1	0.0	5.	18.39
95.00	0.0000	0.0000	0.00	0.2	0.0	1.	19.16
97.00	0.0500	0.0000	12.50	0.2	0.0	0.	0.00
99.00	0.0500	0.9990	7.39	0.1	0.0	0.	0.00
IONS:10000, 1230 TIME: 130. TOTAL=				19.5	5.2	IONZ/TOTAL=	0.2091

50keV Si 28 in GaAs 200.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
101.531	28.767	53.664	27.804	29.781	0.365	2.722	For ions
(nm)		37.796	24.582	18.423	0.730	3.272	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
2.00	2.4250	0.7629	23.77	418.4	213.4	3285.	12.45
6.00	5.4750	0.6941	28.56	508.4	223.1	5645.	12.05
10.00	5.7000	0.7588	27.81	522.5	226.9	6912.	11.82
14.00	6.7750	0.6974	27.26	532.3	227.5	7374.	12.26
18.00	7.5750	0.7228	28.19	572.9	226.1	8404.	15.40
22.00	9.2250	0.7398	28.70	587.9	220.5	8685.	16.03
26.00	8.9000	0.7135	28.32	577.5	214.5	8288.	15.35
30.00	11.5250	0.7549	29.11	548.4	204.1	8514.	16.24
34.00	11.1250	0.6809	30.23	535.8	191.7	8552.	16.74
38.00	12.4000	0.7278	29.62	534.3	178.4	7569.	18.53
42.00	12.1750	0.7331	29.20	490.1	161.6	7342.	20.64
46.00	12.5250	0.7345	30.72	470.6	147.3	7247.	22.93
50.00	12.7250	0.7191	29.70	415.1	129.8	6628.	23.30
54.00	12.3000	0.7073	30.45	390.1	113.8	6259.	24.71
58.00	12.2750	0.7250	30.02	340.2	98.5	5628.	22.65
62.00	11.6250	0.7097	30.60	298.1	84.5	4719.	23.94
66.00	10.4750	0.7112	29.38	246.0	71.5	3919.	25.03
70.00	10.4500	0.7273	31.44	219.6	61.4	3611.	26.10
74.00	10.1000	0.7129	30.56	190.6	50.8	2681.	26.12
78.00	7.8750	0.7556	30.68	159.2	41.5	2464.	25.53
82.00	8.1500	0.7117	28.24	129.4	33.4	1949.	25.16
86.00	6.6500	0.7368	29.93	108.6	26.6	1725.	26.47
90.00	5.3500	0.7056	31.65	81.3	21.0	1273.	23.89
94.00	5.3000	0.6887	30.58	68.1	15.6	1124.	24.37
98.00	4.0250	0.7329	31.96	54.4	12.2	883.	22.00
102.00	3.0750	0.6179	29.61	37.0	8.9	519.	21.76
106.00	2.7500	0.6909	35.89	31.2	6.6	340.	23.05
110.00	1.8750	0.6800	34.31	21.0	4.7	306.	22.10
114.00	1.6250	0.7077	30.23	16.5	3.4	217.	22.40
118.00	1.0000	0.7000	23.72	10.6	2.3	156.	18.00
122.00	0.9000	0.8333	24.52	8.4	1.9	117.	25.18
126.00	0.6750	0.8518	26.63	6.1	1.4	32.	28.72
130.00	0.6000	0.7500	33.87	5.0	1.0	116.	36.59
134.00	0.2500	0.6999	36.72	3.1	0.6	70.	28.08
138.00	0.3250	0.6923	32.44	1.9	0.4	93.	24.31
142.00	0.1250	0.7998	22.09	1.1	0.2	42.	22.17
146.00	0.0750	0.6664	38.03	0.7	0.1	1.	27.70
150.00	0.1000	0.9998	19.21	0.4	0.0	0.	0.00
154.00	0.0500	0.9995	20.14	0.1	0.0	0.	0.00
158.00	0.0500	0.9995	15.89	0.2	0.0	0.	0.00
162.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
166.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
170.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
174.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
178.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
182.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
186.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
194.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
198.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	647	TIME:	237.	TOTAL=	36.6	12.9	IONZ/TOTAL= 0.2609

75keV Si 28 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
142.167	39.017	77.567	38.782	41.552	0.289	2.568	For ions
(nm)		52.665	34.075	26.804	0.655	3.097	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	1.6167	0.7938	42.77	406.7	257.9	3888.	17.69
9.00	2.6000	0.7179	37.08	455.7	266.6	6065.	15.57
15.00	4.1500	0.7630	37.96	486.7	271.8	7161.	18.62
21.00	4.8833	0.7543	40.21	551.6	275.8	7916.	16.08
27.00	5.6500	0.7316	38.48	577.2	274.2	7858.	18.68
33.00	6.7833	0.7371	40.39	562.2	268.7	8237.	20.66
39.00	7.0000	0.7333	42.62	562.9	257.3	8389.	24.57
45.00	7.1667	0.7023	40.59	540.2	243.4	8603.	26.99
51.00	7.6333	0.7576	40.40	527.3	227.5	7828.	25.80
57.00	8.7000	0.7318	42.22	519.9	208.9	7615.	27.15
63.00	8.7667	0.7281	41.83	494.3	189.7	7283.	32.03
69.00	9.0833	0.7450	42.55	455.3	169.7	6686.	33.26
75.00	9.4667	0.7570	40.81	412.8	149.1	6385.	33.12
81.00	9.0500	0.7274	43.32	364.5	128.0	5905.	32.45
87.00	9.0667	0.7004	41.47	315.6	109.2	4665.	34.38
93.00	7.8500	0.7006	42.41	277.5	91.9	3894.	37.62
99.00	7.5000	0.6956	43.88	238.5	76.3	3277.	39.54
105.00	7.0333	0.7133	42.71	204.5	62.7	2721.	37.62
111.00	6.3167	0.7599	42.46	163.6	50.5	2502.	36.93
117.00	5.5000	0.7030	43.25	137.1	40.9	2131.	40.99
123.00	4.8333	0.6965	43.67	103.5	30.1	1266.	47.39
129.00	3.9000	0.7222	41.05	81.2	22.7	969.	39.86
135.00	3.7000	0.7072	39.40	66.1	17.6	842.	39.98
141.00	3.6000	0.7176	42.20	54.3	13.2	594.	30.76
147.00	2.1667	0.7461	41.05	40.0	9.3	387.	35.77
153.00	1.6500	0.7273	40.19	24.6	6.1	270.	44.69
159.00	1.3833	0.6626	41.01	17.7	4.1	175.	31.78
165.00	0.8667	0.8077	36.12	12.1	2.6	138.	29.68
171.00	0.8000	0.7500	33.76	7.8	1.7	53.	20.19
177.00	0.3500	0.5714	39.02	3.8	1.0	107.	21.96
183.00	0.2500	0.7333	39.40	2.5	0.6	26.	21.98
189.00	0.1500	0.6666	45.85	1.8	0.4	57.	18.76
195.00	0.1333	0.4999	36.35	1.4	0.2	36.	10.68
201.00	0.1167	0.7142	42.21	0.9	0.1	13.	7.08
207.00	0.0500	0.6664	27.51	0.2	0.0	23.	9.16
213.00	0.0000	0.0000	0.00	0.1	0.0	3.	10.76
219.00	0.0333	0.4998	53.83	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	439	TIME:	337.	TOTAL=	52.0	22.4	IONZ/TOTAL= 0.3007

100keV Si 28 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
182.540	46.690	102.964	48.174	52.272	0.160	2.521	For ions
(nm)		74.459	45.399	34.029	0.541	2.880	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
4.00	1.1750	0.6915	49.47	380.9	297.1	3343.	13.29
12.00	1.9625	0.7388	49.49	447.0	304.9	5025.	21.37
20.00	2.4500	0.7143	49.37	461.9	309.4	5157.	22.45
28.00	3.1750	0.7677	47.58	489.2	310.8	6397.	22.14
36.00	3.9000	0.7404	51.93	506.1	308.9	7526.	22.41
44.00	4.5375	0.7438	54.55	550.6	301.8	7430.	28.27
52.00	4.6625	0.7078	51.37	527.4	287.7	7623.	31.89
60.00	5.7875	0.6955	53.76	523.9	276.1	7361.	36.55
68.00	6.2125	0.7264	52.56	530.5	259.8	8197.	37.09
76.00	6.4375	0.6990	56.24	503.0	236.4	7674.	35.00
84.00	7.2000	0.7135	53.68	469.8	216.9	6935.	37.21
92.00	7.0000	0.7089	53.34	442.0	194.1	6125.	39.80
100.00	7.1250	0.6789	53.69	412.0	167.8	7002.	43.88
108.00	7.5625	0.7058	53.11	373.0	143.4	6026.	44.44
116.00	7.4875	0.7212	52.91	334.8	122.1	4971.	40.43
124.00	6.9375	0.7405	53.34	279.9	101.8	4142.	42.28
132.00	6.5875	0.7287	53.62	234.9	81.9	3429.	41.28
140.00	5.6250	0.7156	51.41	188.4	63.6	2439.	35.84
148.00	4.7250	0.7434	51.02	153.4	50.0	2146.	40.16
156.00	4.4500	0.6994	51.28	126.4	38.8	2016.	45.49
164.00	3.7625	0.7110	46.03	99.3	28.3	1788.	38.84
172.00	2.9875	0.7531	49.78	71.7	20.7	1089.	37.17
180.00	2.5750	0.7233	48.88	55.0	14.0	848.	42.15
188.00	2.1875	0.7600	47.55	31.9	8.7	498.	50.76
196.00	1.3625	0.7798	50.28	22.7	6.0	535.	63.31
204.00	0.8750	0.7143	50.83	15.4	3.9	337.	58.79
212.00	0.7000	0.7857	50.48	9.5	2.3	324.	57.53
220.00	0.4125	0.6969	57.59	5.5	1.4	168.	95.75
228.00	0.2625	0.8095	56.15	3.9	0.9	99.	104.60
236.00	0.2000	0.6250	44.72	2.0	0.4	57.	22.08
244.00	0.1250	0.7999	47.58	1.1	0.2	20.	18.93
252.00	0.0500	0.2499	12.66	0.2	0.1	0.	0.00
260.00	0.0125	0.9990	32.82	0.1	0.0	0.	0.00
268.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
276.00	0.0125	0.9990	17.33	0.0	0.0	0.	0.00
284.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	332	TIME: 432.	TOTAL=	66.0	33.3	IONZ/TOTAL=	0.3351

150keV Si 28 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
260.115	61.944	152.878	67.249	74.411	0.038	2.496	For ions
(nm)		103.919	62.083	49.334	0.426	2.589	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
6.00	0.6250	0.6933	83.23	351.6	360.4	3205.	21.56
18.00	1.2417	0.7114	64.80	389.2	366.8	4360.	28.72
30.00	1.4917	0.7821	72.56	404.6	370.4	5720.	27.01
42.00	1.9250	0.6840	70.45	432.5	371.5	5995.	25.92
54.00	2.5500	0.7059	74.12	467.0	366.9	6230.	36.99
66.00	2.8333	0.6971	75.68	487.0	361.6	6940.	51.03
78.00	3.1917	0.6919	78.87	489.6	349.7	7209.	51.92
90.00	3.5583	0.7190	78.02	503.9	336.7	7542.	49.89
102.00	4.0833	0.7122	76.09	497.7	313.2	6625.	49.78
114.00	4.7667	0.7150	76.25	492.5	287.4	7020.	48.89
126.00	4.9250	0.6904	79.70	463.5	254.2	5861.	52.34
138.00	5.0750	0.7734	79.07	444.1	225.8	6257.	55.22
150.00	5.1667	0.7129	73.99	393.8	194.6	6056.	61.24
162.00	5.3667	0.7034	77.03	358.0	164.6	4680.	64.41
174.00	5.4417	0.7060	73.95	303.9	134.1	3788.	62.97
186.00	4.9750	0.7102	75.16	256.9	110.9	3132.	67.43
198.00	4.6667	0.7339	71.16	223.1	86.7	2445.	58.53
210.00	4.2083	0.7327	71.80	175.3	66.2	2508.	73.62
222.00	3.8083	0.7287	73.19	135.5	47.9	1733.	58.61
234.00	2.9083	0.7249	72.08	96.1	33.8	1068.	69.22
246.00	2.2917	0.7200	69.67	69.7	23.7	779.	75.18
258.00	1.8583	0.6906	68.55	48.9	16.0	636.	60.01
270.00	1.6417	0.6954	65.11	35.7	10.4	255.	76.52
282.00	0.8750	0.7048	71.00	22.4	6.3	310.	51.65
294.00	0.6417	0.7143	58.12	13.0	3.5	231.	44.20
306.00	0.4333	0.7692	59.03	7.9	2.0	72.	7.98
318.00	0.2333	0.7143	69.55	3.5	0.8	0.	0.00
330.00	0.1833	0.6818	59.39	2.0	0.4	0.	0.00
342.00	0.0250	0.6664	27.59	0.6	0.1	0.	0.00
354.00	0.0083	0.0000	16.42	0.3	0.1	0.	0.00
366.00	0.0083	0.9990	69.20	0.1	0.1	0.	0.00
378.00	0.0167	0.9995	34.01	0.1	0.0	0.	0.00
390.00	0.0083	0.9990	49.03	0.0	0.0	0.	0.00
402.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	258	TIME: 615.	TOTAL=	90.8	58.4	IONZ/TOTAL=	0.3913

200keV Si 28 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
333.174	75.159	200.451	84.692	94.442	-0.036	2.485	For ions
(nm)		148.466	85.378	59.244	0.297	2.421	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	-- Damage keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.5063	0.7160	89.51	328.0	414.0	2448.	19.00
24.00	0.7313	0.7949	94.55	344.3	421.0	3490.	32.86
40.00	1.0313	0.7455	89.64	385.1	423.5	3906.	21.12
56.00	1.4938	0.7322	92.53	416.8	423.3	3914.	20.70
72.00	1.6313	0.7395	91.71	438.6	419.9	4487.	29.52
88.00	2.2500	0.7250	92.11	454.5	409.1	5287.	51.86
104.00	2.6313	0.7720	95.13	486.7	399.0	5518.	46.62
120.00	2.7063	0.7067	102.40	475.2	373.9	4982.	59.14
136.00	3.3250	0.7274	96.77	478.3	346.7	5266.	68.88
152.00	3.4813	0.7074	98.25	461.7	317.7	5306.	68.76
168.00	3.7375	0.7609	96.04	441.6	284.5	4789.	62.15
184.00	3.9563	0.7156	101.05	406.8	250.6	4891.	61.93
200.00	4.1125	0.6900	97.58	377.3	214.9	4552.	69.43
216.00	4.3438	0.6935	98.86	338.0	178.1	3832.	75.04
232.00	4.2875	0.7216	97.12	298.8	145.6	4499.	76.88
248.00	4.0750	0.7347	95.06	244.0	113.2	3298.	74.22
264.00	3.8563	0.7634	92.02	205.4	85.5	2858.	80.34
280.00	3.2688	0.7304	93.49	154.3	61.7	2231.	92.35
296.00	2.6813	0.7156	87.55	109.6	42.0	1892.	79.33
312.00	2.0625	0.6758	83.87	76.5	28.6	1098.	83.21
328.00	1.6063	0.6731	82.31	51.2	17.9	626.	89.00
344.00	1.1250	0.6500	83.38	32.4	10.9	378.	95.39
360.00	0.8250	0.7348	82.61	19.8	6.2	431.	58.29
376.00	0.5625	0.7222	75.49	12.8	3.9	275.	32.28
392.00	0.3375	0.7037	86.39	6.5	1.7	163.	20.74
408.00	0.1500	0.6666	82.33	3.2	0.8	82.	37.95
424.00	0.0813	0.6923	72.12	1.4	0.3	28.	40.28
440.00	0.0438	0.2857	72.78	0.3	0.1	0.	0.00
456.00	0.0125	0.9995	96.01	0.1	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	211	TIME:	785.	TOTAL=	112.8	86.3	IONZ/TOTAL= 0.4335

300keV Si 28 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
474.365	94.662	298.691	114.789	130.731	-0.234	2.550	For ions
(nm)		229.935	114.370	95.088	-0.068	2.260	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
10.00	0.2838	0.9285	131.42	237.7	496.8	1271.	32.60
30.00	0.3716	0.8545	129.00	277.9	503.1	1800.	24.40
50.00	0.4527	0.7463	138.44	297.7	506.6	3031.	21.84
70.00	0.6419	0.7474	148.53	353.4	512.1	2420.	22.18
90.00	0.9662	0.6993	131.17	358.0	505.9	2573.	26.40
110.00	1.2703	0.7181	133.53	381.7	501.4	2262.	77.04
130.00	1.2568	0.7097	155.27	394.6	494.0	2849.	109.40
150.00	1.3108	0.7526	147.71	436.7	482.6	3148.	105.13
170.00	1.6284	0.7054	136.28	415.7	456.1	3012.	95.85
190.00	1.8378	0.7059	139.50	440.5	433.5	3443.	93.68
210.00	2.1892	0.7346	140.73	416.3	405.7	4438.	103.73
230.00	2.3784	0.7017	138.67	433.0	379.4	4270.	95.87
250.00	2.9054	0.7302	135.98	423.0	339.1	3879.	98.19
270.00	2.9865	0.6833	135.11	407.2	299.4	4553.	85.17
290.00	2.9797	0.7143	132.95	380.0	266.8	4701.	96.73
310.00	3.3041	0.7505	135.04	348.6	226.1	4045.	107.71
330.00	3.4662	0.7271	124.42	312.9	188.4	4758.	116.51
350.00	3.1149	0.7592	131.66	272.6	151.9	3391.	99.60
370.00	3.2838	0.7407	121.97	227.4	121.0	1960.	128.83
390.00	2.8176	0.7314	126.92	181.0	89.1	2431.	149.46
410.00	2.6892	0.7638	124.07	142.9	63.5	1731.	121.04
430.00	1.8919	0.7429	118.56	106.4	46.1	1004.	123.25
450.00	1.7500	0.7220	112.41	73.6	30.3	1152.	111.51
470.00	1.3716	0.6749	114.27	45.7	17.6	365.	136.27
490.00	0.9054	0.7388	109.75	31.0	10.8	250.	95.71
510.00	0.5541	0.6219	109.00	16.5	5.6	63.	52.23
530.00	0.4054	0.7167	104.75	8.3	2.6	51.	55.01
550.00	0.1486	0.5454	104.05	4.1	1.1	55.	72.62
570.00	0.0878	0.5384	71.78	1.7	0.5	0.	0.00
590.00	0.0541	0.8749	76.67	0.9	0.2	0.	0.00
610.00	0.0000	0.0000	0.00	0.1	0.1	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0135	0.4998	145.67	0.2	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7400,	115	TIME: 826.	TOTAL=	148.5	150.7	IONZ/TOTAL=	0.5037

400keV Si 28 in GaAs 1250.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
602.963	110.889	386.594	141.537	166.833	-0.278	2.596	For ions
(nm)		284.601	144.876	127.907	0.063	2.441	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	-- Damage keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
12.50	0.1357	0.7368	160.42	224.0	588.0	792.	5.92
37.50	0.3214	0.6889	170.46	236.9	587.4	1811.	104.50
62.50	0.2571	0.7500	177.66	294.2	585.8	2389.	126.01
87.50	0.4429	0.7903	199.73	313.7	583.3	2068.	63.01
112.50	0.5929	0.6747	154.78	305.1	578.1	2861.	100.21
137.50	0.7214	0.7327	177.19	330.7	574.1	2720.	47.73
162.50	0.8429	0.7458	163.10	376.6	569.9	2954.	75.71
187.50	1.1000	0.7208	202.53	382.1	546.8	1745.	45.64
212.50	1.3071	0.7760	178.64	409.0	538.6	2574.	91.94
237.50	1.4071	0.6700	184.99	397.7	508.1	3281.	98.60
262.50	1.6714	0.6923	191.90	424.3	477.4	4095.	140.90
287.50	1.7643	0.7368	186.87	401.2	443.3	3807.	155.33
312.50	1.9571	0.7372	176.17	408.5	400.3	4471.	162.52
337.50	2.3000	0.7050	178.38	385.8	358.6	3750.	116.97
362.50	2.6000	0.7363	180.10	377.8	320.9	3559.	150.78
387.50	2.4857	0.7385	167.90	362.5	272.6	3522.	157.29
412.50	2.8500	0.7268	169.58	324.7	229.3	4869.	160.45
437.50	2.7429	0.7031	163.34	281.0	184.6	2366.	175.00
462.50	2.5786	0.7008	162.39	242.8	148.1	2029.	149.52
487.50	2.4571	0.7093	148.18	185.9	106.9	1202.	162.06
512.50	2.2286	0.7564	141.17	151.7	81.2	1108.	158.53
537.50	1.8929	0.6906	150.51	117.0	55.8	939.	111.18
562.50	1.5357	0.6698	144.10	81.8	38.0	537.	139.56
587.50	1.2429	0.7586	142.61	54.7	22.7	528.	138.09
612.50	0.6929	0.7629	140.36	30.3	13.1	412.	95.88
637.50	0.6429	0.6667	125.50	21.1	7.7	96.	120.02
662.50	0.3714	0.6346	119.67	11.4	3.6	331.	107.75
687.50	0.2143	0.7333	98.41	5.2	1.5	147.	138.44
712.50	0.0857	0.6666	114.16	1.8	0.5	0.	0.00
737.50	0.0143	0.9995	120.00	0.3	0.1	0.	0.00
762.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
787.50	0.0071	0.9990	9.04	0.1	0.0	0.	0.00
812.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
837.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
862.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
887.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
912.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
937.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
962.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
987.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1012.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1037.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1062.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1087.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1112.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1137.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1162.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1187.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1212.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
1237.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5600,	70	TIME: 793.	TOTAL=	178.5	220.7	IONZ/TOTAL=	0.5528

10keV P 31 in GaAs 50.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
25.308	8.125	12.981	7.339	7.458	0.609	3.116	For ions
(nm)		8.942	6.240	4.419	0.900	3.607	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.50	9.8000	0.6939	6.88	401.4	133.0	2606.	3.21
1.50	23.4000	0.6581	6.40	523.4	140.5	4798.	3.25
2.50	27.4000	0.6423	6.38	545.1	142.0	6204.	3.48
3.50	34.4000	0.6715	6.13	543.6	140.7	7193.	3.59
4.50	35.4000	0.7034	6.94	531.5	137.3	7639.	3.81
5.50	42.8000	0.6729	6.88	549.3	133.1	7863.	4.00
6.50	42.4000	0.6250	7.14	515.2	126.6	7960.	4.08
7.50	42.7000	0.6698	6.90	493.1	118.1	7738.	4.20
8.50	49.8000	0.6707	6.92	457.1	108.7	7265.	4.55
9.50	44.4000	0.7365	7.29	416.7	99.8	7013.	4.74
10.50	50.2000	0.7052	7.20	398.0	90.7	6391.	4.92
11.50	48.7000	0.6756	6.53	360.7	82.1	6130.	5.43
12.50	47.7000	0.6709	7.33	324.4	73.1	5557.	5.68
13.50	46.1000	0.6247	7.66	288.3	65.1	5114.	6.03
14.50	43.0000	0.6837	7.72	250.2	56.1	4531.	5.97
15.50	41.3000	0.6538	7.85	230.3	48.6	4041.	6.01
16.50	35.9000	0.6992	7.69	197.0	41.1	3556.	6.60
17.50	36.6000	0.6831	8.57	163.9	34.8	3071.	6.84
18.50	31.2000	0.6250	8.08	143.8	29.5	2565.	7.15
19.50	29.2000	0.6952	8.37	115.4	24.2	2166.	7.18
20.50	26.2000	0.6756	8.52	99.3	20.4	1845.	6.99
21.50	20.3000	0.6749	7.45	79.4	16.4	1499.	6.91
22.50	19.6000	0.6531	8.62	64.5	12.8	1313.	6.94
23.50	16.3000	0.7239	7.62	50.4	10.3	1048.	7.20
24.50	14.4000	0.6597	9.21	45.9	8.5	810.	7.65
25.50	10.5000	0.6952	8.79	31.7	6.7	633.	7.60
26.50	11.1000	0.6937	7.54	26.9	5.3	507.	7.54
27.50	7.5000	0.6667	7.73	20.4	4.0	416.	7.59
28.50	6.2000	0.5968	9.08	16.3	3.3	302.	7.97
29.50	5.3000	0.6038	8.54	11.8	2.5	236.	7.44
30.50	4.4000	0.6818	7.68	9.1	1.9	169.	7.56
31.50	3.8000	0.7631	8.52	7.6	1.4	111.	8.04
32.50	2.9000	0.7241	7.84	6.2	1.1	90.	7.77
33.50	2.8000	0.6071	9.00	4.5	0.8	65.	9.50
34.50	2.1000	0.7143	6.62	2.9	0.5	47.	7.20
35.50	1.3000	0.6923	5.56	2.4	0.4	20.	9.27
36.50	1.1000	0.8181	10.19	1.5	0.3	11.	7.88
37.50	0.7000	0.8570	8.16	0.7	0.2	16.	5.03
38.50	0.4000	0.7498	5.96	0.5	0.1	10.	6.33
39.50	0.2000	0.9995	2.38	0.3	0.1	6.	7.06
40.50	0.0000	0.0000	0.00	0.2	0.1	1.	7.60
41.50	0.3000	0.6664	3.53	0.5	0.1	1.	6.35
42.50	0.0000	0.0000	0.00	0.1	0.0	2.	5.32
43.50	0.2000	0.4998	6.26	0.1	0.0	4.	5.55
44.50	0.1000	0.9990	14.88	0.0	0.0	1.	8.43
45.50	0.0000	0.0000	0.00	0.0	0.0	3.	3.94
46.50	0.1000	0.9990	3.30	0.0	0.0	1.	2.92
47.50	0.0000	0.0000	0.00	0.0	0.0	1.	3.69
48.50	0.0000	0.0000	0.00	0.0	0.0	0.	3.83
49.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2683 TIME: 184. TOTAL=				7.9	1.9	IONZ/TOTAL=	0.1951

25keV P 31 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
49.672	15.093	26.355	14.066	14.809	0.461	2.812	For ions
(nm)		17.861	12.154	8.850	0.848	3.523	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.00	4.8500	0.6392	12.39	480.3	207.3	3445.	4.99
3.00	8.8000	0.6648	13.27	555.0	216.2	5680.	5.36
5.00	12.3000	0.6463	12.25	552.5	217.3	7141.	6.24
7.00	16.3500	0.6697	13.17	631.9	218.3	8607.	6.70
9.00	18.0500	0.6870	14.09	609.9	216.3	8903.	7.10
11.00	19.8000	0.6641	13.15	605.4	209.8	9352.	8.06
13.00	20.7000	0.6739	13.17	621.3	200.3	9475.	8.43
15.00	21.2500	0.6353	14.05	580.5	190.0	8933.	8.36
17.00	24.1500	0.6667	13.72	549.2	176.7	8620.	8.89
19.00	24.7500	0.6727	14.12	525.9	162.1	8539.	9.15
21.00	26.6000	0.6861	14.93	492.5	148.7	8289.	9.94
23.00	26.3000	0.6882	14.38	448.1	132.3	7250.	10.23
25.00	25.2000	0.6806	14.93	403.9	118.0	6647.	10.78
27.00	22.2000	0.7162	15.32	359.4	104.0	6017.	10.45
29.00	21.7000	0.6866	14.92	323.1	89.5	5331.	11.01
31.00	22.7500	0.7099	15.89	283.5	77.9	4608.	11.89
33.00	22.1500	0.6930	15.90	242.0	66.0	3677.	12.78
35.00	18.9500	0.6359	16.16	211.4	55.3	3099.	13.01
37.00	16.9500	0.7109	15.00	162.5	44.5	2641.	13.68
39.00	15.0500	0.6711	15.83	143.9	37.3	2372.	13.29
41.00	14.7500	0.7288	15.96	129.2	31.0	2046.	13.40
43.00	12.1000	0.6942	14.92	103.3	24.6	1634.	13.27
45.00	11.9000	0.6429	16.84	79.7	19.6	1263.	14.94
47.00	8.8000	0.7557	16.43	65.0	15.6	1131.	15.87
49.00	7.4000	0.6554	14.74	51.3	11.5	833.	15.99
51.00	7.1000	0.6268	17.35	37.7	8.6	658.	16.68
53.00	4.9500	0.6970	15.76	28.3	6.6	439.	17.71
55.00	4.0500	0.5802	17.77	20.8	4.9	333.	18.16
57.00	3.0500	0.5902	17.61	18.3	3.6	218.	16.49
59.00	2.9000	0.6724	14.64	12.1	2.5	151.	13.56
61.00	1.9000	0.6052	14.76	8.0	1.8	129.	15.86
63.00	1.3000	0.7692	14.48	5.5	1.2	112.	16.57
65.00	0.8500	0.4706	18.47	3.8	0.8	90.	17.63
67.00	0.6000	0.8333	10.65	2.3	0.5	37.	14.09
69.00	0.5000	0.7999	15.97	1.7	0.3	26.	9.78
71.00	0.4000	0.8749	18.57	1.1	0.2	9.	8.81
73.00	0.1500	0.6664	14.88	0.5	0.2	7.	8.38
75.00	0.3500	0.8570	5.26	0.6	0.1	0.	0.00
77.00	0.2000	0.7498	15.52	0.6	0.1	3.	10.46
79.00	0.0500	0.9990	7.41	0.2	0.0	1.	10.15
81.00	0.0000	0.0000	0.00	0.1	0.0	2.	9.19
83.00	0.0000	0.0000	0.00	0.2	0.0	10.	7.84
85.00	0.0500	0.9990	2.91	0.1	0.0	15.	9.36
87.00	0.0000	0.0000	0.00	0.0	0.0	1.	10.17
89.00	0.0500	0.0000	10.94	0.0	0.0	0.	0.00
91.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
93.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
95.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
97.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
99.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS:10000, 1228 TIME: 256. TOTAL= 18.7 6.0 IONZ/TOTAL= 0.2442

50keV P 31 in GaAs 175.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
85.036	24.219	47.449	23.837	24.766	0.337	2.639	For ions
(nm)		33.155	21.538	14.919	0.715	3.032	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.75	2.2000	0.7013	20.69	466.9	289.6	3233.	8.70
5.25	4.4857	0.6497	22.12	541.5	296.4	5679.	8.68
8.75	6.0571	0.6462	22.13	578.0	300.0	6892.	8.74
12.25	7.1143	0.6908	24.08	607.7	301.7	7735.	9.68
15.75	9.2000	0.6708	23.49	621.0	297.2	8702.	10.74
19.25	10.6857	0.7219	23.21	628.9	290.4	9281.	12.65
22.75	11.6571	0.6274	23.83	615.1	281.5	9893.	12.28
26.25	12.2857	0.7116	24.56	636.3	269.8	9967.	13.46
29.75	13.2857	0.6925	23.93	575.5	247.7	9495.	14.43
33.25	13.4857	0.7182	25.07	562.0	234.1	8586.	15.70
36.75	14.8000	0.7027	25.11	550.6	214.2	7963.	16.98
40.25	15.1429	0.6717	24.80	490.2	193.1	7396.	18.14
43.75	14.4857	0.6726	25.71	475.0	173.4	7443.	18.15
47.25	13.9429	0.6660	25.73	411.1	150.6	6183.	18.77
50.75	14.5429	0.6699	25.19	368.4	129.9	5333.	19.58
54.25	13.2857	0.6667	25.28	329.6	110.7	4857.	20.31
57.75	13.5429	0.6920	25.53	275.1	93.1	4404.	20.86
61.25	12.7429	0.6883	24.97	241.0	77.2	3701.	21.09
64.75	10.7143	0.6667	23.06	208.8	64.5	3369.	21.33
68.25	10.2286	0.7263	25.22	170.3	52.0	2868.	21.63
71.75	8.9143	0.6859	26.43	140.4	42.7	2521.	20.90
75.25	7.7714	0.6801	25.25	116.1	32.8	2054.	23.02
78.75	6.9714	0.6721	25.20	85.4	25.4	1580.	23.88
82.25	6.0000	0.6286	26.29	68.8	18.8	1340.	22.20
85.75	4.2857	0.6600	26.27	53.4	13.9	907.	23.81
89.25	3.6286	0.6457	25.44	36.4	10.1	689.	22.97
92.75	3.6857	0.6512	24.44	28.3	8.0	547.	27.72
96.25	2.6571	0.7634	26.34	23.4	5.7	416.	28.66
99.75	1.5714	0.6727	23.10	12.9	3.6	218.	27.90
103.25	1.2571	0.6818	24.31	10.4	2.4	180.	27.37
106.75	1.0000	0.6857	23.51	6.4	1.6	127.	26.30
110.25	0.6286	0.6363	31.42	4.5	1.1	97.	24.08
113.75	0.4286	0.7333	21.52	3.2	0.8	41.	22.98
117.25	0.3714	0.9230	25.06	2.5	0.5	41.	25.51
120.75	0.4000	0.7857	19.91	1.3	0.3	23.	22.16
124.25	0.1143	0.4999	21.87	0.7	0.1	5.	26.39
127.75	0.0000	0.0000	0.00	0.0	0.0	0.	27.96
131.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
134.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
138.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
141.75	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
145.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
148.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
152.25	0.0286	0.0000	5.85	0.0	0.0	0.	0.00
155.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
159.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
162.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
166.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
169.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
173.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 407. TOTAL=				34.8	14.8	IONZ/TOTAL=	0.2986

75keV P 31 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
118.197	31.712	68.039	32.388	34.073	0.213	2.550	For ions
(nm)		48.374	29.226	20.787	0.475	2.729	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	1.8167	0.7248	28.93	466.1	352.4	3669.	8.84
9.00	3.3333	0.7100	28.79	530.6	359.0	5655.	9.60
15.00	4.1000	0.7276	31.40	563.0	362.5	6441.	11.28
21.00	5.4000	0.7068	31.24	597.8	361.3	7233.	14.38
27.00	6.7000	0.6915	32.39	610.7	352.9	8007.	16.75
33.00	7.7333	0.6961	33.86	591.0	336.8	8932.	17.91
39.00	7.8833	0.6934	35.27	609.7	320.4	8746.	20.82
45.00	9.6667	0.7138	35.62	580.9	293.3	8808.	22.50
51.00	10.2500	0.6667	34.58	556.6	267.4	9068.	22.30
57.00	11.2500	0.6741	33.63	531.5	240.4	8508.	23.05
63.00	10.7167	0.6439	35.96	472.4	205.4	7719.	24.35
69.00	10.8167	0.6965	34.76	413.8	174.5	6670.	26.67
75.00	10.4167	0.6848	35.98	363.4	144.3	6260.	29.35
81.00	10.0000	0.6833	34.68	304.3	118.2	5101.	27.39
87.00	9.8333	0.6847	33.02	256.1	93.4	4210.	27.38
93.00	8.4833	0.7269	32.80	201.2	71.5	3313.	28.11
99.00	7.2667	0.7041	33.32	153.0	54.1	2654.	29.44
105.00	5.9667	0.7179	34.62	126.5	40.9	2060.	29.16
111.00	5.1167	0.6775	36.40	88.2	29.0	1509.	30.82
117.00	4.1500	0.7229	34.44	63.6	20.0	954.	29.86
123.00	3.2667	0.6582	33.45	45.9	13.3	614.	31.75
129.00	2.6333	0.6329	31.55	30.9	8.5	447.	27.08
135.00	1.6500	0.6667	33.41	17.1	4.7	370.	27.84
141.00	0.8667	0.7308	37.12	11.0	3.0	191.	33.08
147.00	0.5833	0.5714	37.88	6.7	1.8	146.	37.29
153.00	0.5000	0.6000	27.77	3.7	1.0	5.	33.38
159.00	0.2833	0.5294	31.90	2.2	0.6	2.	26.45
165.00	0.2167	0.3846	33.37	1.1	0.2	5.	29.57
171.00	0.0000	0.0000	0.00	0.2	0.1	1.	27.39
177.00	0.0500	0.9997	26.59	0.1	0.0	0.	0.00
183.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
189.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
195.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
201.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
207.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 564. TOTAL=				49.2	25.4	IONZ/TOTAL=	0.3404

100keV P 31 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
149.595	38.703	87.949	40.796	43.035	0.117	2.481	For ions
(nm)		60.298	37.743	27.150	0.550	2.734	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	1.3167	0.7975	40.60	447.3	404.3	3547.	16.30
9.00	2.3333	0.7571	39.44	491.6	410.8	5436.	17.96
15.00	2.8500	0.6550	43.33	514.7	414.3	6667.	17.86
21.00	3.3333	0.6600	40.95	566.3	416.8	7648.	16.15
27.00	4.1667	0.6640	41.80	577.7	414.1	8556.	19.72
33.00	4.4333	0.7143	43.10	588.3	404.2	8523.	21.50
39.00	4.6667	0.6429	44.22	581.4	393.0	8324.	24.18
45.00	5.8167	0.6533	42.32	579.8	381.3	8425.	24.78
51.00	6.7833	0.6929	42.23	598.2	369.4	8637.	28.53
57.00	7.1833	0.6891	44.43	599.6	343.7	8663.	28.51
63.00	7.7833	0.7066	43.79	558.8	317.9	8714.	29.17
69.00	7.5167	0.7095	44.57	536.8	293.3	8270.	30.51
75.00	9.2833	0.6894	44.05	516.5	264.0	7542.	31.82
81.00	8.9000	0.6442	44.08	487.9	235.9	6847.	33.08
87.00	8.3667	0.6594	44.97	439.0	207.2	6300.	33.74
93.00	9.3000	0.6541	41.49	391.6	181.4	5482.	33.56
99.00	8.4167	0.7010	43.43	360.1	155.0	5084.	35.28
105.00	6.9333	0.6154	42.24	294.2	129.2	4685.	34.74
111.00	7.6500	0.6405	43.72	257.3	106.6	4034.	35.87
117.00	7.9333	0.6513	42.65	226.6	88.9	3319.	38.17
123.00	6.2500	0.6507	46.52	177.2	70.4	2686.	38.26
129.00	6.0833	0.6959	43.25	154.7	54.7	2348.	34.87
135.00	5.4000	0.6821	41.43	118.2	42.5	1999.	37.79
141.00	4.2667	0.6953	40.36	90.3	31.5	1610.	42.27
147.00	3.3667	0.6980	45.67	70.5	23.3	1102.	38.26
153.00	3.4500	0.6280	39.92	57.7	16.8	803.	34.90
159.00	2.2500	0.6593	38.20	38.9	11.7	595.	41.76
165.00	1.7500	0.7048	40.25	23.7	7.6	431.	37.01
171.00	1.5167	0.5934	36.91	16.0	4.9	339.	32.34
177.00	0.8167	0.5918	48.03	12.3	3.4	227.	30.35
183.00	0.7333	0.6591	41.12	6.5	1.9	137.	36.17
189.00	0.4667	0.6071	41.80	4.2	1.1	73.	30.31
195.00	0.1333	0.7499	35.48	1.3	0.5	27.	31.07
201.00	0.2000	0.6666	26.91	1.6	0.4	26.	33.58
207.00	0.1000	0.8332	19.34	1.0	0.2	4.	13.17
213.00	0.0667	0.4999	42.92	0.3	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0167	0.9990	27.27	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 688. TOTAL=				62.3	37.2	IONZ/TOTAL=	0.3738

150keV P 31 in GaAs 500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
210.574	49.632	128.831	54.880	59.529	-0.019	2.479	For ions
(nm)		90.926	52.935	37.956	0.363	2.523	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
5.00	0.7400	0.6892	57.46	406.5	489.0	3290.	18.42
15.00	1.2400	0.6452	57.22	428.9	496.8	4685.	22.64
25.00	1.6000	0.6687	65.92	468.6	499.0	5204.	22.89
35.00	2.1600	0.6528	58.14	487.3	495.3	5663.	26.07
45.00	2.9000	0.6103	55.98	528.4	490.5	6480.	26.99
55.00	3.2100	0.6698	59.51	555.7	478.3	6935.	32.78
65.00	3.7000	0.7081	60.45	567.5	459.1	7431.	37.11
75.00	4.4400	0.6734	63.21	568.9	438.1	7709.	37.82
85.00	4.8600	0.6934	63.38	561.5	407.7	7714.	38.36
95.00	5.3000	0.7302	60.34	526.5	369.8	7346.	38.56
105.00	6.1500	0.6764	63.20	519.1	339.9	7145.	40.39
115.00	6.1200	0.6895	61.05	498.2	302.0	6756.	45.48
125.00	6.5400	0.7034	61.45	456.5	263.7	6613.	45.62
135.00	6.7100	0.6826	62.89	403.3	217.1	5866.	47.29
145.00	6.4700	0.6491	61.12	351.3	180.0	5159.	46.32
155.00	5.9700	0.6834	58.49	300.6	142.4	4336.	49.21
165.00	6.1800	0.6780	56.94	236.5	110.0	3402.	51.46
175.00	5.1300	0.6550	56.15	194.3	83.9	2798.	52.16
185.00	4.8500	0.6639	56.49	145.1	60.6	2291.	51.71
195.00	3.9600	0.6843	59.91	107.9	42.0	1515.	51.34
205.00	3.1800	0.6730	53.86	76.5	28.8	1143.	49.44
215.00	2.4400	0.6926	54.37	53.8	18.8	907.	61.05
225.00	1.4500	0.6965	54.04	33.0	11.4	467.	58.26
235.00	1.1200	0.6518	51.96	20.0	6.2	321.	51.91
245.00	0.6200	0.6774	47.74	10.2	3.1	178.	55.04
255.00	0.4400	0.6818	40.62	5.6	1.6	82.	40.08
265.00	0.3000	0.6666	45.58	2.4	0.8	54.	44.01
275.00	0.0900	0.6666	50.86	1.2	0.4	28.	28.49
285.00	0.0700	0.9999	33.10	0.6	0.1	11.	9.81
295.00	0.0300	0.6664	22.79	0.2	0.0	0.	0.00
305.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
315.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
325.00	0.0100	0.0000	52.33	0.1	0.0	0.	0.00
335.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
345.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
355.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
375.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
385.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
405.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
415.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
435.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
445.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
465.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
475.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
495.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 894. TOTAL=				85.2	64.4	IONZ/TOTAL=	0.4305

200keV P 31 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
268.885	58.737	170.158	67.947	74.571	-0.127	2.530	For ions
(nm)		118.252	68.052	46.309	0.345	2.417	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
6.00	0.5208	0.7400	67.43	354.2	560.6	2327.	25.00
18.00	0.7292	0.5428	74.68	391.0	565.7	3333.	24.73
30.00	1.1354	0.7064	68.36	422.7	565.9	4288.	27.52
42.00	1.2708	0.7131	76.16	442.5	563.9	5354.	29.43
54.00	1.5833	0.6579	76.46	470.8	561.9	5385.	29.77
66.00	1.9271	0.6649	75.91	482.4	547.5	5811.	36.44
78.00	2.2604	0.7005	75.81	517.9	535.3	6036.	43.57
90.00	2.8854	0.6823	82.72	534.2	515.4	6784.	45.68
102.00	3.5729	0.6764	85.84	518.2	487.2	6725.	49.15
114.00	3.5521	0.6510	77.06	532.9	461.0	6798.	51.86
126.00	4.5000	0.6597	78.71	522.6	425.1	6328.	53.03
138.00	4.2188	0.7037	79.39	517.6	389.8	6082.	55.74
150.00	5.2292	0.6813	77.64	497.7	345.1	5605.	51.82
162.00	5.4583	0.6737	75.55	448.6	296.0	5369.	53.82
174.00	5.4375	0.6628	74.18	408.3	249.0	4583.	55.71
186.00	5.0729	0.7002	76.69	351.1	208.6	4133.	58.44
198.00	5.3646	0.6699	73.17	300.9	169.8	3869.	62.72
210.00	5.1563	0.6848	73.50	260.8	136.5	3390.	59.89
222.00	5.0000	0.6583	72.07	216.2	104.5	2896.	60.36
234.00	4.0000	0.6458	68.68	166.4	75.0	2427.	59.70
246.00	3.4271	0.6869	69.62	119.7	53.3	1663.	55.17
258.00	2.7396	0.6730	71.19	90.4	36.4	1134.	60.73
270.00	2.3125	0.7117	66.01	59.3	23.5	759.	57.39
282.00	1.7396	0.6647	62.05	39.6	14.9	529.	61.25
294.00	1.2083	0.6465	62.61	23.2	8.4	390.	50.19
306.00	0.6979	0.6716	58.88	15.0	4.7	259.	45.51
318.00	0.4479	0.6977	54.45	5.9	1.9	119.	50.22
330.00	0.2083	0.9000	62.51	3.2	0.9	32.	42.86
342.00	0.0938	0.7777	40.43	0.8	0.3	8.	17.04
354.00	0.0417	0.4999	82.09	0.5	0.1	4.	5.17
366.00	0.0104	0.9990	15.17	0.2	0.1	9.	3.81
378.00	0.0208	0.4998	48.43	0.0	0.0	2.	6.55
390.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
402.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
414.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
438.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 8000, 1000 TIME: 941.			TOTAL=	104.6	94.9	IONZ/TOTAL=	0.4757

300keV P 31 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
373.517	75.274	244.300	91.081	103.191	-0.261	2.618	For ions
(nm)		174.721	95.976	64.978	0.203	2.302	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
8.00	0.2000	0.5000	74.92	315.3	683.1	1775.	38.13
24.00	0.5500	0.7500	98.38	325.1	685.9	2383.	45.78
40.00	0.6125	0.6939	114.02	368.3	686.0	3147.	42.55
56.00	0.7750	0.6935	107.94	415.9	678.3	3375.	40.04
72.00	0.9125	0.6849	93.31	441.3	665.5	4182.	45.35
88.00	1.1750	0.6596	113.52	448.2	656.5	3891.	49.16
104.00	1.2250	0.6429	108.20	439.2	641.6	4180.	45.96
120.00	1.6625	0.6466	117.19	470.6	625.4	4591.	53.89
136.00	2.0875	0.6707	108.06	469.6	609.9	4603.	57.69
152.00	2.4375	0.6564	104.64	499.6	575.1	4800.	65.04
168.00	2.4750	0.7020	109.28	493.3	541.4	5425.	71.18
184.00	2.9500	0.6907	115.25	516.7	500.8	5083.	82.05
200.00	3.5500	0.6338	117.31	482.7	453.9	5160.	77.23
216.00	3.4500	0.6594	113.82	471.5	404.9	4824.	75.54
232.00	3.6625	0.6758	103.46	436.0	355.2	4362.	75.55
248.00	4.0875	0.6881	103.46	407.3	304.9	4093.	73.90
264.00	4.5625	0.6849	103.56	386.1	259.8	3825.	78.55
280.00	4.6500	0.6559	101.90	320.2	200.4	3501.	78.59
296.00	3.6750	0.6667	101.17	260.8	157.7	3160.	80.87
312.00	3.6750	0.6871	100.63	204.9	116.9	2436.	83.67
328.00	3.1125	0.6908	98.87	161.8	84.9	1976.	89.30
344.00	3.0375	0.6173	92.54	127.0	60.5	1563.	74.72
360.00	2.3875	0.6963	85.22	83.3	38.5	1100.	73.15
376.00	1.6000	0.7187	84.68	55.4	24.2	740.	75.33
392.00	1.2125	0.7320	81.53	33.1	13.8	568.	70.19
408.00	0.8125	0.5846	73.22	20.0	7.6	377.	65.61
424.00	0.5750	0.6739	84.81	11.4	3.8	175.	56.66
440.00	0.2500	0.7000	63.91	4.7	1.6	22.	37.29
456.00	0.1375	0.8181	70.30	2.4	0.7	53.	64.51
472.00	0.0875	0.7142	59.15	1.2	0.3	51.	78.24
488.00	0.0125	0.0000	77.95	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5000, 700 TIME: 782. TOTAL=				138.8	160.6	IONZ/TOTAL=	0.5365

400keV P 31 in GaAs 1000.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
474.151	86.326	320.408	110.412	127.682	-0.411	2.731	For ions
(nm)		230.536	120.227	85.889	0.023	2.195	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
10.00	0.1500	0.5000	109.75	248.9	787.7	1532.	51.49
30.00	0.2625	0.7143	123.83	276.6	784.6	1910.	41.14
50.00	0.3625	0.7931	124.14	318.1	780.6	2195.	42.85
70.00	0.5250	0.6190	137.41	317.2	775.2	2700.	60.33
90.00	0.4625	0.7027	175.72	391.7	774.8	2916.	61.68
110.00	0.9750	0.6667	130.69	387.8	760.5	3328.	74.86
130.00	0.8250	0.6212	147.21	380.6	738.5	2866.	72.29
150.00	1.0750	0.6860	151.74	413.7	721.6	3031.	69.98
170.00	1.3250	0.6604	136.36	426.3	706.0	3603.	75.93
190.00	1.3875	0.7027	150.09	463.8	671.8	3662.	82.98
210.00	1.8375	0.7007	125.23	493.5	627.2	4077.	85.99
230.00	2.2625	0.6575	144.34	464.8	585.6	4702.	99.13
250.00	2.5875	0.6280	142.79	466.7	536.2	4009.	93.78
270.00	2.7875	0.6995	142.42	467.8	489.2	4325.	107.46
290.00	3.0000	0.7333	136.56	412.8	426.7	4110.	104.15
310.00	2.7625	0.6742	136.56	412.0	371.3	3896.	100.78
330.00	3.4750	0.7338	122.92	366.3	318.5	3701.	102.57
350.00	3.7750	0.6490	125.66	367.2	263.6	3280.	107.63
370.00	3.7125	0.6397	121.59	301.2	206.4	2949.	97.99
390.00	3.6625	0.6382	118.40	249.6	155.7	2818.	95.62
410.00	2.8250	0.6814	114.03	191.6	113.9	2208.	95.36
430.00	3.0250	0.7107	122.81	148.8	77.9	1591.	102.50
450.00	2.2750	0.6923	112.39	100.8	53.1	992.	104.70
470.00	1.6625	0.7368	94.88	65.5	28.9	747.	87.66
490.00	1.3250	0.6415	102.04	38.5	16.4	443.	84.88
510.00	0.7125	0.6491	79.66	17.9	7.6	231.	64.90
530.00	0.3750	0.6000	89.31	8.6	3.3	73.	60.54
550.00	0.2000	0.5625	83.11	3.9	1.6	50.	90.72
570.00	0.1250	0.8999	66.69	2.2	0.6	28.	78.56
590.00	0.0250	0.4998	66.11	0.5	0.1	0.	0.00
610.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
630.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
650.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
670.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
690.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
710.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
730.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
750.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
770.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
790.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
810.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
830.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
850.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
870.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
890.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
910.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
930.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
950.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
970.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
990.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4000,	500	TIME: 708.	TOTAL=	164.1	235.7	IONZ/TOTAL=	0.5896

10keV Ar 40 in GaAs 50.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
20.375	7.240	11.323	6.428	6.262	0.639	3.227	For ions
(nm)		7.646	5.452	3.518	0.994	4.081	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.50	12.6000	0.6270	5.66	532.7	120.9	3050.	2.89
1.50	27.8000	0.5432	5.22	662.6	125.1	5927.	2.87
2.50	35.8000	0.6006	5.17	675.3	126.3	7473.	2.76
3.50	41.5000	0.6169	5.49	644.7	122.5	8632.	3.04
4.50	46.9000	0.5800	5.51	656.7	117.9	9446.	3.29
5.50	51.1000	0.6086	5.31	652.9	112.5	9307.	3.53
6.50	51.8000	0.5869	5.94	589.2	103.3	9293.	3.71
7.50	57.0000	0.5333	5.81	553.7	94.5	9138.	3.91
8.50	53.0000	0.6170	5.94	499.4	85.0	8622.	4.05
9.50	60.0000	0.5767	6.02	462.2	76.8	7841.	4.38
10.50	55.1000	0.5699	6.70	426.7	67.3	7414.	4.72
11.50	51.7000	0.6112	6.34	358.6	58.5	6598.	4.77
12.50	53.5000	0.5757	6.41	313.5	51.0	5705.	5.05
13.50	52.1000	0.5969	6.47	285.3	43.1	5186.	5.17
14.50	44.1000	0.5964	6.06	227.5	35.0	4288.	5.38
15.50	37.7000	0.5729	6.72	192.8	28.4	3576.	5.42
16.50	34.5000	0.5478	6.98	150.0	22.9	3015.	5.53
17.50	30.6000	0.6046	6.78	112.9	18.2	2450.	5.79
18.50	26.6000	0.5075	7.05	99.1	15.4	1961.	5.93
19.50	23.0000	0.5217	7.20	86.6	12.2	1592.	6.10
20.50	19.1000	0.5340	7.73	63.2	9.3	1216.	6.45
21.50	15.6000	0.5641	7.53	49.0	7.2	918.	6.63
22.50	14.6000	0.5753	6.99	39.7	5.5	741.	6.11
23.50	11.6000	0.5948	7.18	28.8	3.9	583.	6.28
24.50	6.8000	0.5441	7.07	19.8	3.0	444.	6.06
25.50	6.4000	0.5000	6.29	15.9	2.3	331.	6.08
26.50	5.1000	0.4314	7.55	12.4	1.8	243.	7.09
27.50	4.2000	0.4524	6.09	9.7	1.3	172.	6.70
28.50	3.1000	0.6451	7.51	6.6	0.9	157.	6.41
29.50	2.5000	0.7200	7.05	4.7	0.6	97.	7.65
30.50	2.5000	0.5600	6.39	2.8	0.4	71.	6.92
31.50	1.8000	0.5555	7.68	2.2	0.3	54.	6.22
32.50	1.1000	0.8181	9.83	1.7	0.2	22.	6.83
33.50	0.6000	0.4999	3.46	0.8	0.2	27.	7.27
34.50	0.3000	0.6664	8.95	0.4	0.1	18.	6.11
35.50	0.2000	0.9995	7.48	1.0	0.1	13.	5.24
36.50	0.1000	0.9990	0.65	0.1	0.0	4.	6.12
37.50	0.1000	0.9990	12.74	0.1	0.0	3.	1.55
38.50	0.1000	0.0000	0.05	0.2	0.0	3.	2.62
39.50	0.2000	0.4998	10.78	0.1	0.0	1.	4.13
40.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
41.50	0.1000	0.0000	2.12	0.1	0.0	4.	2.63
42.50	0.1000	0.0000	5.77	0.3	0.0	6.	2.89
43.50	0.0000	0.0000	0.00	0.1	0.0	9.	4.76
44.50	0.0000	0.0000	0.00	0.0	0.0	6.	4.88
45.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
46.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
47.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
48.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
49.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2701 TIME: 181. TOTAL=				8.4	1.5	IONZ/TOTAL=	0.1486

25keV Ar 40 in GaAs 80.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
39.535	13.583	22.619	12.307	12.048	0.533	2.981	For ions
(nm)		15.557	10.838	6.971	0.867	3.477	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.80	6.5000	0.5096	10.53	609.5	188.1	3584.	5.15
2.40	11.1250	0.5562	11.13	706.8	193.3	6468.	5.01
4.00	12.4375	0.5779	11.16	762.2	196.3	8178.	5.21
5.60	18.6250	0.6208	10.68	776.5	194.9	9485.	5.74
7.20	19.1250	0.5359	10.76	798.0	192.5	10531.	6.09
8.80	22.2500	0.5730	10.87	793.7	186.2	11321.	6.35
10.40	24.3125	0.6041	11.25	762.5	178.7	11437.	6.64
12.00	28.7500	0.5848	11.79	749.4	169.1	11256.	6.97
13.60	29.7500	0.5525	10.80	717.6	159.8	11162.	7.40
15.20	27.8750	0.5942	10.97	686.2	150.6	10785.	7.57
16.80	28.1875	0.5366	11.23	630.8	137.4	9990.	8.02
18.40	28.4375	0.5780	12.49	595.7	125.5	9389.	8.22
20.00	29.8125	0.5786	12.17	534.5	113.7	8673.	8.47
21.60	30.7500	0.5752	11.76	496.0	100.2	8111.	8.82
23.20	27.5625	0.5329	12.36	430.1	88.2	7426.	9.11
24.80	28.2500	0.5619	12.30	400.7	78.1	6814.	9.51
26.40	24.3125	0.5681	12.70	346.9	67.5	6009.	9.85
28.00	23.7500	0.5474	12.60	297.4	58.9	5227.	9.96
29.60	23.6875	0.6121	12.52	273.4	51.3	4860.	10.19
31.20	19.9375	0.5486	11.82	235.5	44.0	4267.	10.25
32.80	18.9375	0.5908	12.43	202.1	36.8	3803.	10.53
34.40	16.9375	0.6015	13.84	169.8	30.4	3140.	10.75
36.00	14.6875	0.6128	12.99	138.1	24.7	2611.	11.13
37.60	14.3750	0.6043	12.64	118.6	20.2	2145.	11.92
39.20	13.3750	0.5748	14.10	98.9	16.6	1794.	12.27
40.80	9.9375	0.5912	12.85	77.4	13.0	1392.	12.23
42.40	9.0000	0.5903	12.63	61.8	10.1	1211.	11.30
44.00	7.3750	0.5508	12.96	45.3	8.0	991.	11.26
45.60	4.8750	0.5513	14.81	31.8	6.1	739.	12.14
47.20	4.8750	0.5897	12.84	29.7	5.0	541.	11.75
48.80	3.6250	0.6207	12.98	25.2	4.1	432.	11.49
50.40	4.0625	0.5385	12.83	17.7	3.1	365.	11.75
52.00	2.3750	0.6579	13.93	12.9	2.1	270.	10.97
53.60	2.3125	0.5405	15.25	11.4	1.6	249.	11.48
55.20	1.3750	0.4545	13.69	7.9	1.3	190.	10.90
56.80	1.0625	0.7058	13.74	5.0	0.9	123.	11.41
58.40	0.8750	0.4285	13.11	4.1	0.6	96.	11.68
60.00	0.8750	0.7142	9.96	2.6	0.4	59.	10.55
61.60	0.8750	0.7142	9.36	1.8	0.3	26.	11.30
63.20	0.1875	0.6664	11.55	1.6	0.3	22.	10.83
64.80	0.2500	0.4999	10.01	1.4	0.2	16.	13.70
66.40	0.4375	0.7142	11.29	0.9	0.1	25.	11.79
68.00	0.2500	0.4999	17.33	0.7	0.1	17.	10.62
69.60	0.0625	0.9990	0.21	0.2	0.1	9.	6.48
71.20	0.0000	0.0000	0.00	0.2	0.1	3.	11.82
72.80	0.0000	0.0000	0.00	0.3	0.1	1.	12.62
74.40	0.0000	0.0000	0.00	0.1	0.0	1.	11.80
76.00	0.0625	0.0000	6.52	0.1	0.0	0.	12.62
77.60	0.0000	0.0000	0.00	0.3	0.0	0.	0.00
79.20	0.0625	0.9990	10.01	0.1	0.0	0.	0.00

IONS:10000, 2750 TIME: 415. TOTAL= 20.3 4.6 IONZ/TOTAL= 0.1842

50keV Ar 40 in GaAs 150.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
67.646	22.561	40.262	20.702	20.376	0.414	2.753	For ions
(nm)		27.975	18.495	12.266	0.701	3.120	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.50	2.9667	0.6404	17.97	703.7	265.0	4064.	6.54
4.50	5.0667	0.6382	16.51	747.5	269.0	7421.	7.43
7.50	7.6000	0.5702	17.62	810.3	270.7	8830.	7.70
10.50	9.4333	0.6007	17.57	825.6	269.5	10118.	9.00
13.50	10.7667	0.6037	17.73	820.7	263.4	10894.	10.08
16.50	13.3333	0.5875	16.72	847.5	255.3	11632.	10.36
19.50	13.3667	0.5511	18.17	829.2	243.3	11487.	10.92
22.50	14.7667	0.5846	19.31	782.1	228.4	11877.	11.16
25.50	16.2333	0.5873	18.95	743.0	215.5	11304.	12.31
28.50	16.5667	0.6237	19.02	724.7	198.9	11093.	13.14
31.50	16.1000	0.5901	19.45	654.4	180.8	10431.	13.93
34.50	18.0333	0.5860	20.76	620.9	166.4	9674.	15.34
37.50	18.4333	0.5913	20.63	561.7	145.6	9380.	16.61
40.50	18.3000	0.5756	20.38	518.5	128.6	8772.	15.78
43.50	16.8333	0.6119	20.60	453.6	109.7	8231.	15.72
46.50	15.7667	0.6004	21.55	389.6	94.6	7083.	18.00
49.50	13.7667	0.6077	22.15	339.1	80.4	5836.	17.75
52.50	13.8667	0.5889	21.34	276.2	66.3	5213.	17.78
55.50	11.7000	0.5926	21.79	236.9	54.9	4384.	18.41
58.50	10.5000	0.5778	22.09	203.1	45.4	3761.	19.57
61.50	10.2333	0.5928	22.60	174.9	37.9	2984.	19.36
64.50	8.9333	0.5373	23.58	149.2	30.6	2531.	18.81
67.50	8.2000	0.5285	23.38	110.8	23.6	2316.	18.38
70.50	5.9667	0.6089	22.39	90.4	18.2	1530.	19.20
73.50	5.4667	0.5671	22.14	69.9	13.9	1077.	20.50
76.50	4.5333	0.5588	20.59	52.6	10.6	829.	18.19
79.50	3.5333	0.6321	19.19	36.8	7.7	575.	20.58
82.50	2.7000	0.6173	24.87	30.8	5.8	506.	21.62
85.50	2.5333	0.5000	20.55	21.8	4.0	437.	21.79
88.50	1.9000	0.5789	24.96	16.7	2.9	376.	19.65
91.50	1.0667	0.6875	22.05	11.1	1.8	193.	17.47
94.50	1.1000	0.4242	20.06	7.2	1.2	99.	16.07
97.50	0.5000	0.4000	17.83	3.8	0.8	81.	15.62
100.50	0.6333	0.7368	26.27	2.7	0.6	67.	18.84
103.50	0.3000	0.6666	21.75	3.4	0.4	59.	23.20
106.50	0.2000	0.9998	19.93	0.9	0.1	29.	25.81
109.50	0.0667	0.9995	19.51	1.0	0.1	26.	28.85
112.50	0.0667	0.4998	15.34	0.1	0.1	7.	29.82
115.50	0.0333	0.9990	0.68	0.3	0.1	1.	0.00
118.50	0.0333	0.0000	50.19	0.2	0.0	0.	0.00
121.50	0.0667	0.0000	34.17	0.0	0.0	0.	0.00
124.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
127.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
130.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
133.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
136.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
139.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
142.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
145.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
148.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 387. TOTAL=				38.6	11.1	IONZ/TOTAL=	0.2238

75keV Ar 40 in GaAs 200.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
94.758	30.297	57.815	28.624	27.874	0.304	2.637	For ions
(nm)		39.132	26.393	17.457	0.725	3.006	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
2.00	2.1250	0.5882	23.97	690.6	323.4	4658.	9.26
6.00	4.0500	0.5494	22.69	743.8	327.9	8016.	8.92
10.00	4.5250	0.6077	24.70	754.4	328.5	8731.	10.24
14.00	5.2000	0.5385	21.88	779.9	326.1	9645.	11.93
18.00	6.3250	0.5731	25.05	781.8	320.4	11219.	13.50
22.00	9.0250	0.5789	25.34	811.9	315.5	12387.	14.43
26.00	8.5000	0.6206	28.56	821.2	304.1	12110.	16.53
30.00	10.1250	0.5407	25.97	825.6	291.0	12189.	16.57
34.00	10.6750	0.5972	26.88	796.0	276.1	12234.	17.38
38.00	10.7500	0.6023	25.70	759.4	259.7	11813.	18.81
42.00	12.2500	0.5918	26.98	720.6	238.5	11205.	19.01
46.00	12.1500	0.5741	27.28	672.8	217.3	10148.	19.55
50.00	12.1750	0.5708	27.19	633.4	197.2	9673.	21.58
54.00	11.9500	0.5732	28.70	560.4	175.3	8611.	22.49
58.00	12.8250	0.5497	27.78	554.9	159.0	7507.	22.17
62.00	12.7250	0.5933	30.46	502.3	139.6	6761.	21.81
66.00	13.1000	0.5439	28.80	406.9	116.4	6006.	22.61
70.00	10.1750	0.6020	28.03	373.0	100.7	5363.	23.60
74.00	10.8500	0.6037	28.65	320.3	84.0	5061.	24.64
78.00	9.7500	0.5487	29.93	256.0	70.5	4300.	25.90
82.00	8.1000	0.5772	30.12	234.3	57.9	3879.	25.89
86.00	7.6750	0.5733	30.12	184.3	46.4	3760.	26.78
90.00	7.4750	0.5786	30.16	155.0	37.0	3060.	26.52
94.00	6.4250	0.6070	29.00	128.6	30.2	2103.	28.07
98.00	4.9500	0.5909	28.89	95.1	22.9	1657.	29.69
102.00	4.2250	0.5562	29.08	77.6	17.6	1525.	28.34
106.00	3.5500	0.5493	29.72	58.9	13.6	1191.	26.68
110.00	2.8750	0.6261	29.18	46.8	10.0	853.	30.98
114.00	2.2750	0.4945	31.97	37.3	6.9	521.	33.88
118.00	1.6250	0.6923	24.21	22.3	4.9	358.	30.40
122.00	1.5750	0.5238	28.81	16.3	3.5	379.	33.60
126.00	1.1000	0.5454	28.75	11.4	2.2	286.	30.89
130.00	0.8750	0.5428	32.45	8.3	1.6	142.	28.94
134.00	0.5250	0.7143	26.07	5.1	1.0	51.	17.70
138.00	0.3500	0.6428	24.16	4.8	0.8	40.	15.16
142.00	0.2250	0.5555	28.94	2.9	0.5	37.	20.98
146.00	0.2000	0.4999	21.25	1.2	0.2	37.	26.78
150.00	0.1500	0.6666	34.03	0.8	0.1	25.	23.40
154.00	0.0250	0.9990	35.73	0.2	0.0	4.	32.19
158.00	0.0250	0.0000	5.19	0.0	0.0	0.	0.00
162.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
166.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
170.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
174.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
178.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
182.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
186.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
194.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
198.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME:		543.	TOTAL=	55.4	19.3	IONZ/TOTAL=	0.2584

100keV Ar 40 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
121.146	36.557	75.782	35.369	35.107	0.218	2.608	For ions
(nm)		51.651	33.033	20.721	0.576	2.820	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	1.2167	0.6164	33.84	615.1	370.4	4645.	9.86
9.00	2.6667	0.5250	27.20	689.0	375.8	7427.	10.42
15.00	3.5000	0.5571	30.02	714.2	375.5	8961.	11.75
21.00	4.1500	0.5020	31.54	761.6	373.9	10004.	14.07
27.00	5.5167	0.5801	31.55	780.3	367.1	11003.	16.65
33.00	6.3500	0.5643	33.72	823.3	354.2	11597.	17.38
39.00	7.3500	0.5828	33.61	807.6	338.1	11319.	19.17
45.00	7.6667	0.5739	35.91	792.2	316.5	11468.	20.93
51.00	8.4500	0.5759	33.27	761.4	293.0	11433.	22.69
57.00	9.4500	0.5538	34.88	722.2	264.6	10629.	22.85
63.00	10.6667	0.5609	35.80	663.2	238.3	10235.	24.40
69.00	10.7333	0.6071	35.10	616.8	212.1	9505.	26.76
75.00	10.2833	0.5673	36.50	564.1	183.0	8005.	27.08
81.00	9.8833	0.5413	37.64	495.1	155.0	7313.	27.45
87.00	9.3167	0.5778	35.93	420.2	130.8	7152.	28.93
93.00	9.3500	0.5954	37.03	370.0	106.5	6175.	29.05
99.00	8.3667	0.5219	35.86	280.9	84.0	4887.	27.95
105.00	7.1333	0.5724	33.94	243.7	66.9	3951.	29.60
111.00	6.3667	0.5654	35.84	193.4	51.8	3145.	32.07
117.00	5.8000	0.6063	36.08	154.0	38.9	2605.	33.16
123.00	5.3167	0.5768	37.10	122.4	29.9	2126.	32.95
129.00	3.7500	0.5511	34.25	86.3	20.0	1458.	28.95
135.00	3.1833	0.5550	37.03	59.6	13.3	919.	31.71
141.00	2.3667	0.5704	37.37	39.4	8.9	565.	35.66
147.00	1.3500	0.5679	34.27	21.6	5.5	301.	35.42
153.00	0.9667	0.4828	34.18	16.5	3.7	216.	27.15
159.00	0.7500	0.6222	34.35	11.4	2.5	184.	23.41
165.00	0.6333	0.5526	30.20	6.8	1.5	90.	23.64
171.00	0.3333	0.5000	45.11	4.2	0.9	56.	23.09
177.00	0.2667	0.6250	20.25	2.8	0.5	64.	26.74
183.00	0.2000	0.5000	45.56	1.6	0.3	53.	33.06
189.00	0.0500	0.3332	32.41	0.7	0.1	52.	38.89
195.00	0.0000	0.0000	0.00	0.1	0.0	13.	44.51
201.00	0.0167	0.0000	43.96	0.1	0.0	0.	0.00
207.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
213.00	0.0167	0.9990	17.83	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 668.			TOTAL=	71.1	28.7	IONZ/TOTAL=	0.2877

150keV Ar 40 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
171.964	48.105	110.456	48.384	49.271	0.088	2.566	For ions
(nm)		76.984	46.060	29.361	0.445	2.724	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
4.00	0.9250	0.6081	39.77	570.2	450.9	3812.	12.74
12.00	1.4875	0.5378	43.22	638.4	456.3	5942.	13.88
20.00	1.9000	0.6184	44.23	645.8	456.3	7292.	16.88
28.00	2.3625	0.5820	44.44	691.9	454.1	7974.	19.72
36.00	3.0250	0.5289	45.23	714.8	446.4	8496.	20.90
44.00	3.4500	0.5362	45.71	736.3	435.3	9416.	21.57
52.00	4.3500	0.5776	47.49	783.4	421.0	9294.	23.64
60.00	5.1500	0.5777	47.10	764.5	400.6	10026.	26.90
68.00	5.4750	0.5525	47.62	765.7	381.2	10108.	28.40
76.00	6.2625	0.5509	49.84	749.0	353.5	10249.	30.67
84.00	6.5250	0.5843	52.91	723.9	324.4	10054.	32.59
92.00	6.8625	0.6029	50.24	683.8	295.5	9719.	35.47
100.00	7.5875	0.5766	50.06	634.3	262.9	9713.	38.20
108.00	7.6750	0.5961	51.53	599.6	228.0	8228.	36.21
116.00	7.6625	0.5856	49.54	525.9	194.0	7358.	37.78
124.00	7.3500	0.5850	49.59	459.2	162.8	6871.	39.28
132.00	7.2375	0.6097	53.22	391.4	131.3	5917.	40.14
140.00	7.0500	0.5426	50.92	326.8	106.4	5540.	43.02
148.00	5.6375	0.5632	50.89	269.0	83.9	4079.	44.47
156.00	5.4125	0.5658	48.24	216.0	64.7	3262.	47.38
164.00	4.2125	0.5935	47.90	157.4	46.2	2421.	43.49
172.00	3.7125	0.5926	46.47	120.3	34.6	1898.	39.87
180.00	3.1375	0.6056	50.67	91.1	25.4	1222.	39.32
188.00	2.4750	0.5556	47.62	66.1	17.4	862.	39.70
196.00	2.0875	0.6287	54.83	46.6	11.5	695.	38.77
204.00	1.4375	0.5217	44.95	31.4	7.4	520.	44.65
212.00	0.9875	0.6202	51.13	20.0	4.8	353.	39.15
220.00	0.6000	0.4583	36.87	13.4	3.1	191.	41.48
228.00	0.3250	0.6923	32.58	6.1	1.4	121.	39.49
236.00	0.3250	0.6538	43.31	4.5	0.8	76.	29.16
244.00	0.1375	0.6363	53.32	1.9	0.4	55.	35.76
252.00	0.0750	0.6666	44.54	0.9	0.2	27.	23.44
260.00	0.0500	0.4999	29.65	0.3	0.1	31.	42.10
268.00	0.0250	0.4998	35.39	0.1	0.0	10.	49.40
276.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
284.00	0.0125	0.9990	3.43	0.0	0.0	0.	0.00
292.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
300.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
316.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 867. TOTAL=				99.6	50.1	IONZ/TOTAL=	0.3347

200keV Ar 40 in GaAs 500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
220.293	59.086	143.813	61.053	62.770	0.005	2.518	For ions
(nm)		99.461	59.377	38.384	0.441	2.611	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
5.00	0.5900	0.4915	57.37	542.3	518.3	3305.	16.54
15.00	0.9800	0.5816	58.47	598.6	522.6	5069.	18.03
25.00	1.2900	0.5736	59.47	652.9	520.7	5947.	17.87
35.00	1.8700	0.5615	57.01	663.0	519.7	6693.	19.67
45.00	2.4900	0.6145	57.08	714.9	509.4	7224.	23.41
55.00	2.4700	0.5304	60.10	733.6	501.1	8491.	25.45
65.00	2.8100	0.5409	63.01	705.5	488.6	8644.	29.12
75.00	3.7600	0.5824	65.02	757.8	473.0	8824.	32.80
85.00	3.9000	0.5667	63.70	730.9	452.2	8993.	33.74
95.00	4.3600	0.5734	64.68	755.7	416.4	8751.	40.24
105.00	5.1000	0.5392	65.17	709.2	384.3	8877.	44.01
115.00	5.2300	0.5354	65.40	673.6	349.4	8924.	45.66
125.00	5.4300	0.5709	64.40	642.7	316.3	8218.	49.74
135.00	6.0200	0.5698	62.34	625.6	279.4	8043.	48.49
145.00	6.2800	0.5541	61.74	555.2	238.6	7188.	51.33
155.00	6.0500	0.5702	67.18	483.6	202.1	5793.	57.13
165.00	5.8200	0.5945	64.83	427.1	170.0	4946.	55.35
175.00	5.4100	0.5305	60.83	353.8	135.3	4539.	53.99
185.00	5.2400	0.5973	61.21	301.5	108.5	4248.	54.73
195.00	4.9800	0.5542	63.41	253.3	85.7	3313.	56.39
205.00	4.2500	0.5765	62.13	200.7	63.5	2348.	55.31
215.00	3.5000	0.5686	60.86	152.6	47.3	1969.	45.88
225.00	2.9000	0.6276	61.52	106.2	33.3	1538.	45.69
235.00	2.2700	0.5903	65.16	77.3	22.9	1291.	49.26
245.00	1.8600	0.6237	61.49	58.0	15.8	923.	45.22
255.00	1.3200	0.5606	60.07	37.0	9.9	549.	45.03
265.00	0.9600	0.6562	58.79	22.6	6.0	331.	43.99
275.00	0.5400	0.6481	54.25	13.5	3.6	280.	53.46
285.00	0.4100	0.5854	54.49	7.6	1.9	153.	48.95
295.00	0.2900	0.4827	43.79	4.5	1.0	51.	49.65
305.00	0.1300	0.3846	49.13	2.5	0.5	28.	23.90
315.00	0.0400	0.7498	32.99	1.3	0.3	35.	21.58
325.00	0.0400	0.4999	61.15	0.6	0.1	0.	0.00
335.00	0.0100	0.0000	17.07	0.2	0.0	0.	0.00
345.00	0.0300	0.9997	88.58	0.1	0.0	0.	0.00
355.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
365.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
375.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
385.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
405.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
415.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
435.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
445.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
465.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
475.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
495.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 1039. TOTAL=				125.7	74.0	IONZ/TOTAL=	0.3706

300keV Ar 40 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
314.044	76.695	211.959	83.125	86.963	-0.095	2.551	For ions
(nm)		147.300	85.208	55.029	0.362	2.466	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.2969	0.5263	88.40	500.9	630.6	2475.	18.58
24.00	0.6250	0.6750	104.20	473.0	631.6	3924.	31.10
40.00	0.7969	0.5686	94.31	548.6	630.0	4609.	30.42
56.00	0.9844	0.5238	82.57	601.4	622.8	5372.	29.93
72.00	1.3594	0.6322	91.33	638.2	612.3	5741.	42.94
88.00	1.4844	0.6316	89.48	678.4	603.4	6694.	40.89
104.00	2.2813	0.5822	88.96	688.9	582.9	6773.	45.36
120.00	2.6719	0.6140	87.23	693.4	558.7	7009.	50.73
136.00	3.1250	0.4850	88.11	717.1	516.0	6928.	59.34
152.00	3.3906	0.5853	88.90	701.6	472.3	7279.	60.44
168.00	3.9375	0.5595	90.18	662.9	418.8	6947.	62.08
184.00	3.7969	0.5597	91.43	631.3	373.6	6518.	66.69
200.00	4.0313	0.6085	87.18	585.3	326.2	5788.	69.43
216.00	4.5156	0.5709	94.12	530.7	279.6	5599.	72.46
232.00	4.9063	0.5764	85.91	479.1	226.8	4835.	70.05
248.00	4.3281	0.5162	88.26	401.9	179.0	4288.	73.12
264.00	3.8125	0.5984	84.23	307.1	132.6	3339.	76.46
280.00	4.0625	0.5615	84.46	255.3	100.3	2773.	75.24
296.00	3.1875	0.5392	79.86	196.8	71.8	2224.	76.51
312.00	2.5000	0.5312	82.24	125.3	46.8	1638.	74.81
328.00	1.9063	0.5984	79.87	92.4	30.7	1208.	78.92
344.00	1.5469	0.4343	73.50	58.8	18.5	754.	78.79
360.00	0.9688	0.6774	62.57	36.5	10.1	557.	71.00
376.00	0.5781	0.6216	88.53	19.1	5.8	282.	73.16
392.00	0.4688	0.5000	94.96	12.3	3.1	214.	89.15
408.00	0.2813	0.6666	85.24	5.0	1.4	112.	77.99
424.00	0.1094	0.8570	60.48	1.9	0.5	35.	108.14
440.00	0.0625	0.4999	72.41	0.6	0.1	0.	0.00
456.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
472.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
488.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
504.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
520.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
536.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 4000, 1000 TIME: 889. TOTAL=				170.3	129.4	IONZ/TOTAL=	0.417

400keV Ar 40 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
404.902	91.567	279.915	102.116	112.155	-0.281	2.613	For ions
(nm)		203.702	108.979	72.064	0.153	2.280	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	-- Damage keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
8.00	0.2000	0.6875	107.84	451.3	727.3	1778.	31.40
24.00	0.3375	0.6666	113.77	452.7	726.2	2485.	29.43
40.00	0.4000	0.6875	101.49	476.7	723.1	2984.	38.20
56.00	0.4500	0.5833	95.96	507.7	719.0	3253.	40.33
72.00	0.8375	0.6418	105.43	529.2	716.4	3834.	41.34
88.00	0.8250	0.4848	123.37	583.4	703.8	4584.	47.15
104.00	1.1000	0.5114	107.40	555.8	692.2	4361.	50.62
120.00	1.3750	0.6000	122.54	607.6	677.4	4327.	61.39
136.00	1.2875	0.5825	118.23	639.7	661.2	4617.	58.03
152.00	1.6500	0.6136	131.79	637.4	632.3	5145.	68.34
168.00	1.9625	0.5414	120.66	641.2	606.8	5411.	74.58
184.00	2.0625	0.5818	123.90	647.8	578.0	6142.	82.99
200.00	2.5375	0.5764	114.40	670.6	543.5	5927.	78.77
216.00	2.4750	0.6061	118.54	665.7	500.9	6294.	78.03
232.00	3.0500	0.6188	123.66	637.4	456.5	5960.	81.69
248.00	3.3375	0.6067	118.37	601.8	412.4	5994.	88.85
264.00	4.0125	0.5950	109.94	570.6	366.6	5510.	90.52
280.00	3.1625	0.5771	121.71	531.2	321.7	4443.	87.23
296.00	3.6000	0.5521	114.88	470.7	274.7	4297.	93.08
312.00	3.6250	0.5828	114.50	450.3	236.5	4437.	96.55
328.00	4.1375	0.5921	113.21	390.3	192.8	4361.	88.35
344.00	3.5500	0.5810	103.33	335.0	149.4	3343.	86.89
360.00	3.3000	0.5985	104.95	269.3	115.2	2759.	86.62
376.00	3.1375	0.5657	99.94	199.1	83.1	2722.	85.29
392.00	2.4250	0.5258	106.42	162.0	60.2	1815.	91.77
408.00	2.0875	0.6287	94.94	112.7	41.2	1426.	101.61
424.00	1.8000	0.6250	103.40	76.5	27.1	986.	90.44
440.00	1.1500	0.5761	96.97	52.5	17.1	728.	78.80
456.00	0.8375	0.5075	91.76	32.5	10.0	555.	75.71
472.00	0.6375	0.4510	79.25	18.8	5.5	350.	66.57
488.00	0.2875	0.5217	108.57	9.4	2.8	136.	71.46
504.00	0.2625	0.4286	82.43	7.7	1.9	168.	56.83
520.00	0.0875	0.7142	63.45	2.2	0.6	56.	42.25
536.00	0.0750	0.6666	63.25	1.0	0.2	0.	0.00
552.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
568.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5000,	500 TIME:	803.	TOTAL=	208.0	191.7	IONZ/TOTAL=	0.4797

10keV Cr 52 in GaAs 40.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
15.898	6.214	9.582	5.401	5.024	0.668	3.323	For ions
(nm)		6.477	4.675	2.788	1.002	3.996	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.40	16.8750	0.5333	3.91	677.5	95.6	3163.	2.36
1.20	27.8750	0.5022	3.69	858.3	98.0	6306.	2.41
2.00	42.7500	0.5117	3.91	860.4	97.1	8313.	2.52
2.80	41.6250	0.4985	4.25	892.4	96.2	9773.	2.68
3.60	54.2500	0.4862	4.24	848.0	92.6	10600.	2.90
4.40	59.2500	0.5211	4.46	823.9	87.4	11162.	3.05
5.20	71.7500	0.4808	4.78	798.2	82.3	11373.	3.15
6.00	67.1250	0.5363	4.50	683.3	74.9	11340.	3.36
6.80	67.0000	0.4646	4.84	663.3	67.7	10805.	3.54
7.60	72.1250	0.4385	4.93	603.9	61.5	10594.	3.67
8.40	72.1250	0.5390	5.12	541.4	55.3	10070.	3.86
9.20	69.3750	0.4775	5.01	485.3	48.2	9288.	4.08
10.00	61.5000	0.4980	5.25	415.0	41.3	8350.	4.18
10.80	64.0000	0.4844	5.28	359.8	35.6	7382.	4.24
11.60	55.1250	0.5102	5.07	323.8	30.6	6443.	4.29
12.40	52.6250	0.4964	5.24	261.9	25.3	5555.	4.46
13.20	50.5000	0.4827	5.36	222.1	20.8	4668.	4.58
14.00	42.2500	0.4882	5.49	188.7	17.2	4029.	4.85
14.80	35.6250	0.5053	5.61	144.6	14.1	3410.	4.90
15.60	34.2500	0.5693	5.95	131.7	11.8	2768.	4.93
16.40	27.7500	0.4414	5.84	103.3	9.6	2388.	5.00
17.20	22.3750	0.4916	5.53	80.1	7.5	1891.	4.91
18.00	18.5000	0.5000	4.94	68.4	6.0	1629.	5.19
18.80	16.3750	0.4809	6.98	48.3	4.8	1332.	5.35
19.60	12.6250	0.5644	5.37	41.4	3.6	1012.	5.31
20.40	11.0000	0.4773	5.09	35.0	2.8	798.	6.01
21.20	9.1250	0.4247	6.54	23.5	2.1	567.	5.70
22.00	8.3750	0.4179	5.50	15.5	1.5	466.	5.89
22.80	5.7500	0.4783	5.59	13.9	1.2	358.	5.96
23.60	4.3750	0.4857	4.94	11.9	0.9	298.	5.78
24.40	3.7500	0.4000	6.59	8.0	0.7	217.	4.97
25.20	2.6250	0.5714	6.09	4.3	0.4	155.	6.59
26.00	1.6250	0.7692	5.27	3.2	0.4	104.	5.14
26.80	2.2500	0.3889	6.12	3.2	0.3	70.	6.07
27.60	0.6250	0.3999	3.83	2.5	0.2	47.	6.03
28.40	0.8750	0.5713	4.07	1.4	0.1	41.	5.55
29.20	0.8750	0.5713	4.53	0.6	0.1	20.	5.12
30.00	0.6250	0.2000	5.59	1.5	0.1	15.	4.69
30.80	0.1250	0.0000	0.52	0.2	0.0	9.	6.47
31.60	0.3750	0.9997	6.42	0.2	0.0	9.	5.77
32.40	0.0000	0.0000	0.00	0.4	0.1	10.	8.64
33.20	0.1250	0.0000	1.86	0.2	0.0	9.	7.12
34.00	0.2500	0.4998	10.40	0.6	0.0	9.	10.83
34.80	0.1250	0.9990	5.64	0.0	0.0	4.	10.16
35.60	0.0000	0.0000	0.00	0.0	0.0	2.	2.47
36.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
37.20	0.0000	0.0000	0.00	0.0	0.0	1.	15.25
38.00	0.0000	0.0000	0.00	0.0	0.0	4.	1.24
38.80	0.0000	0.0000	0.00	0.0	0.0	4.	2.59
39.60	0.0000	0.0000	0.00	0.0	0.0	6.	2.14

IONS:10000, 2750 TIME: 181. TOTAL= 9.0 1.0 IONZ/TOTAL= 0.0961

25keV Cr 52 in GaAs 60.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
30.349	11.624	18.634	10.333	9.434	0.596	3.060	For ions
(nm)		12.601	8.920	5.430	0.926	3.811	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.60	7.4167	0.6180	7.30	848.6	150.0	4209.	3.89
1.80	13.4167	0.4845	8.01	1014.1	153.7	7269.	3.57
3.00	16.2500	0.5077	7.13	1085.9	153.7	9125.	3.78
4.20	18.8333	0.4602	6.98	1074.3	152.6	11134.	4.07
5.40	23.4167	0.5160	8.13	1063.6	148.9	12092.	4.37
6.60	28.5000	0.5234	8.36	1045.4	145.8	13782.	4.87
7.80	30.8333	0.5027	8.64	1026.7	141.8	14240.	5.28
9.00	32.6667	0.4668	7.61	969.7	135.1	14383.	5.82
10.20	32.2500	0.4935	9.18	959.0	127.7	14281.	6.11
11.40	32.6667	0.4617	8.80	958.0	121.1	13998.	6.23
12.60	39.0000	0.5214	8.46	885.2	112.3	14293.	6.39
13.80	36.0000	0.4630	9.41	801.5	103.4	13713.	6.90
15.00	37.6667	0.4911	9.13	767.6	95.8	13217.	7.18
16.20	36.5000	0.5046	9.20	709.4	87.5	12163.	7.45
17.40	37.2500	0.4877	9.30	637.1	78.3	11405.	7.74
18.60	35.3333	0.4670	9.26	580.8	70.4	10558.	8.09
19.80	31.0833	0.4558	9.20	523.8	62.8	9579.	8.23
21.00	34.0000	0.4534	9.79	473.9	56.1	9225.	8.21
22.20	30.1667	0.5193	10.34	421.6	49.5	8429.	8.60
23.40	31.0833	0.4826	10.19	369.0	43.3	7561.	8.82
24.60	25.8333	0.4839	10.23	339.0	37.4	6691.	8.95
25.80	21.2500	0.5216	10.12	286.4	31.5	5564.	9.05
27.00	22.8333	0.4526	9.73	240.7	26.9	4863.	9.18
28.20	20.2500	0.4897	10.29	213.5	23.3	3940.	9.17
29.40	19.0000	0.4605	11.22	180.0	19.9	3274.	9.14
30.60	16.5833	0.4673	10.66	158.7	16.6	3036.	9.32
31.80	15.5833	0.5027	11.47	124.5	13.8	2746.	9.34
33.00	12.0000	0.4514	10.24	106.5	11.6	2251.	9.38
34.20	12.9167	0.4645	11.01	91.2	9.6	1886.	8.80
35.40	9.5000	0.5175	9.53	76.5	8.0	1587.	8.31
36.60	9.4167	0.4602	10.62	68.5	6.6	1273.	8.52
37.80	6.7500	0.4444	10.34	53.6	5.5	1021.	8.93
39.00	6.0833	0.4110	10.09	36.7	4.1	906.	9.06
40.20	5.1667	0.5000	13.06	30.9	3.4	614.	8.70
41.40	4.1667	0.5800	11.89	29.1	2.8	419.	10.25
42.60	3.3333	0.5500	11.62	21.0	2.2	308.	9.13
43.80	2.8333	0.5000	11.96	20.2	1.9	317.	7.33
45.00	2.6667	0.4062	12.05	15.3	1.4	224.	7.68
46.20	2.7500	0.6363	11.08	10.7	1.1	211.	7.25
47.40	2.0833	0.4400	10.95	6.3	0.8	212.	6.04
48.60	1.1667	0.2857	8.75	7.7	0.7	179.	6.17
49.80	1.5000	0.5000	9.63	5.3	0.5	155.	7.60
51.00	0.6667	0.2500	8.77	3.0	0.3	148.	7.55
52.20	0.3333	0.4999	11.53	2.8	0.3	109.	6.39
53.40	0.6667	0.4999	8.02	2.2	0.2	48.	3.72
54.60	0.5000	0.3333	11.09	2.3	0.1	46.	3.46
55.80	0.4167	0.3999	7.13	1.1	0.1	22.	4.93
57.00	0.1667	0.9995	14.12	0.6	0.1	14.	7.04
58.20	0.0833	0.9990	5.50	0.3	0.0	2.	9.32
59.40	0.1667	0.9995	4.67	0.8	0.0	3.	10.28
IONS:10000, 1208 TIME: 230. TOTAL=				22.0	2.9	IONZ/TOTAL=	0.1165

50keV Cr 52 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
51.475	19.204	32.735	17.252	15.633	0.520	3.071	For ions
(nm)		22.026	15.195	9.568	0.827	3.384	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.25	3.9200	0.4796	9.70	984.0	212.6	5180.	5.46
3.75	7.2800	0.5165	13.28	1077.2	213.7	9669.	5.69
6.25	9.7600	0.4713	12.72	1111.1	214.9	12127.	6.41
8.75	11.1200	0.4964	12.74	1149.9	211.4	13784.	6.74
11.25	14.8800	0.4704	12.48	1161.5	205.5	15780.	7.40
13.75	15.3600	0.4896	14.04	1151.4	197.8	16189.	8.60
16.25	17.2000	0.5023	13.63	1108.9	186.4	16324.	8.88
18.75	20.8000	0.4827	13.80	1079.1	174.4	15631.	9.49
21.25	22.0800	0.4764	14.85	1016.3	162.7	15122.	10.12
23.75	21.0400	0.4848	14.27	915.9	149.7	14961.	10.55
26.25	20.6400	0.5116	13.94	908.5	135.1	14173.	11.00
28.75	22.2400	0.5270	15.97	804.0	119.0	12985.	12.00
31.25	20.5600	0.4903	16.20	709.2	105.4	11798.	12.72
33.75	22.0000	0.4745	15.86	626.5	92.4	11008.	13.11
36.25	19.3600	0.5207	16.12	568.6	79.2	9816.	13.80
38.75	18.4800	0.4870	16.26	499.9	67.7	8890.	14.71
41.25	18.3600	0.4837	16.38	409.3	57.3	7365.	14.74
43.75	15.1600	0.4881	16.62	361.6	48.9	6343.	16.16
46.25	14.6400	0.4918	18.43	306.5	39.7	5616.	15.56
48.75	12.2400	0.4804	17.58	250.5	32.5	4732.	15.90
51.25	12.3200	0.5390	17.14	194.6	26.1	3624.	16.77
53.75	10.7200	0.5448	17.30	171.9	21.2	2884.	15.51
56.25	7.9600	0.4221	17.64	137.8	16.6	2508.	16.69
58.75	7.2000	0.4889	18.14	105.7	12.5	2063.	16.14
61.25	5.2400	0.5114	18.44	82.2	10.2	1526.	18.33
63.75	4.8400	0.4628	17.73	58.9	7.3	1280.	18.54
66.25	4.0800	0.4510	18.79	49.0	5.7	1078.	19.10
68.75	3.0800	0.4805	19.89	38.2	4.3	750.	19.88
71.25	2.4000	0.4000	19.75	28.9	3.2	620.	21.49
73.75	1.6400	0.4634	18.38	22.0	2.3	388.	20.13
76.25	1.4400	0.4722	16.31	13.1	1.7	275.	20.60
78.75	1.3200	0.6666	19.17	11.1	1.3	202.	16.00
81.25	0.9200	0.6087	13.76	7.9	0.8	148.	14.52
83.75	0.6000	0.3333	14.94	3.0	0.5	56.	20.46
86.25	0.1200	0.6664	11.56	1.6	0.4	32.	18.30
88.75	0.2800	0.5713	8.10	3.3	0.3	23.	23.85
91.25	0.3600	0.5555	28.06	1.9	0.3	27.	23.89
93.75	0.2000	0.3999	17.22	1.5	0.2	13.	16.90
96.25	0.1200	0.0000	19.44	1.4	0.1	17.	17.83
98.75	0.0800	0.0000	9.61	0.6	0.1	4.	18.37
101.25	0.0400	0.9990	16.13	0.5	0.1	0.	0.00
103.75	0.0400	0.0000	15.85	0.6	0.0	0.	0.00
106.25	0.0800	0.0000	6.41	0.1	0.0	0.	0.00
108.75	0.0400	0.0000	11.65	0.1	0.0	0.	0.00
111.25	0.0400	0.0000	27.61	0.3	0.0	0.	0.00
113.75	0.0400	0.9990	5.49	0.0	0.0	0.	0.00
116.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
118.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
121.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
123.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 372. TOTAL=				42.8	7.1	IONZ/TOTAL=	0.1414

75keV Cr 52 in GaAs 150.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
71.804	26.103	46.225	23.418	21.816	0.412	2.837	For ions
(nm)		31.740	21.223	12.402	0.751	3.215	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.50	2.6000	0.4359	14.32	993.3	258.9	5342.	6.55
4.50	4.6333	0.4029	17.73	1125.8	261.4	8669.	7.32
7.50	5.3667	0.6025	16.84	1077.8	260.9	10957.	7.17
10.50	6.7667	0.5074	17.59	1147.0	258.9	12630.	8.03
13.50	8.2667	0.5121	17.05	1182.8	255.6	14338.	9.49
16.50	10.1667	0.4852	19.11	1146.8	249.1	15460.	10.91
19.50	11.2667	0.4675	19.57	1175.3	242.2	15653.	12.49
22.50	11.3667	0.4780	21.00	1146.6	231.3	15799.	13.11
25.50	12.2333	0.5014	19.99	1122.7	221.3	15910.	13.54
28.50	14.5333	0.5298	20.10	1087.7	207.4	15998.	13.26
31.50	15.3667	0.4772	20.93	1033.8	194.0	15986.	13.63
34.50	16.1000	0.5238	20.46	1021.1	180.1	16031.	14.31
37.50	16.6333	0.5190	19.81	919.0	165.5	15015.	15.06
40.50	15.8333	0.4905	21.87	864.6	149.7	13774.	16.04
43.50	15.3000	0.4793	20.46	806.7	133.3	12880.	17.19
46.50	16.8333	0.4693	21.48	726.9	119.4	12058.	16.89
49.50	14.7000	0.4966	23.16	654.5	104.2	11262.	17.06
52.50	14.3000	0.4755	23.84	563.9	90.7	9777.	17.24
55.50	13.9333	0.4522	22.62	482.6	79.1	8872.	17.78
58.50	11.0333	0.4924	24.63	434.5	69.0	8123.	18.85
61.50	11.4667	0.4913	22.26	388.4	59.0	7165.	19.15
64.50	12.0333	0.4792	23.57	334.8	49.5	5837.	19.44
67.50	10.4333	0.5591	24.04	271.8	41.1	5042.	20.95
70.50	9.0333	0.4723	24.75	246.3	34.3	4139.	21.44
73.50	7.5000	0.4844	24.67	203.2	27.8	3699.	19.19
76.50	7.1000	0.5070	25.28	163.1	22.6	3109.	19.59
79.50	6.2333	0.4545	21.85	129.2	18.0	2537.	19.26
82.50	5.2667	0.5253	24.71	106.0	14.1	2218.	19.19
85.50	3.9667	0.5042	25.63	81.1	11.4	1602.	20.06
88.50	3.6667	0.5273	26.12	63.1	8.8	1391.	22.43
91.50	2.9333	0.5795	23.94	51.6	6.8	1056.	20.12
94.50	2.3333	0.5000	28.51	41.7	5.3	875.	20.32
97.50	1.8333	0.4545	21.01	29.9	3.9	664.	19.07
100.50	1.2667	0.3947	22.87	26.5	2.9	503.	16.66
103.50	1.5000	0.5111	24.36	17.1	2.0	356.	20.44
106.50	0.8667	0.4231	21.06	11.9	1.4	212.	22.37
109.50	0.9000	0.5555	25.63	7.8	0.9	206.	23.48
112.50	0.5000	0.7333	22.74	6.7	0.7	116.	22.55
115.50	0.4333	0.7692	26.56	4.6	0.5	60.	23.47
118.50	0.2667	0.6249	24.43	2.9	0.3	70.	14.27
121.50	0.1667	0.3999	20.28	2.0	0.2	63.	15.57
124.50	0.1333	0.9998	42.46	1.2	0.1	38.	20.73
127.50	0.0333	0.9990	3.97	2.0	0.1	5.	14.09
130.50	0.0667	0.9995	9.72	0.3	0.1	0.	0.00
133.50	0.0667	0.4998	24.02	0.3	0.0	0.	0.00
136.50	0.0333	0.9990	49.61	0.2	0.0	0.	0.00
139.50	0.0333	0.9990	15.41	0.0	0.0	0.	0.00
142.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
145.50	0.0333	0.0000	10.12	0.0	0.0	0.	0.00
148.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 527.			TOTAL=	62.7	12.1	IONZ/TOTAL=	0.1621

100keV Cr 52 in GaAs 200.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
91.834	32.494	60.027	29.650	27.591	0.380	2.794	For ions
(nm)		41.238	27.591	16.027	0.730	3.120	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
2.00	1.6750	0.5224	27.86	983.2	298.1	5737.	8.81
6.00	3.3000	0.4848	22.81	1005.9	299.8	8913.	9.29
10.00	3.7500	0.5533	21.77	1087.9	299.9	10855.	9.47
14.00	5.1250	0.4829	22.11	1136.0	298.1	13290.	11.55
18.00	6.9000	0.5145	22.39	1189.1	293.2	14368.	13.42
22.00	7.8750	0.4698	22.17	1224.4	286.0	15711.	13.89
26.00	8.4250	0.4481	21.70	1157.6	275.8	16777.	14.12
30.00	8.7000	0.4856	25.30	1160.4	266.0	16828.	16.10
34.00	10.5750	0.5390	23.48	1104.4	251.8	16388.	16.51
38.00	10.9750	0.4806	27.00	1092.3	236.5	15689.	17.50
42.00	11.9500	0.4874	26.96	1032.3	220.4	15739.	17.66
46.00	12.1250	0.5340	26.34	1015.1	202.3	15073.	18.55
50.00	13.0750	0.4857	26.60	930.6	184.3	14248.	19.88
54.00	12.7750	0.4716	27.18	879.8	166.0	12987.	21.78
58.00	12.9500	0.4961	28.03	795.5	146.8	12011.	21.93
62.00	11.0250	0.4671	28.53	704.5	131.7	11498.	21.85
66.00	12.2750	0.4929	28.51	639.2	114.0	9957.	22.41
70.00	11.8250	0.4947	27.25	531.9	97.7	8972.	23.05
74.00	10.9250	0.5217	30.06	501.6	84.2	8416.	24.24
78.00	9.5750	0.4856	30.73	425.6	70.7	7440.	24.39
82.00	8.4500	0.4793	30.11	340.4	59.0	6644.	24.22
86.00	8.1250	0.4400	31.49	283.9	49.3	5469.	25.93
90.00	7.0250	0.5160	30.26	261.0	40.6	4406.	26.61
94.00	6.9500	0.4748	29.38	211.8	33.2	4003.	25.38
98.00	5.8750	0.4596	30.13	188.7	26.4	3121.	26.53
102.00	4.9000	0.4490	30.55	134.7	20.3	2478.	26.04
106.00	4.1750	0.4671	30.25	109.9	15.8	1818.	24.01
110.00	3.5250	0.5248	29.43	81.5	11.9	1585.	21.58
114.00	2.5250	0.5445	31.91	56.7	9.1	1182.	24.60
118.00	1.8500	0.5270	37.12	45.7	6.6	1083.	26.29
122.00	1.9750	0.5570	33.81	38.4	5.1	952.	23.53
126.00	1.2250	0.4898	29.96	29.0	3.9	695.	21.14
130.00	1.1500	0.5000	28.36	23.4	2.8	551.	20.35
134.00	0.9750	0.6666	35.53	17.0	1.9	430.	21.17
138.00	0.7000	0.4643	21.96	9.7	1.4	260.	23.57
142.00	0.4750	0.6315	27.43	8.1	1.0	134.	23.78
146.00	0.3500	0.3571	26.58	5.0	0.6	112.	17.43
150.00	0.2000	0.4999	41.50	4.0	0.4	73.	14.16
154.00	0.2000	0.3750	33.84	2.8	0.3	61.	24.87
158.00	0.1500	0.6666	20.90	2.0	0.2	46.	21.10
162.00	0.0500	0.4998	9.39	0.7	0.1	22.	16.43
166.00	0.1000	0.4999	35.50	0.4	0.1	28.	15.31
170.00	0.0250	0.9990	0.53	0.4	0.0	31.	20.65
174.00	0.0250	0.0000	17.22	0.1	0.0	2.	19.05
178.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
182.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
186.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
194.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
198.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 651. TOTAL=				81.8	18.1	IONZ/TOTAL=	0.1808

150keV Cr 52 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
131.979	43.538	88.258	40.531	38.975	0.229	2.623	For ions
(nm)		61.459	38.130	22.882	0.561	2.809	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	0.9333	0.5357	26.00	892.4	363.3	5033.	10.21
9.00	1.5833	0.4737	31.22	925.9	364.5	7711.	11.73
15.00	2.5167	0.4901	28.32	1083.9	364.9	9881.	13.26
21.00	3.0500	0.4372	32.31	1104.5	362.1	10988.	15.18
27.00	4.0667	0.4795	34.76	1076.6	357.0	12912.	17.19
33.00	5.0500	0.4125	36.18	1127.8	348.8	14496.	18.39
39.00	5.4167	0.4462	35.22	1179.4	338.8	14120.	19.37
45.00	6.3333	0.5263	37.11	1148.7	325.6	15349.	21.10
51.00	6.7833	0.4939	37.47	1118.8	305.8	14617.	23.19
57.00	7.6333	0.4847	37.70	1091.1	287.1	14020.	25.32
63.00	8.2500	0.4707	38.05	1045.9	267.2	13988.	26.42
69.00	8.5667	0.4786	38.64	986.9	242.9	13998.	27.17
75.00	8.9333	0.4776	37.85	940.7	221.1	13288.	27.32
81.00	9.4333	0.4417	38.70	903.2	198.1	13057.	29.26
87.00	9.2333	0.5108	39.03	773.3	174.1	11796.	30.63
93.00	9.0333	0.4834	40.91	725.9	152.3	10605.	30.87
99.00	8.3500	0.4431	41.56	626.0	129.6	8815.	31.97
105.00	8.0000	0.5062	39.02	543.2	110.5	7920.	32.95
111.00	7.6833	0.4794	39.51	474.8	91.9	7800.	34.44
117.00	7.0167	0.4893	41.22	397.5	74.2	6589.	34.50
123.00	6.4167	0.5195	44.58	320.9	59.6	6177.	34.59
129.00	5.5000	0.4970	41.82	275.8	48.1	5077.	34.87
135.00	5.4000	0.5062	42.43	229.3	38.8	3905.	36.14
141.00	4.4667	0.5000	39.30	178.4	29.3	2901.	36.70
147.00	3.9000	0.5043	43.39	134.5	22.2	2472.	37.45
153.00	2.7833	0.4611	42.58	99.4	15.9	1673.	34.85
159.00	2.2667	0.4118	38.16	70.8	11.2	1049.	37.87
165.00	1.8500	0.5225	40.87	55.0	8.1	736.	35.43
171.00	1.2667	0.5921	42.76	39.2	5.5	794.	43.19
177.00	1.1500	0.5797	35.53	26.4	3.6	566.	33.74
183.00	0.7000	0.4286	33.48	18.4	2.5	472.	30.89
189.00	0.4500	0.4074	44.19	12.2	1.6	232.	30.28
195.00	0.4000	0.4583	35.95	7.2	1.1	160.	31.26
201.00	0.2667	0.5000	34.13	6.2	0.7	93.	23.81
207.00	0.1333	0.2500	34.17	3.3	0.5	68.	11.51
213.00	0.1167	0.5713	48.91	1.6	0.2	41.	17.65
219.00	0.1000	0.6666	29.23	0.8	0.1	14.	9.89
225.00	0.0000	0.0000	0.00	0.4	0.0	0.	0.00
231.00	0.0167	0.9990	80.22	0.3	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
255.00	0.0167	0.0000	15.95	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 853.			TOTAL=	117.9	32.0	IONZ/TOTAL=	0.2134

200keV Cr 52 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
170.016	55.324	115.340	51.965	50.024	0.180	2.644	For ions
(nm)		78.547	48.447	29.592	0.601	3.016	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
4.00	0.9500	0.4737	41.04	876.1	419.6	4734.	12.85
12.00	1.4375	0.4087	40.99	972.8	421.4	7198.	13.33
20.00	1.6500	0.5000	41.26	1022.6	419.4	8679.	16.49
28.00	2.5375	0.5074	41.63	1049.8	417.0	10081.	18.56
36.00	2.8500	0.5000	41.82	1089.0	407.1	11477.	20.67
44.00	3.2625	0.5057	42.84	1120.3	397.5	12354.	23.77
52.00	4.1375	0.5045	47.44	1110.8	384.0	13057.	26.36
60.00	4.4500	0.4551	45.81	1124.9	368.6	13576.	28.32
68.00	5.2375	0.5060	46.26	1138.6	349.9	13820.	28.93
76.00	6.4375	0.4835	48.08	1082.1	326.1	14026.	30.28
84.00	6.2875	0.5050	48.53	1072.4	302.6	13270.	32.17
92.00	6.8625	0.4954	49.24	960.8	273.9	12808.	35.77
100.00	6.7750	0.4465	52.84	926.2	246.7	12213.	37.29
108.00	7.1000	0.5088	50.90	852.3	217.4	11074.	38.65
116.00	7.4750	0.4916	51.09	788.4	190.2	10177.	39.64
124.00	6.7625	0.4603	52.47	678.6	164.6	8893.	41.12
132.00	6.6000	0.4962	50.97	589.2	138.8	7410.	41.62
140.00	6.5125	0.4837	54.55	524.4	115.2	6383.	45.72
148.00	5.9125	0.5032	50.80	429.0	94.0	5724.	44.30
156.00	5.6875	0.4967	52.94	391.1	77.4	4904.	45.77
164.00	5.0750	0.4655	53.71	290.9	60.1	4300.	46.25
172.00	4.0000	0.4750	52.12	243.9	45.9	3230.	43.25
180.00	3.0875	0.4575	53.84	175.2	34.4	2485.	46.30
188.00	2.9250	0.4316	48.26	139.5	26.5	1800.	47.84
196.00	2.6250	0.4667	52.10	111.0	20.1	1543.	44.88
204.00	1.8625	0.5235	48.41	81.7	14.0	1088.	49.45
212.00	1.7500	0.5500	56.75	57.2	9.4	837.	50.63
220.00	1.0375	0.4819	56.10	38.0	6.4	586.	43.66
228.00	0.8500	0.4853	52.79	30.1	4.6	486.	42.87
236.00	0.4875	0.3846	55.17	18.6	3.1	322.	53.82
244.00	0.4500	0.4444	50.52	11.3	1.7	142.	54.07
252.00	0.2375	0.3158	49.93	6.6	0.9	116.	48.39
260.00	0.1750	0.4285	42.25	4.3	0.5	72.	40.29
268.00	0.1000	0.3750	54.18	2.0	0.4	70.	51.74
276.00	0.1250	0.5999	41.87	1.4	0.2	51.	56.35
284.00	0.0250	0.4998	50.97	0.5	0.1	11.	44.02
292.00	0.0000	0.0000	0.00	0.5	0.0	0.	0.00
300.00	0.0125	0.9990	12.23	0.0	0.0	0.	0.00
308.00	0.0000	0.0000	0.00	0.3	0.1	0.	0.00
316.00	0.0125	0.0000	41.24	0.2	0.0	0.	0.00
324.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
364.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 1027. TOTAL=				152.1	47.7	IONZ/TOTAL=	0.2387

300keV Cr 52 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
248.553	76.150	172.929	74.453	71.698	0.078	2.551	For ions
(nm)		119.213	71.456	43.966	0.434	2.673	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
6.00	0.3929	0.4242	50.87	838.7	512.0	3951.	14.52
18.00	0.8929	0.4800	59.10	910.1	512.3	5829.	17.64
30.00	1.1071	0.5269	61.48	915.0	509.8	6615.	21.56
42.00	1.4881	0.5280	69.27	947.9	506.7	7991.	24.55
54.00	1.8452	0.5097	67.27	1020.8	498.5	8750.	34.88
66.00	2.0952	0.5170	74.81	1067.4	488.2	8656.	40.28
78.00	2.8333	0.5378	68.94	1029.7	470.4	9609.	41.05
90.00	3.0714	0.4884	65.01	1103.7	448.5	10153.	39.93
102.00	3.6429	0.4935	68.71	1043.3	423.2	10385.	42.27
114.00	3.8571	0.5463	68.72	1030.9	395.9	10719.	47.65
126.00	3.8214	0.5078	68.08	983.5	362.4	10508.	50.40
138.00	4.5357	0.5066	75.61	949.1	332.8	9819.	53.78
150.00	4.9048	0.4951	72.12	883.8	295.2	9943.	55.60
162.00	4.7381	0.5176	79.06	848.1	264.9	9314.	53.23
174.00	4.8810	0.4537	76.01	745.0	226.5	8716.	55.88
186.00	5.1786	0.4828	74.95	688.2	193.4	7689.	58.89
198.00	4.4881	0.5146	72.65	598.3	160.9	6656.	58.85
210.00	4.4762	0.4734	72.80	488.8	130.1	6089.	61.43
222.00	4.5357	0.4409	70.99	429.8	103.5	5097.	57.06
234.00	4.2381	0.4916	64.96	331.8	81.4	4138.	53.41
246.00	3.2143	0.4889	71.24	260.7	62.7	2766.	58.81
258.00	3.0714	0.4961	76.20	211.3	47.6	2146.	73.25
270.00	2.4048	0.5000	75.62	160.3	34.1	1590.	66.63
282.00	1.8810	0.4747	66.74	123.2	23.7	1185.	63.39
294.00	1.4286	0.5000	73.33	73.6	16.2	994.	57.11
306.00	1.1429	0.4375	81.78	54.3	11.6	843.	64.59
318.00	0.8095	0.4559	61.82	40.5	8.4	562.	67.80
330.00	0.6190	0.4615	72.99	28.3	5.4	391.	74.51
342.00	0.4286	0.5278	63.85	21.8	3.6	180.	57.15
354.00	0.3690	0.5484	82.86	11.7	1.7	98.	83.00
366.00	0.1667	0.5000	75.92	6.7	0.9	104.	57.87
378.00	0.1071	0.1111	40.99	2.5	0.4	58.	44.22
390.00	0.0238	0.4998	63.32	0.7	0.1	1.	53.84
402.00	0.0357	0.0000	67.09	0.6	0.1	0.	0.00
414.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
426.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
438.00	0.0119	0.0000	61.36	0.1	0.0	0.	0.00
450.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
498.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7000,	800 TIME: 1008.		TOTAL=	214.2	85.6	IONZ/TOTAL=	0.2855

400keV Cr 52 in GaAs 800.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
323.260	93.574	227.730	91.915	92.113	0.010	2.565	For ions
(nm)		160.536	93.615	55.486	0.398	2.622	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
8.00	0.1875	0.4666	85.08	738.4	590.3	3068.	14.14
24.00	0.4500	0.4722	63.02	770.6	588.4	4788.	18.97
40.00	0.7375	0.5932	62.37	887.6	586.2	5558.	28.50
56.00	1.1000	0.4659	87.51	824.5	581.7	6302.	35.95
72.00	1.3375	0.5327	86.45	1003.5	569.4	6916.	42.42
88.00	1.4250	0.5702	87.22	953.3	558.0	7721.	41.19
104.00	2.0375	0.5276	93.74	1026.4	542.9	7623.	49.80
120.00	2.2125	0.5424	91.27	1073.7	523.3	8821.	52.13
136.00	2.5000	0.4900	93.49	1040.9	492.7	8447.	57.37
152.00	3.1500	0.5119	93.82	1010.7	456.2	9054.	59.85
168.00	3.5000	0.5036	89.86	1015.4	419.8	8890.	62.77
184.00	3.4750	0.4604	94.07	981.7	378.4	9248.	61.83
200.00	3.8750	0.5032	100.77	909.0	335.5	9029.	66.46
216.00	3.9375	0.5016	90.89	813.1	297.1	8673.	67.07
232.00	3.9125	0.5080	89.63	724.3	252.6	6929.	69.49
248.00	4.0000	0.5219	95.74	644.8	209.4	6059.	74.63
264.00	3.7250	0.4664	90.03	559.6	172.2	5474.	73.96
280.00	3.6750	0.5204	93.74	491.4	140.3	4336.	74.33
296.00	3.7125	0.4916	94.17	406.4	107.3	4288.	78.64
312.00	3.0625	0.5224	96.15	299.7	79.9	3123.	83.04
328.00	2.5375	0.5074	94.77	252.5	58.3	2422.	96.56
344.00	2.1875	0.4857	91.97	164.2	39.2	2020.	80.02
360.00	1.6750	0.5075	91.84	117.7	27.4	1416.	80.76
376.00	1.2000	0.5312	86.46	80.6	17.7	1099.	71.73
392.00	0.9750	0.3974	88.62	58.7	12.0	805.	80.51
408.00	0.5500	0.4773	88.82	35.0	7.3	547.	84.81
424.00	0.3250	0.5384	80.46	25.3	4.7	383.	79.69
440.00	0.4000	0.6250	84.92	14.1	2.6	238.	64.30
456.00	0.1750	0.4285	60.45	8.5	1.3	99.	27.07
472.00	0.1125	0.6666	111.92	4.3	0.7	79.	48.79
488.00	0.0250	0.0000	70.04	0.9	0.2	27.	46.73
504.00	0.0250	0.4998	38.60	0.2	0.1	12.	19.91
520.00	0.0000	0.0000	0.00	0.1	0.1	13.	9.95
536.00	0.0000	0.0000	0.00	0.1	0.1	0.	0.00
552.00	0.0000	0.0000	0.00	0.3	0.0	0.	0.00
568.00	0.0125	0.9990	177.41	0.0	0.0	0.	0.00
584.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
600.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
616.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
632.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
648.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
664.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
680.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
696.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
712.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
728.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
744.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
760.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
776.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
792.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5000, 650 TIME: 929. TOTAL=				271.0	128.9	IONZ/TOTAL=	0.3222

10keV Zn 65 in GaAs 40.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
13.039	5.409	8.495	4.669	4.206	0.680	3.348	For ions
(nm)		5.558	4.007	2.252	1.034	4.100	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.40	13.0357	0.4247	3.56	801.2	84.7	3597.	1.93
1.20	30.1786	0.4379	3.15	1057.8	85.4	7388.	2.12
2.00	46.7857	0.3931	3.51	1041.2	83.7	9764.	2.27
2.80	60.7143	0.4559	3.27	1092.5	80.8	11345.	2.51
3.60	64.8214	0.4325	3.44	988.4	75.8	12400.	2.72
4.40	73.2143	0.4512	3.77	920.0	70.7	12993.	2.87
5.20	82.1429	0.4565	3.69	855.2	64.4	13254.	2.90
6.00	85.0000	0.4349	3.75	778.5	57.1	13021.	3.10
6.80	85.8929	0.4532	4.34	689.9	50.2	12479.	3.33
7.60	80.7143	0.4403	3.89	590.3	43.8	11578.	3.38
8.40	81.6071	0.4551	4.14	516.2	37.6	10441.	3.55
9.20	77.5000	0.4562	4.19	441.0	31.7	9235.	3.65
10.00	65.0000	0.4396	4.43	363.0	26.1	7889.	3.90
10.80	61.0714	0.4474	4.73	301.6	21.0	6897.	3.95
11.60	55.7143	0.4904	4.56	252.0	17.5	5884.	4.08
12.40	47.5000	0.4812	5.02	189.7	14.0	4933.	4.32
13.20	44.1071	0.4170	4.82	171.8	11.4	4031.	4.31
14.00	32.8571	0.4076	4.30	138.3	8.9	3284.	4.43
14.80	30.5357	0.3977	5.30	96.9	6.9	2590.	4.59
15.60	24.4643	0.4890	5.08	78.2	5.2	2182.	4.92
16.40	19.8214	0.4324	5.12	58.1	4.0	1644.	4.83
17.20	15.5357	0.3793	5.01	43.2	2.8	1212.	4.99
18.00	13.7500	0.4286	3.76	32.0	2.1	970.	5.01
18.80	11.9643	0.3582	4.75	25.0	1.6	714.	4.81
19.60	7.5000	0.4762	5.00	13.8	1.0	489.	5.19
20.40	3.7500	0.4762	5.90	13.2	0.8	404.	5.11
21.20	4.1071	0.3913	5.94	9.8	0.6	269.	4.62
22.00	3.3929	0.5263	6.27	6.2	0.4	186.	4.86
22.80	1.2500	0.4285	5.42	4.4	0.3	130.	5.54
23.60	2.6786	0.5333	5.78	2.4	0.2	107.	6.13
24.40	0.3571	0.0000	3.11	2.6	0.1	82.	5.28
25.20	1.0714	0.1666	6.30	1.4	0.1	70.	5.80
26.00	0.5357	0.6664	6.26	1.0	0.1	47.	6.26
26.80	0.1786	0.0000	7.93	1.0	0.1	32.	6.74
27.60	0.5357	0.3332	8.31	1.4	0.1	22.	6.90
28.40	0.5357	0.0000	1.11	0.4	0.0	21.	7.13
29.20	0.1786	0.9990	8.33	0.0	0.0	5.	8.60
30.00	0.1786	0.0000	5.04	0.3	0.0	1.	2.24
30.80	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
31.60	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
32.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
33.20	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
34.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
34.80	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
35.60	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
36.40	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
37.20	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
38.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
38.80	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
39.60	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS: 7000, 2776 TIME: 169. TOTAL= 9.3 0.7 IONZ/TOTAL= 0.0715

25keV Zn 65 in GaAs 50.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
24.492	9.959	16.200	8.708	7.598	0.565	3.043	For ions
(nm)		10.181	7.508	4.076	1.047	3.990	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.50	6.8000	0.3382	5.62	1060.1	133.1	4524.	3.57
1.50	12.0000	0.3833	6.91	1308.2	133.7	8489.	3.36
2.50	18.1000	0.4254	6.16	1298.9	133.6	11022.	3.53
3.50	22.2000	0.4504	5.62	1317.6	131.4	13206.	3.96
4.50	26.8000	0.3806	5.64	1287.4	129.2	14914.	4.12
5.50	29.2000	0.4863	6.55	1276.9	125.7	16143.	4.25
6.50	34.6000	0.3988	6.38	1275.9	120.7	16993.	4.49
7.50	36.8000	0.4293	6.28	1229.8	115.3	17063.	4.74
8.50	38.0000	0.4289	6.75	1201.1	110.4	17480.	4.82
9.50	38.3000	0.4621	6.95	1118.3	103.6	17642.	5.11
10.50	39.0000	0.4179	6.40	1075.2	96.3	17554.	5.19
11.50	41.4000	0.4324	6.73	959.1	88.5	17062.	5.50
12.50	48.4000	0.4607	7.30	937.7	82.6	15908.	5.75
13.50	43.3000	0.4226	6.94	831.9	75.4	15220.	5.81
14.50	46.0000	0.4413	6.74	815.9	69.5	14356.	6.02
15.50	41.8000	0.4402	7.73	766.8	63.2	13222.	6.32
16.50	42.2000	0.4455	7.83	658.6	56.6	12254.	6.47
17.50	42.4000	0.4222	8.29	605.2	50.6	11390.	6.51
18.50	39.8000	0.5000	8.09	527.1	44.0	9871.	6.76
19.50	35.0000	0.4543	7.97	473.8	39.2	8530.	7.13
20.50	34.2000	0.4181	7.63	426.5	34.5	8180.	7.35
21.50	31.0000	0.4258	8.27	358.6	30.1	7568.	7.62
22.50	29.0000	0.4241	8.35	318.9	25.5	6277.	7.60
23.50	27.9000	0.4624	8.74	283.4	21.5	5336.	7.78
24.50	25.0000	0.4520	8.16	228.1	18.5	4778.	7.95
25.50	24.0000	0.4292	8.51	203.9	16.2	4375.	8.67
26.50	18.5000	0.4432	9.11	174.3	13.3	3793.	8.60
27.50	14.7000	0.4354	9.78	138.1	11.3	3460.	8.53
28.50	14.6000	0.4247	8.33	119.1	9.4	2767.	8.23
29.50	13.6000	0.4853	9.60	100.3	8.0	2182.	8.32
30.50	10.1000	0.4158	9.94	78.7	6.7	1638.	8.55
31.50	10.9000	0.4495	9.84	81.7	5.9	1540.	8.11
32.50	8.6000	0.4419	9.00	68.9	4.6	1353.	7.43
33.50	7.4000	0.4189	8.59	49.2	3.5	1107.	7.35
34.50	7.1000	0.3099	9.17	38.8	2.8	932.	8.22
35.50	5.4000	0.4259	9.11	28.9	2.1	718.	8.93
36.50	4.4000	0.2954	10.97	20.1	1.7	531.	8.66
37.50	3.6000	0.6944	7.39	20.0	1.4	405.	9.88
38.50	2.8000	0.4286	8.21	20.2	1.2	425.	9.27
39.50	2.3000	0.4782	9.20	11.3	1.0	425.	9.40
40.50	1.3000	0.3846	10.48	10.6	0.7	291.	9.92
41.50	2.0000	0.4000	9.73	8.7	0.6	242.	7.94
42.50	1.7000	0.2941	9.25	7.9	0.5	209.	8.28
43.50	1.3000	0.3846	10.55	4.6	0.3	153.	9.66
44.50	0.8000	0.4999	8.15	4.7	0.2	99.	9.67
45.50	0.6000	0.1666	8.03	2.1	0.2	67.	9.87
46.50	0.8000	0.3750	9.13	1.4	0.1	30.	10.24
47.50	0.2000	0.4998	7.30	1.7	0.1	25.	12.19
48.50	0.0000	0.0000	0.00	0.9	0.1	22.	13.24
49.50	0.3000	0.3332	11.80	0.9	0.1	7.	12.78
IONS:10000, 1201 TIME: 220. TOTAL=				22.8	2.1	IONZ/TOTAL=	0.0851

50keV Zn 65 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
41.366	16.417	27.856	14.517	12.618	0.534	3.049	For ions
(nm)		19.113	13.236	6.996	0.849	3.556	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.00	3.8500	0.4026	9.69	1247.0	187.9	5911.	4.93
3.00	7.3500	0.4286	9.71	1346.2	187.9	10431.	4.95
5.00	11.0000	0.3727	8.83	1469.9	185.8	12759.	5.64
7.00	12.1000	0.4545	10.03	1435.0	182.4	14869.	6.40
9.00	15.1000	0.4536	9.52	1434.1	178.5	16264.	6.77
11.00	18.2000	0.4890	10.43	1440.4	171.3	17645.	7.05
13.00	21.4000	0.4579	11.02	1397.2	164.2	17829.	7.32
15.00	22.9500	0.4597	11.80	1335.8	154.5	18048.	7.91
17.00	24.2500	0.4598	11.90	1281.8	144.8	18731.	8.40
19.00	27.5500	0.4374	11.82	1217.3	133.9	18574.	8.73
21.00	25.3000	0.3992	11.64	1176.4	121.8	18506.	9.79
23.00	25.7500	0.4078	11.68	1020.5	108.9	17642.	10.06
25.00	26.5000	0.3962	12.37	903.7	97.2	16468.	10.03
27.00	25.6500	0.5068	13.18	860.1	87.0	15246.	9.96
29.00	26.0500	0.4357	13.17	775.1	75.8	13776.	10.29
31.00	22.6500	0.4415	13.86	646.2	65.2	12247.	11.01
33.00	22.4500	0.4699	13.31	597.2	56.8	11053.	10.79
35.00	22.1000	0.4457	12.07	531.2	47.7	10424.	10.99
37.00	19.3000	0.4145	13.26	415.9	39.7	9008.	11.22
39.00	15.2500	0.4459	14.92	353.9	33.4	7814.	11.70
41.00	16.7500	0.4418	13.39	292.4	27.1	6362.	12.29
43.00	13.1500	0.3840	13.71	254.6	22.9	5249.	12.20
45.00	12.9000	0.4496	14.48	193.5	18.3	4892.	12.08
47.00	10.0000	0.4700	14.38	170.1	15.0	4051.	12.67
49.00	8.3000	0.4337	14.39	127.7	12.1	3194.	13.51
51.00	7.7000	0.4545	14.55	119.3	10.0	2497.	13.00
53.00	6.8500	0.3869	14.02	87.8	7.5	2034.	12.80
55.00	4.8500	0.4639	15.25	71.3	5.7	1573.	13.25
57.00	3.8000	0.5000	16.76	47.8	4.5	1285.	14.25
59.00	3.5000	0.5000	15.35	43.9	3.5	1219.	18.24
61.00	3.1500	0.5555	15.17	33.2	2.7	991.	17.44
63.00	1.9500	0.5128	17.31	23.7	2.3	651.	19.78
65.00	1.7000	0.4412	13.55	17.9	1.4	419.	21.12
67.00	1.5500	0.3548	18.99	10.7	1.1	265.	20.20
69.00	1.0500	0.4762	13.06	12.0	0.9	305.	18.54
71.00	0.7000	0.5000	12.00	8.5	0.7	188.	21.55
73.00	0.4000	0.4999	16.42	4.6	0.4	94.	20.08
75.00	0.5000	0.5000	16.45	2.6	0.3	115.	18.82
77.00	0.3500	0.5713	12.33	3.3	0.3	137.	14.97
79.00	0.3000	0.4999	16.88	1.6	0.1	72.	14.69
81.00	0.1000	0.0000	23.13	1.4	0.1	49.	20.18
83.00	0.2000	0.2499	11.82	1.1	0.1	32.	21.10
85.00	0.0500	0.9990	5.26	0.5	0.0	12.	18.89
87.00	0.0500	0.9990	5.80	0.2	0.0	11.	14.46
89.00	0.0000	0.0000	0.00	0.3	0.0	6.	16.91
91.00	0.0500	0.9990	6.56	0.1	0.0	7.	16.68
93.00	0.0000	0.0000	0.00	0.0	0.0	13.	15.99
95.00	0.0000	0.0000	0.00	0.0	0.0	10.	17.80
97.00	0.0000	0.0000	0.00	0.0	0.0	7.	19.37
99.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 357. TOTAL=				44.8	5.1	IONZ/TOTAL=	0.1026

75keV Zn 65 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
56.709	22.181	38.780	19.572	17.042	0.475	3.004	For ions
(nm)		26.418	18.167	9.935	0.804	3.470	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.25	1.8800	0.5106	11.42	1277.7	229.8	6028.	5.56
3.75	4.7600	0.3950	12.19	1464.7	230.0	10602.	5.94
6.25	6.9200	0.4740	12.17	1507.6	230.1	13366.	6.95
8.75	9.2800	0.4224	12.10	1630.9	225.5	15569.	7.62
11.25	9.8000	0.4041	13.53	1487.3	219.6	17389.	8.29
13.75	11.6000	0.4000	14.29	1497.7	213.3	18960.	8.81
16.25	11.6000	0.4586	15.88	1452.4	206.5	18871.	9.67
18.75	14.6400	0.4317	14.44	1440.8	196.4	19049.	10.39
21.25	17.2800	0.3796	14.75	1441.3	186.5	19430.	11.08
23.75	16.7600	0.4272	15.18	1309.0	173.6	19896.	11.52
26.25	18.4800	0.4610	16.01	1322.6	163.1	18537.	11.53
28.75	18.6800	0.4604	16.46	1248.9	152.0	18392.	12.54
31.25	20.6000	0.4116	16.25	1156.9	138.7	18052.	13.30
33.75	18.1600	0.4273	15.97	1041.1	124.0	16731.	13.71
36.25	19.2000	0.4500	18.40	924.0	112.0	16150.	14.14
38.75	18.8000	0.4574	16.03	879.0	101.1	14645.	14.65
41.25	17.6800	0.4072	18.08	808.6	90.0	13834.	14.32
43.75	20.3200	0.4390	17.71	721.3	79.3	13255.	14.51
46.25	16.4800	0.4369	18.37	650.7	67.0	11792.	14.95
48.75	15.8800	0.4358	18.62	522.2	57.2	10710.	15.38
51.25	15.1600	0.4828	18.72	469.0	48.8	9280.	15.51
53.75	12.5200	0.4281	18.16	413.3	41.0	8241.	15.22
56.25	12.2000	0.4197	17.93	337.9	35.2	6935.	15.43
58.75	11.0800	0.3863	20.16	293.1	28.9	6051.	16.74
61.25	9.3200	0.4421	18.95	245.1	23.6	5366.	16.60
63.75	8.1200	0.4631	19.70	193.1	19.5	4810.	17.35
66.25	6.4400	0.4907	20.30	156.8	15.7	3768.	17.89
68.75	4.9600	0.4516	19.25	127.5	12.9	3131.	18.25
71.25	4.8400	0.5041	19.15	102.5	10.4	3052.	17.60
73.75	5.0000	0.4640	19.55	75.7	8.1	2570.	18.37
76.25	3.5600	0.3708	20.80	66.8	6.5	1849.	19.84
78.75	2.9600	0.3513	19.31	57.9	5.3	1372.	19.49
81.25	2.4400	0.4754	18.46	52.4	4.0	991.	19.18
83.75	2.0400	0.2353	20.79	32.3	3.0	688.	20.19
86.25	1.5200	0.3421	17.55	28.4	2.2	442.	20.81
88.75	1.0800	0.4815	20.93	19.6	1.6	251.	17.72
91.25	1.0400	0.4615	21.53	15.2	1.2	270.	20.32
93.75	1.0000	0.6400	15.76	9.9	0.9	254.	19.03
96.25	0.4800	0.4166	23.63	7.5	0.6	165.	19.93
98.75	0.6400	0.4375	24.04	4.9	0.5	167.	14.61
101.25	0.2400	0.4999	17.48	3.2	0.3	142.	15.49
103.75	0.0400	0.9990	10.29	3.2	0.2	104.	15.06
106.25	0.2000	0.3999	9.32	1.6	0.2	108.	13.39
108.75	0.0800	0.9995	21.79	2.1	0.2	71.	12.34
111.25	0.1200	0.3332	27.99	1.0	0.1	32.	17.00
113.75	0.0800	0.0000	8.69	0.5	0.1	21.	21.49
116.25	0.0400	0.0000	7.19	0.5	0.1	38.	23.60
118.75	0.0000	0.0000	0.00	0.6	0.0	57.	24.27
121.25	0.1200	0.0000	23.28	0.8	0.1	16.	17.99
123.75	0.0000	0.0000	0.00	0.0	0.0	1.	0.13
IONS:10000, 1000 TIME: 508. TOTAL=				66.3	8.7	IONZ/TOTAL=	0.1157

100keV Zn 65 in GaAs 175.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
72.342	27.637	49.907	24.477	21.582	0.430	2.912	For ions
(nm)		33.810	22.977	13.014	0.790	3.323	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.75	1.9143	0.4627	15.21	1319.2	264.8	6909.	6.68
5.25	3.4857	0.4836	14.51	1460.0	264.2	11297.	6.93
8.75	4.4571	0.4423	16.90	1520.3	261.5	13777.	7.74
12.25	6.5714	0.3957	16.46	1498.9	258.4	16145.	9.01
15.75	8.2000	0.3624	15.73	1506.2	252.3	18311.	10.40
19.25	8.9143	0.4391	17.88	1508.6	243.6	19493.	11.23
22.75	10.7429	0.4282	19.18	1518.8	234.1	19850.	12.51
26.25	11.5714	0.3951	20.57	1501.2	220.5	20579.	13.32
29.75	13.8286	0.4731	19.03	1486.9	207.5	20470.	13.83
33.25	15.0571	0.4611	19.09	1388.7	193.2	19285.	14.27
36.75	14.3714	0.4573	19.50	1271.1	176.6	18674.	15.08
40.25	16.1714	0.4099	21.76	1207.1	161.0	18635.	16.16
43.75	14.3429	0.4323	20.16	1112.0	144.0	17814.	17.03
47.25	16.7429	0.4676	20.96	1006.5	127.8	17145.	17.76
50.75	15.3143	0.4123	22.35	865.3	111.0	15916.	18.70
54.25	14.8286	0.4258	22.84	784.9	96.7	13841.	19.24
57.75	13.6571	0.4644	23.98	692.7	83.0	12503.	19.71
61.25	12.2000	0.4426	23.23	585.8	69.5	10783.	20.05
64.75	11.0286	0.4145	22.18	535.6	58.5	9559.	20.23
68.25	11.2571	0.4289	23.16	422.1	47.7	8369.	21.67
71.75	9.6286	0.4154	21.86	346.7	39.8	7060.	22.74
75.25	8.8571	0.4258	24.60	300.8	32.9	5732.	23.25
78.75	7.5429	0.4167	25.28	243.6	26.1	5125.	24.93
82.25	6.6000	0.4805	24.90	193.2	20.8	4291.	24.88
85.75	4.9714	0.3908	24.59	148.1	16.2	3322.	23.37
89.25	4.5714	0.3937	21.87	106.6	12.3	2361.	24.31
92.75	3.8571	0.4000	28.18	93.1	9.2	1965.	26.02
96.25	2.5714	0.4889	25.18	67.7	7.4	1273.	25.72
99.75	2.4571	0.5232	19.42	52.1	5.4	1141.	23.19
103.25	1.8571	0.4000	25.86	38.3	4.2	830.	23.38
106.75	1.4000	0.5102	28.99	34.4	3.2	853.	27.26
110.25	1.2000	0.5714	33.95	25.9	2.3	713.	28.14
113.75	1.2000	0.4286	27.84	15.9	1.5	536.	28.42
117.25	0.5714	0.2500	27.03	12.0	1.0	371.	31.23
120.75	0.4286	0.2666	25.46	6.1	0.7	329.	25.36
124.25	0.3143	0.4545	27.46	7.0	0.5	131.	26.53
127.75	0.1429	0.5999	25.64	2.8	0.3	153.	24.93
131.25	0.2286	0.1250	32.78	2.9	0.2	130.	26.83
134.75	0.0857	0.6664	23.39	1.5	0.1	45.	34.96
138.25	0.1143	0.0000	26.46	1.2	0.1	17.	45.78
141.75	0.0286	0.9990	4.11	0.3	0.0	1.	52.65
145.25	0.1143	0.2499	35.58	0.4	0.0	0.	0.00
148.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
152.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
155.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
159.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
162.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
166.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
169.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
173.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 630.			TOTAL=	87.1	12.8	IONZ/TOTAL=	0.1282

150keV Zn 65 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
102.445	37.368	71.689	34.088	30.112	0.394	2.929	For ions
(nm)		48.404	31.514	17.917	0.719	3.246	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	1.3000	0.4359	22.84	1279.5	323.8	7187.	9.91
9.00	2.5167	0.4702	21.81	1444.9	324.0	11892.	11.87
15.00	3.5500	0.4789	22.97	1537.3	318.9	13895.	12.83
21.00	4.8167	0.4602	24.47	1545.4	312.0	15736.	13.04
27.00	5.4500	0.4465	23.65	1531.0	299.5	17711.	14.72
33.00	7.6833	0.4577	25.87	1556.0	287.1	19034.	16.78
39.00	8.3833	0.4493	25.32	1537.3	268.6	20354.	18.18
45.00	9.3500	0.4670	30.50	1483.7	249.3	20908.	20.15
51.00	10.5667	0.4495	27.97	1394.8	226.8	19785.	20.28
57.00	12.1000	0.4421	30.39	1276.4	200.5	18189.	22.28
63.00	11.3667	0.4472	29.16	1142.8	175.4	17727.	23.82
69.00	10.8500	0.4439	30.31	1010.0	149.4	16067.	25.86
75.00	10.8167	0.4284	30.45	866.9	126.8	13812.	26.10
81.00	9.9500	0.4221	31.91	730.1	104.9	11698.	26.65
87.00	9.4500	0.4109	31.30	656.0	87.3	10178.	28.83
93.00	8.5333	0.4336	34.48	531.7	69.6	9043.	28.83
99.00	7.8667	0.4280	33.29	439.1	56.0	7005.	29.01
105.00	6.7333	0.4827	33.93	338.7	41.6	5100.	29.15
111.00	5.1333	0.4416	31.87	256.5	30.7	4210.	28.58
117.00	4.7000	0.4433	32.93	202.4	22.9	3470.	28.51
123.00	3.7333	0.4107	30.98	142.6	17.0	2785.	29.56
129.00	2.8667	0.5174	34.98	103.6	12.1	1834.	30.33
135.00	2.3000	0.4783	34.02	81.5	9.1	1404.	33.20
141.00	1.4500	0.3908	28.72	58.4	6.2	1034.	30.74
147.00	1.3833	0.4699	34.72	35.6	4.1	751.	31.70
153.00	0.8333	0.5800	31.06	26.2	3.0	552.	41.42
159.00	0.7000	0.4286	37.42	19.2	2.0	429.	42.12
165.00	0.4167	0.4000	33.24	13.5	1.2	299.	36.93
171.00	0.3667	0.3636	29.88	6.1	0.7	232.	41.84
177.00	0.2000	0.3333	37.72	3.4	0.3	94.	42.76
183.00	0.1500	0.3333	48.28	2.2	0.2	79.	40.57
189.00	0.0167	0.9990	41.84	1.5	0.1	27.	23.01
195.00	0.1167	0.1428	22.82	0.7	0.1	5.	26.92
201.00	0.0167	0.0000	19.80	0.5	0.0	0.	0.00
207.00	0.0167	0.9990	14.85	0.2	0.0	0.	0.00
213.00	0.0333	0.9995	22.16	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 825.			TOTAL=	127.5	22.4	IONZ/TOTAL=	0.1493

200keV Zn 65 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
133.147	47.308	94.398	43.552	38.893	0.318	2.815	For ions
(nm)		63.320	41.887	22.746	0.725	3.253	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	0.7333	0.5227	26.57	1247.7	373.3	5663.	10.52
9.00	1.5000	0.4889	26.90	1395.1	373.5	8964.	11.42
15.00	2.0333	0.4918	28.56	1430.7	371.1	11458.	13.60
21.00	2.9833	0.4302	32.88	1465.6	367.9	13301.	16.58
27.00	3.2167	0.4767	33.00	1501.8	362.3	14984.	18.28
33.00	4.1333	0.4355	30.58	1488.6	351.8	16476.	19.18
39.00	4.6167	0.4729	32.05	1582.6	343.6	16618.	19.83
45.00	5.9500	0.4482	33.80	1505.1	327.6	17337.	22.63
51.00	6.0500	0.4215	36.66	1532.1	310.1	17913.	23.99
57.00	7.3667	0.4525	38.08	1453.3	292.5	17337.	25.83
63.00	7.3000	0.4452	35.35	1373.4	273.1	16708.	25.79
69.00	8.1667	0.4551	36.34	1359.7	254.4	16586.	27.76
75.00	8.6167	0.4352	37.60	1268.4	231.2	16754.	28.62
81.00	8.6000	0.4302	37.98	1177.0	209.2	15500.	28.20
87.00	8.4500	0.4359	38.12	1105.1	188.7	14437.	28.79
93.00	8.9833	0.4119	38.21	1055.5	167.7	13229.	29.88
99.00	8.1667	0.4184	38.85	922.7	147.1	11722.	30.30
105.00	8.3167	0.4349	41.80	819.1	126.8	10898.	32.11
111.00	7.9833	0.4489	42.13	721.1	108.8	9471.	34.11
117.00	7.3500	0.4512	42.20	581.9	90.2	8515.	35.65
123.00	6.5500	0.4478	40.91	518.0	75.3	7252.	37.19
129.00	5.9833	0.4457	40.83	434.8	62.2	6586.	39.13
135.00	5.3000	0.4654	42.23	371.8	52.0	5579.	39.50
141.00	5.5333	0.4639	41.69	340.4	42.4	5193.	36.74
147.00	4.0167	0.4813	40.47	244.8	32.9	3810.	35.91
153.00	3.7167	0.4484	43.44	187.2	25.2	2876.	40.07
159.00	2.7833	0.4491	50.00	151.1	19.8	2100.	42.92
165.00	2.6667	0.4312	40.57	112.3	14.7	1913.	39.21
171.00	2.0333	0.4918	48.05	88.3	11.2	1538.	36.51
177.00	1.5333	0.4783	38.54	66.5	8.6	1284.	39.28
183.00	1.4167	0.4823	49.07	53.6	6.3	1059.	42.84
189.00	0.9667	0.4655	40.46	33.5	4.4	650.	45.30
195.00	0.6833	0.3902	37.68	27.7	3.2	445.	46.08
201.00	0.6500	0.4872	47.86	19.6	2.4	420.	48.09
207.00	0.4667	0.4643	48.22	18.6	1.7	291.	46.02
213.00	0.3333	0.4000	53.01	8.2	1.0	247.	46.35
219.00	0.1500	0.3333	54.51	6.8	0.8	212.	48.04
225.00	0.2000	0.5000	31.10	5.4	0.7	149.	55.54
231.00	0.1833	0.3636	47.87	5.2	0.4	169.	55.08
237.00	0.1000	0.4999	33.83	1.9	0.2	72.	43.02
243.00	0.0333	0.4998	65.57	0.8	0.1	23.	40.85
249.00	0.0167	0.0000	29.73	1.2	0.1	35.	33.64
255.00	0.0167	0.0000	6.77	0.2	0.1	7.	23.69
261.00	0.0167	0.0000	25.11	0.4	0.0	12.	25.73
267.00	0.0000	0.0000	0.00	0.2	0.0	7.	31.41
273.00	0.0333	0.4998	21.88	0.2	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 993.			TOTAL=	166.1	33.8	IONZ/TOTAL=	0.1692

300keV Zn 65 in GaAs 500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
193.215	66.049	139.718	61.324	55.351	0.206	2.668	For ions
(nm)		95.918	59.735	33.168	0.530	2.831	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
5.00	0.4714	0.3636	34.21	1278.0	456.7	4942.	11.04
15.00	0.8571	0.5500	41.43	1232.1	455.1	7737.	15.10
25.00	1.2429	0.3793	44.83	1323.6	450.7	10027.	19.52
35.00	1.9857	0.4604	43.94	1421.9	444.4	11155.	23.42
45.00	2.5000	0.4457	46.69	1497.6	435.0	11535.	23.95
55.00	2.9857	0.4785	51.27	1474.4	420.7	12748.	27.70
65.00	3.8714	0.3948	54.61	1510.0	400.6	13692.	28.63
75.00	4.0714	0.4175	45.76	1491.3	382.1	13518.	31.65
85.00	4.4714	0.4824	52.40	1460.1	354.7	13501.	33.35
95.00	5.0714	0.4563	50.71	1385.6	329.4	12825.	34.74
105.00	5.6429	0.4253	55.01	1311.8	302.8	13133.	38.39
115.00	5.8143	0.4373	52.26	1213.6	275.4	13491.	40.19
125.00	6.0000	0.4286	55.98	1136.5	239.6	13154.	44.80
135.00	6.0143	0.4418	58.30	1013.7	210.1	11680.	45.92
145.00	6.4571	0.4513	56.76	999.0	182.0	10929.	48.81
155.00	5.4571	0.4869	58.70	825.6	152.5	10218.	48.80
165.00	5.4857	0.4219	57.49	719.7	130.2	9166.	47.46
175.00	5.3714	0.4069	59.03	584.8	101.3	7700.	47.93
185.00	4.5286	0.4479	59.57	484.7	81.0	6140.	54.31
195.00	4.4143	0.4110	55.76	415.8	64.1	4614.	60.77
205.00	3.5714	0.4680	65.58	303.6	49.0	3846.	61.63
215.00	3.1429	0.4909	59.18	238.3	36.6	2746.	54.07
225.00	2.6286	0.4348	60.17	197.1	27.3	2450.	56.15
235.00	2.1000	0.4558	54.62	136.3	19.3	2096.	55.40
245.00	1.4857	0.4519	52.61	100.1	13.9	1541.	53.62
255.00	1.2286	0.5116	57.49	65.3	9.0	1000.	58.96
265.00	0.9714	0.4853	54.17	45.9	5.8	670.	57.18
275.00	0.4714	0.4545	62.17	26.1	3.9	413.	61.99
285.00	0.4857	0.2941	63.92	22.7	2.9	310.	60.82
295.00	0.3000	0.3809	39.19	12.0	1.7	108.	53.76
305.00	0.2429	0.5882	62.19	10.0	1.2	87.	53.41
315.00	0.1286	0.5555	65.36	5.8	0.7	79.	51.55
325.00	0.0857	0.8332	85.08	3.7	0.5	74.	53.99
335.00	0.0143	0.9990	63.39	1.4	0.2	67.	50.22
345.00	0.0286	0.4998	59.82	1.2	0.2	62.	72.77
355.00	0.0143	0.0000	62.53	2.1	0.1	24.	79.84
365.00	0.0286	0.4998	43.69	0.3	0.0	0.	87.27
375.00	0.0143	0.0000	6.87	0.0	0.0	0.	0.00
385.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
395.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
405.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
415.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
425.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
435.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
445.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
465.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
475.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
495.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7000,	800	TIME: 982.	TOTAL=	239.5	60.4	IONZ/TOTAL=	0.2014

400keV Zn 65 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
255.478	83.952	187.087	79.292	72.967	0.119	2.648	For ions
(nm)		129.750	74.870	45.618	0.409	2.665	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
6.00	0.3958	0.2632	40.80	1213.0	526.9	3885.	10.71
18.00	0.5521	0.5094	49.23	1214.8	523.4	5783.	17.29
30.00	0.9375	0.4444	54.68	1247.0	520.4	6354.	19.67
42.00	1.1979	0.4261	60.10	1324.8	514.9	8106.	24.14
54.00	1.5521	0.3557	57.89	1335.0	507.9	8691.	28.16
66.00	1.7292	0.4518	70.00	1366.7	494.7	9505.	33.40
78.00	2.1354	0.3951	67.77	1424.8	476.7	10899.	38.43
90.00	2.5729	0.4372	60.93	1460.3	458.6	11080.	41.75
102.00	2.9583	0.4648	64.80	1396.0	435.8	11284.	41.50
114.00	3.7188	0.4146	64.40	1366.4	413.9	11913.	45.44
126.00	3.6979	0.4423	61.64	1348.6	385.8	12487.	52.29
138.00	3.9479	0.4327	73.59	1312.9	357.9	13044.	54.99
150.00	4.3021	0.4722	72.77	1261.1	323.0	13076.	55.19
162.00	4.4479	0.4309	74.59	1187.7	292.3	12680.	55.51
174.00	5.0313	0.4803	75.88	1110.8	262.3	12284.	61.04
186.00	4.9479	0.4505	73.09	993.6	227.7	10113.	61.95
198.00	4.6250	0.4437	77.20	879.2	193.6	8905.	58.18
210.00	4.5208	0.4309	74.91	772.8	164.9	8167.	66.79
222.00	4.2813	0.4161	80.45	708.3	137.5	6881.	69.62
234.00	4.1146	0.4354	78.48	553.8	112.6	5590.	69.31
246.00	3.6667	0.4489	76.20	490.6	91.7	5735.	70.76
258.00	3.2917	0.4525	76.50	401.3	73.2	4672.	74.13
270.00	2.9063	0.4803	75.34	323.5	56.8	3469.	76.35
282.00	2.6875	0.4457	77.11	257.2	43.8	3121.	80.19
294.00	2.0938	0.3980	83.12	187.1	30.7	2253.	77.14
306.00	1.4583	0.4214	81.21	136.7	23.2	1500.	72.65
318.00	1.5625	0.4333	71.02	108.8	16.5	1031.	51.31
330.00	1.1354	0.4404	83.11	82.0	11.8	717.	53.91
342.00	0.8229	0.5443	76.42	57.2	8.3	567.	55.05
354.00	0.5000	0.4583	71.90	36.2	5.4	256.	42.80
366.00	0.4583	0.4773	89.84	24.4	3.5	150.	58.52
378.00	0.2604	0.4800	72.81	16.0	2.0	129.	49.26
390.00	0.2083	0.4500	78.00	8.8	1.2	61.	68.30
402.00	0.1458	0.4285	64.14	6.7	0.8	67.	39.58
414.00	0.0417	0.0000	41.94	3.2	0.5	108.	40.68
426.00	0.0938	0.1111	62.11	3.5	0.3	5.	12.84
438.00	0.0313	0.6664	67.39	0.3	0.1	0.	0.00
450.00	0.0000	0.0000	0.00	0.3	0.0	0.	0.00
462.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.4	0.0	0.	0.00
498.00	0.0104	0.0000	48.71	0.0	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 8000,	500	TIME:	965.	TOTAL=	307.5	92.4	IONZ/TOTAL= 0.2311

10keV Ge 73 in GaAs 30.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
12.342	5.173	8.308	4.458	3.880	0.686	3.387	For ions
(nm)		5.399	3.851	2.052	1.015	4.025	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.30	10.3333	0.4193	2.85	778.8	65.6	3015.	1.79
0.90	23.3333	0.4286	2.90	1085.0	65.9	6566.	1.96
1.50	34.3333	0.3447	2.77	1147.3	65.8	8676.	2.08
2.10	45.3333	0.4485	3.05	1091.5	64.4	10525.	2.18
2.70	56.8333	0.4545	3.18	1085.3	61.8	11894.	2.34
3.30	70.5000	0.4492	3.13	1069.4	59.5	12653.	2.48
3.90	68.3333	0.4366	3.30	1008.3	56.5	13302.	2.59
4.50	77.1667	0.4341	3.33	977.7	53.0	13584.	2.74
5.10	81.3333	0.4365	3.34	911.3	49.0	13385.	2.81
5.70	91.0000	0.4341	3.37	850.7	45.3	13462.	3.00
6.30	90.5000	0.4420	3.59	789.0	40.6	13152.	3.08
6.90	92.3333	0.4278	3.64	710.2	36.5	12461.	3.21
7.50	92.6667	0.4406	3.98	625.5	32.4	11933.	3.42
8.10	84.1667	0.4277	4.15	519.3	28.6	11220.	3.42
8.70	77.6667	0.4142	3.96	465.5	25.2	10273.	3.61
9.30	77.6667	0.4335	4.12	417.0	21.8	9289.	3.75
9.90	73.8333	0.4199	3.97	375.5	18.8	8431.	3.79
10.50	69.1667	0.4699	4.34	310.4	16.0	7374.	3.89
11.10	56.6667	0.4824	4.38	286.1	13.7	6727.	3.85
11.70	53.3333	0.3969	4.22	228.0	11.4	5850.	3.93
12.30	48.1667	0.3979	4.44	195.1	9.5	4992.	4.17
12.90	42.0000	0.4286	4.40	155.5	7.9	4249.	4.24
13.50	36.3333	0.4954	4.53	134.4	6.5	3528.	4.30
14.10	33.5000	0.3632	4.18	100.0	5.2	3076.	4.36
14.70	26.3333	0.4747	4.60	88.2	4.3	2508.	4.66
15.30	22.1667	0.4511	4.93	70.8	3.6	2037.	4.66
15.90	19.6667	0.4407	4.54	54.8	3.0	1692.	4.56
16.50	18.1667	0.3761	4.58	49.1	2.4	1452.	4.37
17.10	12.1667	0.4247	4.19	39.4	2.0	1192.	4.51
17.70	11.1667	0.4776	4.82	30.3	1.5	931.	4.39
18.30	11.8333	0.3521	4.05	24.3	1.2	737.	4.54
18.90	7.8333	0.4468	4.37	19.0	0.9	638.	4.38
19.50	9.3333	0.4107	5.16	14.1	0.6	504.	4.79
20.10	5.0000	0.3667	4.72	12.0	0.5	443.	4.86
20.70	4.6667	0.5357	4.92	6.5	0.4	333.	4.07
21.30	2.0000	0.3333	5.52	7.1	0.3	264.	4.50
21.90	2.5000	0.5333	5.02	4.9	0.2	169.	4.84
22.50	2.8333	0.4117	6.45	3.4	0.2	139.	5.34
23.10	1.1667	0.4285	6.89	2.5	0.1	115.	6.09
23.70	1.5000	0.7777	4.66	1.3	0.1	78.	6.52
24.30	0.8333	0.3999	5.44	2.0	0.1	63.	5.96
24.90	0.6667	0.4999	5.73	0.6	0.1	35.	4.20
25.50	0.0000	0.0000	0.00	1.3	0.0	18.	3.27
26.10	0.6667	0.2499	5.61	0.6	0.0	15.	3.40
26.70	0.1667	0.0000	3.52	0.7	0.0	15.	2.85
27.30	0.3333	0.4998	3.26	0.6	0.0	6.	1.08
27.90	0.1667	0.9990	1.89	0.5	0.0	9.	4.94
28.50	0.1667	0.0000	2.89	0.2	0.0	4.	5.76
29.10	0.0000	0.0000	0.00	0.1	0.0	11.	3.57
29.70	0.1667	0.9990	8.48	0.2	0.0	11.	4.52
IONS:10000, 2789 TIME: 182.			TOTAL=	9.5	0.5	IONZ/TOTAL=	0.0531

25keV Ge 73 in GaAs 50.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
23.169	9.634	15.814	8.436	7.139	0.608	3.197	For ions
(nm)		10.439	7.340	3.792	0.963	3.861	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.50	6.1000	0.4426	6.28	1157.9	103.7	4356.	2.72
1.50	12.3000	0.4065	5.09	1383.3	103.2	8255.	3.19
2.50	18.9000	0.4233	5.03	1428.2	102.3	10906.	3.39
3.50	22.0000	0.4227	5.22	1383.3	101.1	12735.	3.83
4.50	24.4000	0.4262	5.08	1350.0	99.0	14518.	4.11
5.50	30.6000	0.4346	5.95	1374.9	95.5	16126.	4.32
6.50	35.6000	0.4719	6.18	1314.4	92.1	16806.	4.48
7.50	36.7000	0.4278	6.51	1273.7	87.8	17473.	4.63
8.50	43.1000	0.4548	6.21	1244.0	82.7	18107.	5.09
9.50	40.2000	0.4254	6.25	1213.6	77.7	17932.	5.18
10.50	44.7000	0.4922	6.25	1084.9	72.3	17897.	5.22
11.50	40.7000	0.4767	6.36	1008.1	66.7	17548.	5.48
12.50	48.6000	0.4239	7.11	962.4	61.5	16690.	5.63
13.50	49.4000	0.4251	6.78	863.0	55.6	15400.	5.90
14.50	46.8000	0.4573	7.07	823.9	50.0	14518.	5.89
15.50	47.6000	0.4223	6.94	736.8	44.8	13480.	6.02
16.50	41.0000	0.4634	7.24	685.5	39.9	12680.	6.35
17.50	41.2000	0.4320	7.60	599.2	35.8	11591.	6.66
18.50	37.4000	0.3797	7.82	497.8	31.4	10782.	6.73
19.50	36.7000	0.4360	7.43	464.4	27.1	9861.	7.03
20.50	36.1000	0.3878	7.40	389.6	23.4	8610.	7.24
21.50	32.3000	0.4025	8.09	342.6	20.1	7929.	6.95
22.50	28.9000	0.3772	7.42	307.1	17.3	7071.	7.31
23.50	26.9000	0.3903	8.22	258.0	14.5	6240.	7.68
24.50	23.3000	0.4120	7.67	221.0	12.3	5423.	7.19
25.50	19.3000	0.4819	7.77	169.2	10.4	4458.	7.30
26.50	19.2000	0.4115	8.24	153.3	8.7	3711.	7.49
27.50	15.7000	0.4076	9.22	126.0	7.3	2963.	7.62
28.50	12.3000	0.3902	8.81	106.3	5.9	2572.	8.03
29.50	11.7000	0.5043	7.97	82.0	4.9	2047.	7.86
30.50	9.6000	0.4792	9.08	72.0	4.1	1708.	8.31
31.50	8.4000	0.4167	8.51	63.0	3.6	1535.	8.09
32.50	7.2000	0.3333	8.39	52.6	3.0	1356.	8.33
33.50	7.5000	0.4400	9.51	43.0	2.3	1280.	8.97
34.50	5.6000	0.3929	10.46	35.8	1.9	1072.	9.94
35.50	4.2000	0.4286	8.85	28.7	1.5	932.	10.12
36.50	3.2000	0.5625	7.62	17.8	1.1	624.	9.57
37.50	2.8000	0.4643	9.01	15.1	0.9	519.	8.07
38.50	2.5000	0.4000	10.21	16.3	0.8	395.	7.57
39.50	2.2000	0.5000	11.49	11.9	0.7	306.	7.10
40.50	1.9000	0.3684	8.78	9.8	0.5	225.	5.96
41.50	1.4000	0.7857	7.92	6.5	0.3	137.	6.10
42.50	1.3000	0.4615	9.45	8.2	0.3	126.	7.71
43.50	1.0000	0.5000	7.30	4.3	0.2	104.	6.55
44.50	0.8000	0.6249	10.76	2.6	0.1	72.	4.72
45.50	0.7000	0.5713	6.22	2.3	0.1	38.	5.31
46.50	0.3000	0.0000	4.58	1.5	0.1	11.	9.29
47.50	0.5000	0.5999	7.65	1.5	0.1	4.	12.52
48.50	0.2000	0.0000	6.07	0.4	0.0	8.	1.60
49.50	0.1000	0.9990	3.06	0.3	0.0	7.	1.33
IONS:10000, 1198 TIME: 220. TOTAL=				23.4	1.6	IONZ/TOTAL=	0.0631

50keV Ge 73 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
38.721	15.704	26.807	13.846	11.912	0.586	3.176	For ions
(nm)		18.067	12.442	6.503	0.913	3.635	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.00	3.4500	0.4638	7.05	1374.8	146.1	6069.	4.66
3.00	6.9500	0.3741	8.07	1543.5	146.1	10562.	5.07
5.00	10.0000	0.4600	8.45	1593.5	144.4	13723.	5.83
7.00	13.7500	0.4727	9.30	1561.7	140.4	15639.	6.01
9.00	16.1500	0.4241	9.50	1630.1	135.8	17278.	6.83
11.00	18.0500	0.4792	9.63	1494.0	129.4	19197.	7.00
13.00	23.2500	0.4065	9.94	1481.3	122.9	20102.	7.30
15.00	26.7500	0.4318	10.04	1416.2	114.4	20822.	7.44
17.00	27.2500	0.4275	10.92	1367.2	106.5	20925.	7.97
19.00	29.3500	0.4532	11.24	1240.8	97.6	20178.	8.61
21.00	27.1000	0.4299	11.75	1180.3	87.8	19444.	9.10
23.00	27.1000	0.4594	11.01	1056.1	78.9	18346.	9.71
25.00	30.1500	0.4428	11.62	904.5	69.3	16898.	10.14
27.00	24.7000	0.4696	12.43	858.0	60.7	15264.	9.99
29.00	24.6500	0.4118	12.26	706.9	52.3	13794.	10.44
31.00	23.8000	0.4034	12.50	633.9	44.9	12161.	10.71
33.00	21.7000	0.4170	12.80	553.1	37.9	10780.	10.87
35.00	21.5500	0.4316	12.67	477.0	32.1	9306.	11.58
37.00	20.5000	0.4585	14.02	413.5	26.2	8208.	11.53
39.00	16.1500	0.4180	13.41	321.1	21.3	6907.	11.44
41.00	14.8500	0.3805	13.85	272.8	17.5	5854.	12.03
43.00	13.1000	0.3969	13.05	221.7	14.0	5099.	11.98
45.00	9.8000	0.4133	12.21	171.0	11.3	4133.	12.07
47.00	7.9000	0.4114	15.43	127.6	9.1	3548.	12.49
49.00	7.8000	0.4038	14.07	114.2	7.3	3138.	13.01
51.00	6.0000	0.4750	13.56	91.1	5.8	2455.	14.17
53.00	5.0500	0.4579	14.29	71.2	4.4	2039.	14.12
55.00	4.3000	0.4651	14.76	54.6	3.4	1655.	13.99
57.00	3.2000	0.4219	14.47	43.4	2.6	1261.	14.11
59.00	2.9500	0.4746	15.20	33.5	2.0	878.	15.25
61.00	1.8500	0.5946	14.39	27.6	1.5	880.	17.00
63.00	1.4000	0.2143	18.07	18.8	1.2	725.	14.85
65.00	1.6500	0.4242	15.71	13.2	1.0	428.	11.73
67.00	0.7500	0.6000	11.26	10.7	0.7	216.	10.17
69.00	0.7500	0.3333	14.32	8.1	0.5	232.	12.48
71.00	0.9500	0.2631	15.30	8.2	0.4	117.	12.20
73.00	0.7500	0.6000	13.75	4.6	0.2	72.	13.85
75.00	0.2000	0.9998	10.26	1.6	0.2	36.	13.78
77.00	0.2000	0.4999	15.40	2.1	0.1	39.	18.94
79.00	0.2500	0.5999	11.84	0.7	0.0	13.	13.41
81.00	0.0500	0.9990	37.38	0.4	0.0	13.	7.90
83.00	0.0500	0.9990	29.11	0.4	0.0	8.	7.50
85.00	0.0500	0.9990	23.67	0.0	0.0	0.	0.00
87.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
89.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
91.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
93.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
95.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
97.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
99.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME:		359.	TOTAL=	46.2	3.8	IONZ/TOTAL=	0.0752

75keV Ge 73 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
53.298	21.410	37.316	18.811	16.085	0.499	2.999	For ions
(nm)		24.811	16.952	9.030	0.802	3.394	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.25	2.3200	0.2241	8.45	1445.8	178.5	6776.	6.47
3.75	4.2800	0.4860	11.70	1583.3	178.0	12204.	6.33
6.25	6.9600	0.4598	11.35	1606.8	176.5	15042.	6.58
8.75	8.4400	0.3791	12.52	1711.5	173.7	17614.	7.24
11.25	10.6000	0.4641	12.87	1687.8	169.0	18819.	8.19
13.75	12.7200	0.3994	13.42	1677.1	163.6	20583.	8.62
16.25	14.7200	0.4076	13.05	1577.4	155.9	21246.	8.59
18.75	15.2800	0.4372	12.81	1574.5	148.9	21265.	9.10
21.25	17.5600	0.4237	13.54	1465.0	138.8	21328.	9.90
23.75	19.5200	0.4303	14.73	1389.8	129.2	21226.	10.65
26.25	20.6000	0.4447	14.83	1347.3	120.7	21158.	11.24
28.75	20.4400	0.4266	15.20	1268.7	110.6	20844.	11.63
31.25	20.1600	0.4623	15.65	1231.4	100.7	19579.	12.50
33.75	20.4000	0.4235	15.81	1049.4	89.7	17730.	12.97
36.25	21.0800	0.4156	17.86	981.6	80.3	16540.	13.57
38.75	19.0800	0.4382	15.81	885.1	70.8	15447.	14.48
41.25	17.1200	0.4509	16.59	767.7	61.5	13830.	14.32
43.75	19.5600	0.4335	17.03	674.4	53.8	12436.	15.39
46.25	16.2800	0.4128	19.09	590.7	46.0	11258.	15.48
48.75	14.7200	0.4429	17.94	511.0	38.4	9942.	15.31
51.25	12.5200	0.4728	17.67	444.6	32.4	8489.	15.93
53.75	12.6800	0.4858	17.65	368.6	27.4	6927.	15.99
56.25	11.4400	0.4580	17.63	321.4	23.0	6267.	17.11
58.75	10.3600	0.4633	17.99	254.3	18.6	5488.	16.17
61.25	7.6000	0.4263	16.41	200.4	15.0	4686.	16.55
63.75	7.6000	0.4368	19.93	179.0	12.3	3935.	17.88
66.25	6.2000	0.4323	18.05	141.9	9.6	3199.	16.93
68.75	5.6400	0.4397	18.60	109.5	7.6	2842.	17.65
71.25	5.0800	0.4173	18.13	90.7	6.2	2230.	17.62
73.75	3.4400	0.5000	16.47	71.6	4.8	1829.	18.28
76.25	2.6000	0.5692	20.21	53.6	3.7	1434.	18.34
78.75	2.2800	0.4912	21.25	46.1	2.9	1064.	16.81
81.25	2.5200	0.4286	19.03	33.8	2.1	740.	19.88
83.75	1.6000	0.3750	19.49	24.5	1.6	599.	17.83
86.25	0.9600	0.4583	20.68	16.5	1.2	425.	17.63
88.75	1.0000	0.4800	19.89	15.5	0.7	247.	20.95
91.25	0.6400	0.5000	19.05	7.6	0.5	85.	24.97
93.75	0.4000	0.5000	15.28	7.5	0.4	55.	25.86
96.25	0.6000	0.3333	15.67	5.4	0.3	55.	27.05
98.75	0.3600	0.2222	16.39	3.3	0.2	38.	32.22
101.25	0.1200	0.6664	11.01	1.5	0.1	29.	28.16
103.75	0.0800	0.4998	32.27	0.9	0.1	18.	27.38
106.25	0.0400	0.0000	14.97	1.2	0.1	4.	30.83
108.75	0.0800	0.4998	20.28	1.2	0.1	1.	30.20
111.25	0.0400	0.9990	20.73	0.3	0.0	1.	30.95
113.75	0.0800	0.0000	16.71	0.3	0.0	7.	31.40
116.25	0.0000	0.0000	0.00	0.4	0.0	10.	31.04
118.75	0.0400	0.0000	29.02	0.5	0.0	28.	29.10
121.25	0.0400	0.9990	5.93	0.5	0.0	18.	28.84
123.75	0.0000	0.0000	0.00	0.4	0.0	0.	0.00
IONS:10000, 1000 TIME: 514. TOTAL=				68.6	6.4	IONZ/TOTAL=	0.0852

100keV Ge 73 in GaAs 150.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
67.676	26.602	47.691	23.536	20.378	0.509	3.134	For ions
(nm)		31.503	21.581	11.378	0.895	3.839	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.50	1.5667	0.3404	14.68	1520.5	206.1	7340.	6.27
4.50	3.0333	0.4725	15.01	1528.3	205.3	12042.	7.08
7.50	4.6000	0.4420	13.29	1635.9	203.2	14726.	8.18
10.50	5.7000	0.4620	13.67	1695.6	201.2	16151.	8.54
13.50	7.5333	0.4292	14.97	1646.7	197.2	18024.	9.12
16.50	9.2333	0.4693	16.34	1681.8	191.5	19640.	9.94
19.50	11.5667	0.4438	17.28	1684.6	185.0	20852.	10.84
22.50	10.6667	0.4719	16.64	1692.2	177.8	22445.	11.67
25.50	12.8333	0.4597	17.42	1598.9	168.2	23248.	12.35
28.50	14.3000	0.4662	17.37	1588.9	159.6	22712.	13.37
31.50	15.7333	0.4343	16.86	1531.8	147.6	22395.	13.64
34.50	15.6333	0.4584	17.87	1400.4	137.3	22247.	14.03
37.50	16.4000	0.4207	20.09	1314.6	125.8	21118.	15.36
40.50	16.5667	0.4145	21.16	1209.0	114.2	20052.	16.33
43.50	17.5667	0.4080	20.61	1142.3	102.8	18291.	16.51
46.50	16.3667	0.4460	21.39	1011.4	90.4	15826.	16.51
49.50	15.7000	0.3885	20.29	916.3	79.6	15443.	17.00
52.50	15.6000	0.4081	21.37	807.0	70.7	14250.	17.52
55.50	14.2000	0.4131	20.40	703.0	61.5	12912.	18.15
58.50	13.3333	0.4325	21.46	632.1	53.0	11620.	18.90
61.50	10.7667	0.4427	24.82	524.5	45.9	10647.	19.75
64.50	11.2333	0.4599	21.52	489.6	39.0	9099.	20.79
67.50	10.1000	0.4620	22.97	425.7	33.4	8312.	20.24
70.50	10.0333	0.4120	21.84	345.8	27.4	7229.	20.27
73.50	8.4667	0.4724	22.41	301.1	22.1	5867.	20.35
76.50	7.2333	0.4562	22.10	242.0	18.4	4699.	21.11
79.50	6.7667	0.3350	23.48	186.1	15.0	4083.	22.42
82.50	5.0667	0.5329	23.69	154.5	11.9	3650.	21.68
85.50	4.5667	0.4380	24.32	131.6	9.6	2875.	20.58
88.50	3.5667	0.4860	26.25	91.8	7.3	2332.	22.43
91.50	3.1667	0.4210	25.18	66.8	5.7	1790.	21.24
94.50	2.8333	0.4353	23.68	63.2	4.7	1466.	19.67
97.50	1.9667	0.5085	25.43	51.0	3.7	1127.	20.40
100.50	1.9333	0.4138	22.83	38.4	3.0	788.	21.63
103.50	1.3333	0.4000	25.48	34.1	2.3	745.	21.74
106.50	1.1667	0.3714	27.75	20.2	1.7	591.	21.63
109.50	0.7667	0.5217	24.55	13.1	1.3	430.	20.94
112.50	0.5667	0.3529	31.24	14.5	1.0	390.	21.28
115.50	0.5000	0.3333	26.95	11.7	0.8	324.	24.95
118.50	0.3333	0.3000	25.74	8.9	0.7	254.	26.13
121.50	0.1667	0.5999	34.00	8.9	0.5	294.	26.39
124.50	0.2000	0.3333	38.48	5.3	0.4	220.	22.00
127.50	0.2000	0.6666	29.22	4.3	0.3	186.	16.74
130.50	0.3667	0.7272	28.84	4.4	0.2	80.	19.00
133.50	0.2000	0.3666	28.53	2.6	0.1	86.	18.02
136.50	0.1000	0.3332	39.32	1.2	0.1	44.	22.40
139.50	0.1000	0.3332	28.57	0.7	0.1	37.	19.10
142.50	0.0333	0.0000	20.57	0.8	0.0	23.	27.06
145.50	0.0667	0.4998	9.51	0.4	0.0	30.	14.75
148.50	0.0333	0.9990	4.00	0.4	0.0	26.	12.86
IONS:10000, 1000 TIME: 637. TOTAL=				90.6	9.4	IONZ/TOTAL=	0.0941

150keV Ge 73 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
95.866	36.413	68.366	32.784	28.448	0.419	2.977	For ions
(nm)		46.955	30.723	17.229	0.605	2.875	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	1.1167	0.3731	19.11	1550.5	252.4	7696.	8.48
9.00	2.7833	0.4671	23.85	1584.6	250.4	13581.	9.89
15.00	4.1333	0.4073	21.27	1716.0	245.1	15322.	10.64
21.00	5.6333	0.4024	21.99	1696.9	238.5	17489.	13.61
27.00	6.2167	0.4718	23.03	1694.7	229.2	19697.	15.24
33.00	8.3500	0.4631	23.21	1670.7	216.2	20002.	17.19
39.00	9.9667	0.4197	25.61	1634.9	201.2	20005.	18.89
45.00	10.2000	0.4330	26.59	1537.7	183.5	19730.	19.79
51.00	10.7667	0.4118	27.07	1448.8	164.8	19578.	21.03
57.00	12.0000	0.4278	27.67	1344.2	144.4	19375.	22.01
63.00	11.3500	0.4391	28.72	1154.5	125.0	17770.	23.39
69.00	11.4833	0.4354	27.83	1018.0	105.6	16382.	24.67
75.00	10.2667	0.4269	29.54	902.7	87.2	14777.	25.43
81.00	10.9500	0.4125	28.17	710.1	71.5	12586.	25.39
87.00	9.0167	0.4621	30.72	614.7	57.5	10776.	25.64
93.00	8.8667	0.4154	32.21	519.5	45.4	9974.	27.10
99.00	7.2667	0.4151	33.09	377.9	34.9	8088.	28.79
105.00	5.7333	0.3983	31.19	304.2	25.7	5638.	31.10
111.00	4.6833	0.4911	30.80	228.4	18.8	4493.	30.47
117.00	3.7500	0.4489	34.73	157.9	13.6	3246.	32.29
123.00	3.3500	0.3980	32.01	122.2	9.7	2175.	31.09
129.00	2.2500	0.4741	32.40	80.3	6.8	1834.	31.65
135.00	1.5667	0.4255	37.05	57.6	4.8	1284.	31.53
141.00	1.2167	0.4657	36.70	37.6	3.3	892.	36.24
147.00	0.9667	0.4655	35.91	29.4	2.3	573.	31.49
153.00	0.6333	0.3947	31.01	19.9	1.5	331.	37.16
159.00	0.4833	0.5172	23.13	15.6	1.1	241.	31.89
165.00	0.3500	0.4286	43.77	6.8	0.5	146.	38.46
171.00	0.1667	0.6999	36.16	4.3	0.3	86.	42.62
177.00	0.1167	0.7142	24.89	2.7	0.2	50.	53.24
183.00	0.1333	0.1250	37.51	1.9	0.1	4.	57.68
189.00	0.1000	0.4999	33.30	2.1	0.1	1.	52.49
195.00	0.0000	0.0000	0.00	0.4	0.0	0.	0.00
201.00	0.0167	0.9990	6.94	0.2	0.0	0.	0.00
207.00	0.0333	0.4998	14.19	0.1	0.0	0.	0.00
213.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
219.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
225.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
237.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 833. TOTAL=				133.5	16.5	IONZ/TOTAL=	0.1097

200keV Ge 73 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
125.032	46.486	90.363	42.116	36.564	0.362	2.834	For ions
(nm)		59.747	39.999	20.018	0.813	3.441	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	1.0000	0.3833	26.89	1446.2	290.9	6971.	12.96
9.00	1.4333	0.4767	28.91	1611.7	289.5	10681.	11.78
15.00	1.7000	0.4510	24.02	1547.3	287.0	13159.	14.60
21.00	3.1333	0.4096	25.76	1684.6	281.8	14683.	15.04
27.00	3.8333	0.4391	27.83	1629.0	276.5	16393.	16.98
33.00	4.6500	0.4480	27.79	1725.0	268.6	18548.	18.07
39.00	5.4000	0.4630	29.43	1712.3	260.1	18459.	20.37
45.00	6.3667	0.4450	30.92	1689.3	247.3	19374.	20.77
51.00	7.3500	0.4649	33.58	1657.8	233.1	19477.	21.83
57.00	7.8833	0.4524	32.36	1570.3	216.9	18887.	23.81
63.00	8.1000	0.4012	33.43	1434.4	201.7	18364.	24.18
69.00	8.6167	0.4178	34.73	1432.4	183.7	17847.	25.35
75.00	9.0833	0.4330	36.20	1327.2	167.0	17571.	25.53
81.00	8.9500	0.4190	36.67	1275.2	150.1	15659.	26.89
87.00	8.9333	0.4310	39.72	1120.3	131.7	14497.	29.15
93.00	9.2167	0.4268	36.82	1007.8	116.5	12841.	30.22
99.00	8.2500	0.4303	38.87	887.3	100.4	12039.	30.18
105.00	7.9833	0.4405	38.85	774.0	85.7	10766.	31.72
111.00	7.2833	0.4325	37.77	668.4	73.1	9230.	32.68
117.00	7.0333	0.4431	38.21	571.7	60.7	8364.	32.33
123.00	6.3000	0.3889	40.35	497.1	50.3	7396.	33.86
129.00	6.0167	0.3740	42.03	390.9	40.1	6155.	36.40
135.00	4.9333	0.3547	41.54	329.9	32.5	4912.	35.35
141.00	3.9667	0.4538	42.48	269.0	26.3	3832.	36.43
147.00	4.0500	0.4444	38.27	223.4	20.7	3225.	38.24
153.00	2.8333	0.4882	44.54	163.3	15.6	2503.	41.54
159.00	2.6000	0.4167	40.17	132.8	12.0	2346.	39.44
165.00	2.3500	0.4539	41.77	99.3	9.1	1864.	40.82
171.00	1.7500	0.4286	43.93	76.6	6.7	1330.	41.89
177.00	1.1667	0.4571	42.39	60.1	5.2	1014.	38.15
183.00	0.9167	0.4364	46.09	38.1	3.7	861.	30.98
189.00	0.8333	0.4000	39.65	35.2	3.0	713.	29.07
195.00	0.6500	0.3846	33.47	27.0	2.0	656.	31.81
201.00	0.4000	0.6250	42.08	15.1	1.4	493.	32.15
207.00	0.2833	0.4117	36.13	14.4	1.0	325.	26.96
213.00	0.3333	0.4500	45.97	11.6	0.7	178.	21.72
219.00	0.2833	0.5294	32.45	5.1	0.4	215.	21.96
225.00	0.0667	0.2499	21.94	3.4	0.3	132.	15.67
231.00	0.0833	0.3999	22.88	3.4	0.2	61.	17.75
237.00	0.0333	0.4998	10.32	0.8	0.1	33.	33.84
243.00	0.0167	0.0000	37.59	0.2	0.0	14.	29.69
249.00	0.0000	0.0000	0.00	1.0	0.1	2.	26.86
255.00	0.0167	0.0000	35.02	0.9	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
273.00	0.0167	0.0000	18.08	0.1	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 1009.			TOTAL=	175.0	24.9	IONZ/TOTAL=	0.1246

300keV Ge 73 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
183.472	65.085	135.041	59.349	53.108	0.250	2.738	For ions
(nm)		92.687	56.817	32.167	0.537	2.806	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
4.00	0.3929	0.4091	19.69	1290.5	355.9	5025.	11.15
12.00	0.7321	0.3415	42.67	1350.6	354.8	7934.	13.60
20.00	1.0714	0.3833	29.75	1511.1	352.2	9568.	16.30
28.00	1.7500	0.3367	44.41	1598.3	349.9	10493.	18.50
36.00	1.9107	0.3925	35.31	1547.2	342.4	11744.	21.14
44.00	2.5000	0.4000	38.96	1594.1	334.3	12873.	23.92
52.00	3.3036	0.4919	49.92	1613.5	328.1	14323.	27.09
60.00	3.2321	0.4641	45.41	1615.5	316.5	14985.	30.48
68.00	4.0893	0.3974	45.82	1677.2	304.5	14996.	30.19
76.00	4.8750	0.4139	50.44	1576.2	289.5	15070.	32.97
84.00	4.4286	0.3710	47.38	1567.4	274.4	14736.	35.10
92.00	5.9107	0.4290	54.69	1590.0	257.2	14419.	34.70
100.00	5.6071	0.4682	45.49	1518.7	239.1	14809.	36.71
108.00	6.0893	0.3900	48.69	1375.8	217.1	14984.	39.90
116.00	6.0893	0.4047	49.91	1313.6	196.1	14327.	40.91
124.00	6.3214	0.4379	55.80	1236.5	177.8	13959.	41.08
132.00	5.8929	0.5000	55.79	1167.9	159.5	12575.	40.34
140.00	7.1786	0.4900	54.80	1005.0	138.5	11182.	42.01
148.00	6.3393	0.4338	52.48	886.3	120.1	10978.	44.48
156.00	6.0000	0.4167	53.42	823.2	104.6	10358.	45.82
164.00	5.4464	0.4262	60.30	723.9	89.2	8933.	47.85
172.00	5.4464	0.4295	54.66	613.0	75.5	7553.	48.05
180.00	4.4286	0.4113	58.27	523.9	61.8	6878.	47.36
188.00	4.0536	0.4670	58.21	421.8	50.5	5962.	48.69
196.00	3.3393	0.4118	53.07	340.4	40.9	4652.	50.91
204.00	3.1250	0.4400	60.69	294.7	33.3	4121.	55.7[illegible]
212.00	3.0893	0.4162	54.73	238.3	26.7	3552.	61.7[illegible]
220.00	2.6250	0.3605	60.08	228.4	20.8	2811.	59.83
228.00	2.0714	0.4655	62.05	135.4	15.1	2195.	56.09
236.00	1.8214	0.3431	51.00	126.1	11.6	1619.	58.71
244.00	1.2857	0.3472	55.42	85.2	9.4	1106.	62.95
252.00	1.0893	0.3115	65.94	70.7	6.9	819.	50.92
260.00	0.9286	0.4615	71.37	52.2	4.9	577.	55.14
268.00	0.6607	0.4054	65.04	36.1	3.3	430.	56.68
276.00	0.3929	0.5454	83.41	26.0	2.1	416.	51.40
284.00	0.4107	0.2174	59.81	16.5	1.6	232.	41.65
292.00	0.2321	0.3077	65.88	13.9	1.0	201.	49.55
300.00	0.1964	0.5454	78.13	5.1	0.6	154.	51.89
308.00	0.1607	0.6666	41.56	5.2	0.5	38.	74.32
316.00	0.0893	0.3999	34.40	2.8	0.2	29.	81.20
324.00	0.0357	0.0000	79.37	0.8	0.1	34.	84.86
332.00	0.0179	0.0000	10.72	0.8	0.1	18.	77.69
340.00	0.0179	0.9990	24.61	0.2	0.1	19.	58.18
348.00	0.0000	0.0000	0.00	0.8	0.1	3.	51.89
356.00	0.0179	0.0000	106.03	0.6	0.1	6.	52.63
364.00	0.0357	0.9995	78.54	2.0	0.1	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 7000,	900 TIME: 1093.		TOTAL=	254.6	45.4	IONZ/TOTAL=	0.1512

400keV Ge 73 in GaAs 600.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
242.199	84.625	179.502	77.750	69.183	0.221	2.668	For ions
(nm)		124.795	77.201	41.814	0.505	2.649	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
6.00	0.2500	0.3333	79.73	1301.5	411.0	4620.	16.44
18.00	0.4167	0.4000	42.36	1321.8	408.1	7239.	20.49
30.00	0.9500	0.4210	51.14	1443.5	404.2	8470.	19.32
42.00	1.3667	0.4634	51.86	1563.6	398.7	9308.	23.76
54.00	1.8000	0.4352	55.38	1517.8	391.8	10177.	27.88
66.00	2.1167	0.3937	59.59	1578.0	381.2	10864.	33.20
78.00	2.6833	0.4658	58.16	1591.1	368.8	11955.	35.30
90.00	3.1000	0.4516	64.61	1618.8	353.0	12525.	39.50
102.00	3.7833	0.4097	61.70	1619.6	334.7	13514.	44.05
114.00	3.4167	0.4976	71.76	1573.8	313.2	13900.	49.09
126.00	4.2000	0.4722	63.74	1530.4	289.7	14093.	51.69
138.00	4.7167	0.4276	64.97	1360.3	262.4	13443.	51.74
150.00	4.9667	0.4060	63.71	1292.5	232.0	12263.	54.46
162.00	4.3000	0.4302	73.31	1193.2	209.1	10886.	56.54
174.00	4.7833	0.4669	65.75	1124.9	187.4	10286.	55.00
186.00	4.5500	0.4469	71.51	1025.9	160.7	9559.	54.45
198.00	4.4333	0.4135	68.65	892.0	135.5	8871.	61.64
210.00	4.5667	0.4343	70.11	793.4	113.1	8074.	60.64
222.00	4.1167	0.4049	68.87	693.6	94.9	7042.	61.58
234.00	3.8333	0.4261	80.61	536.8	77.1	6541.	64.37
246.00	3.5667	0.4813	74.34	462.9	62.8	5917.	70.16
258.00	2.9500	0.4124	80.78	361.8	48.6	4941.	75.97
270.00	2.7000	0.3889	69.02	290.3	37.4	3525.	64.93
282.00	2.3000	0.3841	71.84	252.9	30.1	3022.	60.22
294.00	1.8833	0.3894	83.41	181.9	21.1	2661.	68.54
306.00	1.3000	0.3718	79.36	125.7	14.3	1809.	69.44
318.00	1.0500	0.4286	83.38	91.1	11.1	1377.	65.77
330.00	1.0000	0.4667	77.53	73.5	7.8	1121.	59.60
342.00	0.7000	0.4762	72.42	51.6	5.4	568.	59.07
354.00	0.3500	0.4286	75.75	28.1	3.6	450.	78.65
366.00	0.3667	0.4091	80.85	24.2	2.4	210.	51.53
378.00	0.2167	0.5384	61.54	12.4	1.5	63.	27.82
390.00	0.1333	0.4999	72.10	7.6	0.8	87.	42.93
402.00	0.0500	0.6664	135.97	5.8	0.6	31.	28.83
414.00	0.1167	0.5713	93.13	4.9	0.4	52.	10.24
426.00	0.0667	0.4999	86.35	1.1	0.2	3.	12.19
438.00	0.0000	0.0000	0.00	0.7	0.1	0.	0.00
450.00	0.0333	0.0000	50.17	1.0	0.1	0.	0.00
462.00	0.0000	0.0000	0.00	0.5	0.0	0.	0.00
474.00	0.0000	0.0000	0.00	0.3	0.0	0.	0.00
486.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
498.00	0.0167	0.9990	57.42	0.5	0.0	0.	0.00
510.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
522.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
534.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
546.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
558.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
570.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
582.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
594.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS: 5000,	700	TIME:	997.	TOTAL=	330.6	69.3	IONZ/TOTAL= 0.1733

25keV Se 79 in GaAs 50.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
21.422	8.903	15.052	7.754	6.524	0.582	3.130	For ions
(nm)		9.714	6.814	3.530	0.850	3.391	For vacs.

Depth nm	Ions /um/ion	Ist1/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.50	5.3000	0.5660	5.75	1199.5	123.0	4765.	3.03
1.50	10.9000	0.5229	5.14	1464.6	122.1	8594.	3.15
2.50	15.9000	0.3459	4.04	1483.4	120.7	11111.	3.31
3.50	19.6000	0.4541	4.95	1466.6	118.2	13346.	3.49
4.50	26.9000	0.4275	4.79	1496.8	114.8	14993.	3.76
5.50	32.1000	0.4174	4.84	1477.0	110.4	16222.	4.15
6.50	38.8000	0.4304	5.46	1406.4	105.5	17283.	4.34
7.50	43.3000	0.4434	5.04	1378.3	99.6	17971.	4.52
8.50	44.0000	0.4727	5.93	1254.1	93.1	18629.	4.67
9.50	49.4000	0.4130	5.48	1228.4	86.6	18462.	4.85
10.50	51.4000	0.4280	5.76	1139.9	79.9	18026.	5.03
11.50	51.3000	0.4288	5.71	1043.9	72.8	17548.	5.21
12.50	52.3000	0.4512	6.59	912.4	65.7	16734.	5.52
13.50	45.7000	0.4026	6.52	799.2	58.5	15661.	5.58
14.50	49.2000	0.4045	6.39	781.0	52.4	14985.	5.62
15.50	47.7000	0.4235	6.72	716.9	46.4	13753.	5.94
16.50	41.5000	0.4554	6.83	598.0	40.3	12717.	6.22
17.50	43.8000	0.4361	6.91	530.9	35.5	11838.	6.35
18.50	39.2000	0.4260	6.93	456.7	30.9	10653.	6.55
19.50	37.1000	0.3962	6.82	403.7	26.8	9663.	6.78
20.50	33.2000	0.3855	7.19	350.8	22.9	8570.	6.94
21.50	31.6000	0.4304	6.81	298.2	19.0	7372.	7.20
22.50	28.6000	0.5210	7.01	248.7	15.8	6327.	7.26
23.50	21.4000	0.3785	7.97	198.7	13.1	5469.	7.08
24.50	19.5000	0.4410	7.46	188.5	11.3	4805.	7.06
25.50	20.3000	0.4680	8.23	145.7	9.1	4098.	7.45
26.50	17.5000	0.4114	7.77	125.8	7.3	3592.	7.85
27.50	13.3000	0.4361	8.32	92.0	5.9	2980.	8.03
28.50	11.8000	0.4491	8.42	81.2	4.9	2359.	8.40
29.50	9.9000	0.4040	8.26	67.1	3.9	1755.	7.94
30.50	8.4000	0.4167	8.70	55.4	3.0	1459.	7.90
31.50	7.3000	0.4794	7.91	37.8	2.3	1192.	7.55
32.50	5.7000	0.4912	9.65	31.3	1.8	887.	7.59
33.50	4.3000	0.3953	9.25	21.2	1.4	688.	8.02
34.50	4.1000	0.4146	6.71	15.8	1.0	523.	7.94
35.50	2.5000	0.4400	7.73	15.6	0.8	347.	7.98
36.50	1.7000	0.4117	8.58	12.5	0.6	292.	8.70
37.50	2.2000	0.4091	11.64	5.2	0.4	208.	9.30
38.50	1.2000	0.5833	8.96	5.2	0.3	150.	8.89
39.50	0.8000	0.2500	3.38	2.5	0.2	128.	8.09
40.50	0.5000	0.5999	8.37	4.6	0.2	103.	9.04
41.50	0.5000	0.2000	9.32	1.9	0.1	67.	11.19
42.50	0.5000	0.7998	13.47	1.8	0.1	61.	9.26
43.50	0.6000	0.1666	10.02	1.8	0.1	32.	10.10
44.50	0.2000	0.0000	6.68	0.5	0.1	17.	8.41
45.50	0.1000	0.9990	4.99	0.5	0.1	3.	4.14
46.50	0.1000	0.9990	10.32	0.4	0.0	4.	4.82
47.50	0.3000	0.6664	9.24	1.0	0.0	4.	2.07
48.50	0.0000	0.0000	0.00	0.4	0.0	1.	0.00
49.50	0.2000	0.9995	5.03	0.2	0.0	0.	0.00
IONS:10000, 2000 TIME:		47.	TOTAL=	23.2	1.7	IONZ/TOTAL=	0.0692

50keV Se 79 in GaAs 80.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
35.513	14.597	25.288	12.796	10.702	0.572	3.162	For ions
(nm)		16.348	11.649	5.399	0.910	3.708	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.80	2.3750	0.5789	7.77	1479.9	173.6	5940.	4.48
2.40	5.6250	0.4333	5.87	1730.1	172.1	10637.	4.47
4.00	9.6250	0.3961	8.09	1664.9	169.8	14126.	4.84
5.60	11.8750	0.3895	8.02	1673.2	167.1	16079.	5.11
7.20	14.5625	0.4077	7.36	1682.9	162.8	17958.	5.29
8.80	17.5625	0.4093	8.06	1688.9	157.0	19250.	5.90
10.40	20.0625	0.4174	8.52	1632.9	150.9	20198.	6.07
12.00	21.4375	0.4665	8.53	1615.8	142.8	20677.	6.53
13.60	28.1250	0.4533	8.90	1547.9	134.2	20808.	7.00
15.20	29.2500	0.4380	9.21	1475.3	125.5	20921.	7.46
16.80	27.2500	0.4450	10.24	1373.1	117.4	20866.	7.81
18.40	31.6250	0.4328	9.21	1302.4	108.0	20633.	8.08
20.00	29.6875	0.4484	10.09	1158.3	98.2	20247.	8.39
21.60	32.0625	0.4016	10.35	1134.9	89.8	19433.	8.62
23.20	32.9375	0.4516	11.24	1014.0	80.8	18079.	9.02
24.80	28.6250	0.4148	10.66	859.7	71.5	17018.	9.00
26.40	26.9375	0.4292	10.98	782.7	62.4	15479.	9.14
28.00	28.2500	0.4425	11.29	706.4	55.6	14323.	9.45
29.60	24.2500	0.4381	11.21	635.6	49.6	12908.	9.58
31.20	22.0000	0.5170	11.36	584.9	42.9	11681.	9.73
32.80	23.9375	0.4204	11.44	493.7	37.4	10360.	10.02
34.40	20.1875	0.4149	11.75	424.0	31.5	8905.	10.23
36.00	17.9375	0.4251	11.94	338.2	26.3	7742.	10.35
37.60	18.3125	0.4164	11.90	313.2	22.5	6778.	10.65
39.20	15.3125	0.4204	12.33	248.2	18.6	6247.	11.23
40.80	12.8750	0.4320	13.26	224.7	15.2	5641.	11.27
42.40	11.3750	0.4615	12.54	169.2	12.2	4700.	11.41
44.00	8.8125	0.4468	12.75	137.8	10.0	3814.	11.14
45.60	9.0000	0.4306	13.54	110.2	8.3	3055.	11.54
47.20	6.3125	0.3366	15.30	90.7	6.9	2418.	11.85
48.80	4.7500	0.4474	12.85	88.0	5.8	2104.	11.71
50.40	6.0000	0.4479	11.49	60.6	4.7	1728.	12.06
52.00	4.3125	0.4493	13.89	50.6	3.6	1412.	12.63
53.60	3.8750	0.4193	11.73	43.5	2.9	1153.	11.19
55.20	3.5000	0.4643	14.52	33.1	2.3	1016.	11.80
56.80	2.1250	0.5588	15.78	26.8	1.8	718.	12.53
58.40	1.4375	0.4348	11.08	16.4	1.4	534.	12.12
60.00	1.5000	0.4583	12.07	15.8	1.1	393.	12.16
61.60	1.3125	0.4286	16.62	14.5	0.9	308.	14.52
63.20	1.0625	0.4117	12.20	9.0	0.7	243.	12.08
64.80	0.6250	0.5000	10.32	9.1	0.5	220.	10.08
66.40	0.5000	0.2500	11.02	4.4	0.4	172.	9.14
68.00	0.6250	0.5000	9.93	4.3	0.4	129.	10.18
69.60	0.4375	0.2857	13.63	6.1	0.3	118.	8.25
71.20	0.1875	0.3332	11.84	1.2	0.2	82.	10.43
72.80	0.1875	0.0000	8.97	1.1	0.1	49.	9.62
74.40	0.1875	0.3332	10.10	1.2	0.1	44.	9.56
76.00	0.1250	0.4998	20.75	1.4	0.1	36.	8.39
77.60	0.0625	0.9990	28.83	1.7	0.1	25.	15.97
79.20	0.1250	0.0000	18.31	1.4	0.1	20.	14.41
IONS:10000, 2000 TIME:		76.	TOTAL=	45.9	4.1	IONZ/TOTAL=	0.0816

75keV Se 79 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
48.804	19.476	35.021	17.259	14.575	0.473	3.035	For ions
(nm)		22.902	15.907	7.862	0.831	3.455	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.25	2.3200	0.3448	8.55	1609.2	212.1	7038.	5.63
3.75	4.8000	0.3917	10.32	1691.4	209.6	12542.	5.75
6.25	6.1600	0.4156	10.84	1757.3	206.1	16045.	6.53
8.75	9.7200	0.4321	11.22	1722.9	202.2	18269.	7.27
11.25	11.6800	0.4521	12.24	1772.2	196.2	20146.	7.97
13.75	13.2400	0.4532	11.35	1746.9	188.8	21560.	8.47
16.25	16.6800	0.4388	11.20	1776.5	180.2	22199.	8.83
18.75	18.1600	0.4163	12.24	1650.2	169.1	22349.	9.23
21.25	20.5200	0.4230	12.52	1642.8	157.7	22341.	9.71
23.75	21.7600	0.4338	13.80	1504.6	143.6	22372.	10.29
26.25	21.3600	0.4363	14.03	1334.3	129.3	21343.	10.92
28.75	21.3200	0.4165	14.02	1253.0	116.7	20809.	11.31
31.25	21.6000	0.4500	14.00	1126.4	103.8	19396.	12.25
33.75	22.9200	0.4956	14.56	1029.3	92.7	18053.	12.77
36.25	20.4800	0.4512	15.01	882.4	79.8	16238.	13.55
38.75	20.7200	0.3919	14.58	781.9	69.3	14767.	13.81
41.25	19.0000	0.4126	15.99	723.1	59.4	13398.	14.17
43.75	17.0000	0.4165	16.50	583.9	49.9	11816.	14.02
46.25	15.8000	0.4253	17.03	505.6	41.5	10637.	14.28
48.75	14.8400	0.4609	15.03	425.4	34.2	9323.	14.32
51.25	12.8800	0.3944	16.24	366.4	28.8	7881.	14.45
53.75	12.0800	0.4503	15.69	303.6	22.5	6600.	14.52
56.25	10.5600	0.4129	17.44	259.7	17.9	5741.	15.36
58.75	8.6800	0.4378	16.22	188.3	14.0	4910.	15.50
61.25	7.7200	0.4352	15.48	146.0	11.2	3788.	15.44
63.75	6.2400	0.4872	17.35	114.8	8.4	2946.	15.82
66.25	5.0000	0.4240	16.70	89.9	6.1	2305.	16.50
68.75	3.1600	0.4683	17.85	61.8	4.6	1712.	16.69
71.25	3.4800	0.4483	19.06	44.2	3.5	1351.	16.65
73.75	2.4000	0.5000	16.42	37.8	2.6	1068.	16.77
76.25	1.2000	0.2667	21.14	25.6	1.8	807.	15.51
78.75	1.4000	0.4000	18.37	18.2	1.5	710.	16.76
81.25	0.8400	0.4762	19.90	13.0	1.0	507.	18.56
83.75	0.6400	0.4375	20.71	8.0	0.7	315.	18.95
86.25	0.6000	0.1333	21.12	8.3	0.5	208.	21.25
88.75	0.5200	0.1538	18.08	5.6	0.4	176.	21.41
91.25	0.0400	0.0000	34.81	2.0	0.3	130.	25.32
93.75	0.2400	0.3333	24.75	2.0	0.2	102.	27.36
96.25	0.2000	0.7998	15.36	2.1	0.2	79.	25.68
98.75	0.1600	0.7498	21.66	0.9	0.1	62.	21.75
101.25	0.1200	0.0000	21.23	1.1	0.1	29.	22.35
103.75	0.0800	0.0000	20.78	0.7	0.1	11.	8.13
106.25	0.1200	0.6664	21.25	1.1	0.0	18.	7.34
108.75	0.0000	0.0000	0.00	0.0	0.0	5.	12.11
111.25	0.0400	0.9990	22.22	0.4	0.0	16.	18.18
113.75	0.0000	0.0000	0.00	0.0	0.0	4.	17.54
116.25	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
118.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
121.25	0.0400	0.0000	27.39	0.4	0.0	0.	0.00
123.75	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2000 TIME: 103.			TOTAL=	68.1	6.9	IONZ/TOTAL=	0.0923

100keV Se 79 in GaAs 150.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
61.723	24.048	44.689	21.601	18.039	0.470	3.000	For ions
(nm)		29.059	19.875	10.362	0.782	3.330	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.50	1.1333	0.5000	14.46	1558.9	244.7	7551.	6.21
4.50	3.1667	0.4737	12.99	1704.5	242.9	12764.	7.05
7.50	4.8667	0.4315	11.97	1788.9	238.9	15990.	7.55
10.50	6.5667	0.4264	14.15	1826.3	235.1	18018.	8.49
13.50	8.0333	0.3900	13.65	1773.5	227.8	20078.	9.43
16.50	10.1333	0.4441	14.33	1819.7	221.0	21850.	10.24
19.50	11.3667	0.4428	16.43	1787.3	211.9	23022.	10.64
22.50	14.1000	0.4043	14.60	1811.3	202.2	24105.	11.18
25.50	15.5000	0.4280	16.13	1778.8	189.2	24373.	11.96
28.50	17.3333	0.4596	16.71	1590.7	175.3	23452.	12.79
31.50	16.6667	0.4440	16.19	1480.3	160.9	22826.	13.21
34.50	16.3333	0.4020	16.54	1427.0	146.0	22028.	13.70
37.50	17.7333	0.4023	16.87	1295.1	130.8	20646.	14.19
40.50	16.8333	0.4337	18.14	1190.5	117.8	19454.	15.41
43.50	18.4667	0.4170	18.23	1074.9	105.1	18720.	16.05
46.50	16.5000	0.4283	18.95	928.1	90.4	17164.	16.58
49.50	16.3000	0.4479	18.15	854.3	78.7	15425.	17.21
52.50	14.9333	0.4219	19.16	716.0	67.8	13584.	17.87
55.50	14.9000	0.4497	19.11	657.0	57.4	12155.	18.07
58.50	12.8333	0.4104	18.52	541.5	47.6	11039.	17.90
61.50	12.2000	0.4317	19.82	464.2	39.8	9307.	18.20
64.50	11.3333	0.4441	19.24	364.4	32.3	8129.	18.16
67.50	9.4000	0.4113	20.37	324.9	26.7	6913.	18.00
70.50	8.4667	0.4606	21.80	254.9	22.2	5956.	19.51
73.50	6.6000	0.4343	22.27	197.4	17.6	4733.	20.25
76.50	6.0667	0.4176	22.39	176.6	14.0	4075.	20.21
79.50	4.9667	0.4497	19.05	127.4	10.7	3217.	20.92
82.50	4.3333	0.4385	17.69	102.2	8.3	2234.	20.32
85.50	3.3667	0.4851	20.19	84.3	6.2	1701.	20.42
88.50	2.6667	0.4125	23.82	64.0	4.7	1327.	22.18
91.50	2.0000	0.3000	25.65	44.5	3.6	972.	21.68
94.50	1.5000	0.4444	20.90	31.2	2.7	689.	21.08
97.50	1.3000	0.3590	28.04	25.1	1.9	540.	23.58
100.50	1.2667	0.3158	22.11	17.0	1.5	302.	25.29
103.50	0.7667	0.4348	23.97	15.8	1.1	262.	26.34
106.50	0.5333	0.5625	22.30	11.2	0.8	203.	24.17
109.50	0.4000	0.3333	26.78	6.8	0.5	143.	23.12
112.50	0.2333	0.2857	35.22	4.8	0.4	126.	22.01
115.50	0.3333	0.5999	22.15	3.5	0.3	107.	20.42
118.50	0.1667	0.3999	11.64	4.9	0.2	106.	26.83
121.50	0.1000	0.3332	20.93	1.0	0.1	69.	25.78
124.50	0.0667	0.4998	28.19	1.4	0.1	37.	26.86
127.50	0.1333	0.2499	18.64	1.3	0.1	22.	19.70
130.50	0.1333	0.4999	20.51	0.7	0.0	16.	17.38
133.50	0.0333	0.2990	10.61	0.3	0.0	6.	18.98
136.50	0.0000	0.0000	0.00	0.5	0.0	9.	13.19
139.50	0.0000	0.0000	0.00	0.3	0.0	24.	14.10
142.50	0.0000	0.0000	0.00	0.0	0.0	9.	12.01
145.50	0.0000	0.0000	0.00	0.1	0.0	8.	11.41
148.50	0.0000	0.0000	0.00	0.1	0.0	11.	8.47
IONS:10000, 1500 TIME: 136. TOTAL=				89.8	10.2	IONZ/TOTAL=	0.1017

150keV Se 79 in GaAs 200.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
87.173	33.221	63.916	29.829	25.253	0.412	2.931	For ions
(nm)		42.383	28.479	14.325	0.736	3.164	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
2.00	0.9750	0.4102	15.37	1567.0	299.3	6772.	9.10
6.00	1.5000	0.4167	14.88	1755.0	296.8	11418.	8.39
10.00	2.5000	0.4100	15.34	1833.8	293.6	14831.	10.02
14.00	3.9250	0.5096	13.44	1804.4	289.0	16884.	10.44
18.00	5.6250	0.4089	17.65	1851.8	282.3	19704.	12.17
22.00	6.3500	0.4173	20.04	1813.3	273.2	21471.	13.70
26.00	7.5750	0.4620	21.22	1823.1	263.3	21984.	14.10
30.00	8.8000	0.4062	22.12	1793.6	252.4	22523.	14.75
34.00	9.5500	0.3927	21.01	1805.1	239.3	23261.	15.88
38.00	10.3000	0.4393	21.50	1742.8	228.4	22252.	15.81
42.00	11.0000	0.4227	22.18	1670.4	213.4	20988.	16.18
46.00	12.7750	0.4325	22.18	1537.1	197.4	20702.	17.54
50.00	11.6500	0.4227	23.77	1437.0	179.8	20660.	18.17
54.00	13.1750	0.4554	25.37	1392.1	164.0	19924.	18.90
58.00	13.4500	0.3885	24.77	1274.7	145.7	18667.	19.75
62.00	12.3750	0.4384	26.31	1131.4	127.6	17954.	20.79
66.00	12.8000	0.4375	26.31	1006.4	112.6	16204.	21.38
70.00	12.7500	0.4333	27.00	929.0	98.9	14647.	22.69
74.00	10.7250	0.4662	25.71	793.3	86.1	13106.	22.53
78.00	9.9000	0.4571	26.74	717.2	73.5	11653.	24.45
82.00	9.9250	0.4332	27.40	635.8	62.2	10425.	25.17
86.00	8.9750	0.4150	27.92	511.1	51.4	9451.	26.11
90.00	8.0250	0.3645	30.85	430.0	43.2	8079.	28.16
94.00	7.5000	0.4300	27.31	369.5	35.3	7340.	29.55
98.00	6.1000	0.4098	28.96	336.2	29.2	6167.	31.08
102.00	6.2000	0.4274	30.52	243.9	23.0	5244.	28.88
106.00	5.2500	0.3667	28.39	201.8	17.7	4425.	30.38
110.00	4.0750	0.4785	28.29	157.0	13.9	3722.	28.75
114.00	3.1250	0.4080	30.34	111.7	10.5	2799.	30.42
118.00	2.9500	0.5339	29.34	96.0	8.3	2111.	29.87
122.00	2.3750	0.4000	33.23	68.3	6.2	1735.	29.10
126.00	1.4500	0.4828	27.41	54.3	4.8	1340.	27.44
130.00	0.9250	0.3513	25.82	42.6	3.8	1008.	27.40
134.00	1.0750	0.3953	32.50	32.6	2.8	820.	26.91
138.00	0.7750	0.3548	36.03	24.0	2.0	650.	25.88
142.00	0.8250	0.3939	29.65	15.2	1.4	602.	26.11
146.00	0.5500	0.4545	18.27	11.0	1.1	339.	28.68
150.00	0.4750	0.5263	33.66	10.1	0.9	177.	22.57
154.00	0.2750	0.5454	29.57	11.7	0.6	146.	15.53
158.00	0.1500	0.4999	39.95	4.9	0.4	101.	13.41
162.00	0.2000	0.2500	24.04	1.9	0.2	44.	14.64
166.00	0.1250	0.3999	28.14	2.7	0.2	26.	16.83
170.00	0.1000	0.4999	12.43	2.2	0.1	9.	22.84
174.00	0.1000	0.0000	21.08	1.1	0.1	3.	22.50
178.00	0.0000	0.0000	0.00	0.3	0.0	0.	0.00
182.00	0.0750	0.0000	31.53	0.8	0.0	0.	0.00
186.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
190.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
194.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
198.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 200. TOTAL=				132.2	17.7	IONZ/TOTAL=	0.1183

150keV Tel28 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
58.056	22.378	46.584	20.264	15.759	0.474	2.959	For ions
(nm)		28.499	19.665	8.063	0.779	3.202	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.25	0.2000	0.3999	11.83	2821.7	250.8	8823.	6.91
3.75	0.3600	0.6666	13.29	2891.1	246.0	15406.	7.57
6.25	1.3600	0.5588	14.58	2918.5	241.3	19299.	7.95
8.75	2.5600	0.5625	10.58	3040.6	236.2	21984.	9.09
11.25	4.0000	0.5000	8.73	3063.2	229.9	25192.	9.22
13.75	6.4400	0.4161	10.18	3005.6	222.4	27861.	9.62
16.25	8.7600	0.4703	10.76	2893.6	213.8	30070.	10.13
18.75	9.5200	0.4664	10.23	2937.5	204.9	31872.	10.45
21.25	11.4000	0.4947	12.30	2780.7	195.4	31994.	10.54
23.75	13.5200	0.4793	12.43	2584.6	185.4	32382.	11.13
26.25	15.4800	0.4755	12.88	2673.0	175.1	33062.	11.83
28.75	16.7200	0.5072	12.96	2371.5	163.0	32945.	12.43
31.25	17.7600	0.5158	13.42	2421.1	151.2	32507.	13.21
33.75	17.8800	0.4228	14.40	2183.3	139.5	32075.	13.45
36.25	18.7600	0.5437	13.81	2003.1	127.8	30990.	13.77
38.75	18.3200	0.5022	14.83	1922.1	115.8	28205.	14.49
41.25	18.7200	0.4744	16.02	1725.1	104.8	26878.	14.80
43.75	19.6800	0.4858	16.45	1596.5	93.9	26167.	15.03
46.25	18.6400	0.4979	15.72	1391.6	83.4	24844.	15.13
48.75	18.3600	0.4880	16.34	1275.4	73.9	22679.	15.69
51.25	17.3600	0.4839	17.15	1139.3	65.3	20761.	15.92
53.75	15.1600	0.4908	15.87	987.7	56.4	19746.	16.76
56.25	15.0800	0.4801	16.49	856.0	49.4	19335.	17.41
58.75	13.7200	0.4898	16.80	805.3	42.5	17601.	18.31
61.25	14.5600	0.5165	18.88	683.7	35.8	15344.	18.70
63.75	12.0000	0.5000	17.44	552.2	30.0	13470.	18.73
66.25	10.6000	0.4943	18.29	460.6	25.3	11439.	18.81
68.75	8.6800	0.4931	18.37	397.8	21.0	10285.	18.19
71.25	9.2400	0.4675	18.36	343.4	17.6	8504.	18.43
73.75	8.4000	0.5143	18.61	292.0	14.1	7628.	18.32
76.25	6.2000	0.5742	19.42	221.9	11.5	6537.	18.85
78.75	5.1600	0.5426	19.44	184.7	9.4	5716.	19.25
81.25	4.5200	0.5310	20.88	146.2	7.6	5013.	19.88
83.75	4.2000	0.4571	19.28	124.3	6.1	3955.	20.75
86.25	3.4800	0.5287	20.66	96.0	4.8	2976.	21.49
88.75	2.3200	0.5172	18.41	84.7	3.8	2381.	21.15
91.25	2.0800	0.4808	18.23	55.2	2.9	2019.	21.54
93.75	1.7200	0.5814	17.82	44.9	2.3	1533.	21.12
96.25	1.3600	0.4706	16.45	41.9	1.8	1262.	21.36
98.75	1.4000	0.4571	17.89	28.7	1.3	894.	23.94
101.25	1.0400	0.4615	23.57	22.2	1.0	774.	24.16
103.75	0.7600	0.4210	20.46	13.6	0.7	605.	21.08
106.25	0.4800	0.5833	23.71	12.5	0.5	405.	21.41
108.75	0.4400	0.6363	24.55	6.2	0.4	282.	21.47
111.25	0.3200	0.3750	24.48	7.5	0.3	167.	19.88
113.75	0.2800	0.5713	15.26	2.5	0.2	168.	17.17
116.25	0.2800	0.5713	19.80	4.0	0.2	139.	15.90
118.75	0.1200	0.6664	15.16	3.2	0.2	153.	14.98
121.25	0.2000	0.3999	13.73	2.1	0.1	112.	14.68
123.75	0.0000	0.0000	0.00	1.8	0.1	59.	11.23
IONS:10000, 1500 TIME: 129. TOTAL=				140.3	9.7	IONZ/TOTAL=	0.0645

200keV Se 79 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
113.166	41.940	83.445	37.951	32.732	0.340	2.847	For ions
(nm)		54.075	35.785	19.145	0.700	3.086	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	0.7000	0.3333	23.67	1593.6	345.2	7610.	9.28
9.00	1.5833	0.4421	22.15	1759.9	341.7	11776.	11.05
15.00	2.3667	0.4296	22.22	1774.3	336.1	14593.	13.43
21.00	2.9500	0.4181	23.72	1809.0	329.6	16398.	15.42
27.00	4.7167	0.4099	23.47	1827.4	320.8	16967.	16.79
33.00	5.1833	0.4212	25.04	1775.6	307.8	18367.	17.69
39.00	6.0000	0.4083	28.00	1873.7	295.4	19691.	19.50
45.00	7.5000	0.4511	26.48	1842.3	279.0	20579.	20.12
51.00	8.1167	0.4086	30.52	1681.5	258.4	21223.	22.01
57.00	8.8667	0.4342	31.54	1636.7	239.8	20370.	23.13
63.00	10.0333	0.4352	30.47	1559.4	217.0	19942.	24.23
69.00	9.7667	0.4198	34.19	1423.9	193.8	18704.	26.43
75.00	10.2167	0.4405	32.43	1281.0	171.7	17640.	26.82
81.00	10.3167	0.4330	32.94	1180.7	149.2	16013.	27.60
87.00	9.3333	0.4161	32.69	1032.0	128.4	13402.	28.11
93.00	8.8667	0.4135	34.35	920.7	107.9	12847.	29.65
99.00	9.1833	0.3811	35.06	792.9	90.5	10865.	30.06
105.00	7.6000	0.4276	33.74	641.4	74.4	9887.	29.81
111.00	7.5167	0.4169	37.18	516.3	60.5	8841.	30.42
117.00	6.4167	0.4286	34.02	451.0	48.9	7191.	32.88
123.00	6.2000	0.4220	35.98	364.3	39.4	5868.	35.04
129.00	4.7000	0.4362	37.14	303.9	30.3	4812.	38.32
135.00	4.1167	0.4453	38.35	222.8	22.6	3524.	37.70
141.00	3.5667	0.4252	36.46	160.3	16.8	2744.	38.48
147.00	2.5167	0.4702	37.45	122.5	13.0	2376.	42.13
153.00	1.9667	0.4322	41.59	95.5	9.1	1739.	43.19
159.00	1.6833	0.4356	35.05	70.4	6.7	1416.	45.13
165.00	1.3000	0.4231	40.39	59.7	4.7	1036.	47.30
171.00	0.9333	0.4286	38.22	34.8	3.3	697.	45.59
177.00	0.6833	0.3415	49.98	26.6	2.2	451.	43.75
183.00	0.4167	0.4000	33.94	16.0	1.3	305.	26.76
189.00	0.3833	0.4348	29.91	10.2	0.9	91.	37.75
195.00	0.2500	0.3333	33.76	8.1	0.6	67.	44.66
201.00	0.1500	0.4444	25.52	5.2	0.5	121.	57.17
207.00	0.1333	0.2500	53.71	2.3	0.2	63.	60.98
213.00	0.0500	0.6664	36.34	0.7	0.1	16.	44.24
219.00	0.0167	0.0000	11.20	1.4	0.1	16.	33.80
225.00	0.0333	0.4998	23.91	0.6	0.1	5.	34.29
231.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
237.00	0.0167	0.0000	14.22	0.2	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0167	0.9990	14.81	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 258.			TOTAL=	173.3	26.7	IONZ/TOTAL=	0.1335

300keV Se 79 in GaAs 400.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
163.768	59.349	122.838	54.060	46.681	0.246	2.720	For ions
(nm)		86.094	53.098	28.354	0.573	3.027	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
4.00	0.3500	0.2857	40.00	1587.8	422.5	5097.	8.73
12.00	0.9625	0.4545	26.23	1600.0	418.7	8786.	11.74
20.00	1.2375	0.4242	27.44	1689.3	412.7	9596.	12.89
28.00	2.2625	0.4530	30.19	1805.2	406.4	11498.	16.37
36.00	2.5000	0.4800	33.61	1747.4	397.2	13125.	20.45
44.00	3.2500	0.4154	34.99	1833.6	386.4	13272.	22.24
52.00	3.5625	0.4000	38.99	1741.1	370.7	14518.	24.05
60.00	4.1375	0.4501	39.82	1772.8	353.4	15420.	26.83
68.00	5.1125	0.4328	38.44	1768.0	334.8	16343.	28.68
76.00	5.3250	0.4084	41.01	1738.6	313.6	16884.	31.72
84.00	5.8250	0.4206	42.89	1665.3	292.7	16977.	32.73
92.00	6.7750	0.4539	45.82	1545.2	266.3	16483.	35.22
100.00	6.5125	0.4415	43.36	1443.3	242.5	16272.	38.21
108.00	6.7250	0.4405	45.94	1388.2	217.2	14222.	37.39
116.00	7.1875	0.4557	46.32	1269.3	192.4	13474.	39.94
124.00	7.2250	0.4187	47.66	1108.8	169.9	13454.	39.57
132.00	6.6375	0.4369	46.50	1005.5	146.1	12868.	41.80
140.00	5.8750	0.4106	51.37	858.3	124.6	12170.	42.59
148.00	6.4250	0.4358	49.96	769.0	104.2	11438.	44.11
156.00	5.9125	0.4271	50.81	659.1	85.9	9289.	46.35
164.00	5.6750	0.4581	55.80	550.3	69.9	7547.	46.47
172.00	4.3625	0.4011	49.06	436.4	56.9	6439.	45.74
180.00	3.8875	0.4116	54.69	363.0	45.2	5253.	47.00
188.00	3.5750	0.4720	55.49	294.4	35.2	3914.	46.27
196.00	2.6375	0.4171	52.58	226.4	26.9	3013.	43.83
204.00	2.6625	0.4178	48.56	181.4	20.6	2331.	41.89
212.00	2.0750	0.4036	53.65	137.8	15.6	1821.	45.71
220.00	1.8000	0.3264	50.65	115.3	11.1	1375.	41.64
228.00	1.2000	0.4271	53.01	72.3	7.5	983.	46.39
236.00	0.9000	0.4583	53.18	54.0	5.5	678.	46.16
244.00	0.7375	0.4576	56.04	35.2	3.8	540.	49.17
252.00	0.3875	0.3548	63.45	22.2	2.6	466.	53.70
260.00	0.2750	0.2273	49.25	14.4	1.9	340.	48.27
268.00	0.3875	0.5806	59.62	15.3	1.2	398.	44.96
276.00	0.1500	0.2500	50.06	7.9	0.8	268.	59.41
284.00	0.1625	0.4615	57.81	5.1	0.5	284.	59.88
292.00	0.0750	0.8332	50.33	3.2	0.2	201.	46.85
300.00	0.0750	0.3333	59.47	1.1	0.1	144.	37.92
308.00	0.0000	0.0000	0.00	0.2	0.0	29.	18.37
316.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
324.00	0.0125	0.0000	13.00	0.1	0.0	0.	0.00
332.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
340.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
348.00	0.0000	0.0000	0.00	0.4	0.0	0.	0.00
356.00	0.0000	0.0000	0.00	0.2	0.1	0.	0.00
364.00	0.0125	0.9990	25.58	0.3	0.0	0.	0.00
372.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
380.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
388.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
396.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	700 TIME:	377.	TOTAL=	252.3	47.7	IONZ/TOTAL=	0.1591

400keV Se 79 in GaAs 500.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
215.496	74.955	163.830	69.156	59.147	0.222	2.738	For ions
(nm)		115.299	68.606	34.932	0.442	2.599	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
5.00	0.1600	0.3750	17.25	1437.8	487.6	4521.	10.63
15.00	0.4700	0.5319	36.61	1492.9	483.8	6474.	15.94
25.00	0.7500	0.4133	37.57	1625.0	478.7	8164.	17.73
35.00	1.2600	0.4841	43.21	1616.9	470.9	9109.	20.27
45.00	1.8900	0.3651	46.27	1722.0	463.8	10210.	23.28
55.00	1.8100	0.5028	46.42	1724.8	451.1	10876.	26.59
65.00	2.5700	0.4358	49.42	1713.4	438.9	12338.	29.26
75.00	3.0400	0.4901	46.41	1779.0	420.8	13963.	33.59
85.00	3.1900	0.4263	54.79	1658.6	400.8	14302.	38.49
95.00	3.9800	0.4296	55.84	1716.7	380.4	14830.	39.11
105.00	4.1200	0.3883	53.45	1726.2	358.3	13769.	40.67
115.00	4.8500	0.4351	55.90	1697.0	334.0	14352.	41.38
125.00	4.9200	0.4329	56.11	1578.3	304.8	14594.	43.08
135.00	5.3900	0.4211	59.31	1488.1	275.7	13712.	45.13
145.00	5.2000	0.4288	55.58	1346.5	246.3	13258.	48.43
155.00	5.3800	0.4275	60.38	1212.7	220.5	12397.	54.78
165.00	5.4400	0.4265	61.19	1122.3	193.7	11288.	50.44
175.00	5.0200	0.3765	63.78	1064.5	167.3	10223.	53.14
185.00	5.5800	0.4444	60.01	894.6	142.2	9227.	47.91
195.00	4.9800	0.4096	64.34	810.8	119.6	8412.	47.72
205.00	4.4300	0.3973	63.54	658.1	99.6	8015.	50.79
215.00	4.2300	0.4043	60.60	567.2	80.7	6717.	49.96
225.00	3.7700	0.4456	65.10	466.8	65.1	6501.	55.50
235.00	3.5500	0.4169	60.94	383.3	52.4	5314.	59.13
245.00	2.7600	0.4565	65.50	293.5	39.8	4066.	61.81
255.00	2.4400	0.4549	65.70	248.3	31.2	3946.	61.71
265.00	2.2400	0.4152	62.67	179.8	23.2	3181.	60.91
275.00	1.6600	0.4639	70.62	136.1	16.9	2287.	68.74
285.00	1.1900	0.4538	66.82	96.6	12.5	1494.	70.31
295.00	0.8700	0.4253	66.08	67.1	8.9	932.	73.23
305.00	0.7000	0.4571	69.21	48.1	6.9	563.	87.46
315.00	0.5600	0.3750	62.98	37.5	5.0	303.	57.73
325.00	0.4200	0.4524	66.63	33.7	3.7	513.	78.28
335.00	0.3700	0.5135	67.93	21.8	2.6	273.	78.48
345.00	0.2200	0.4091	76.00	14.3	1.6	84.	101.26
355.00	0.2100	0.4762	72.93	10.1	1.0	12.	86.36
365.00	0.1200	0.2500	76.36	7.9	0.6	0.	0.00
375.00	0.1300	0.3846	70.16	4.0	0.4	0.	0.00
385.00	0.0500	0.5999	57.50	2.0	0.2	0.	0.00
395.00	0.0400	0.0000	59.75	0.7	0.1	0.	0.00
405.00	0.0100	0.0000	59.75	1.3	0.0	0.	0.00
415.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
425.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
435.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
445.00	0.0100	0.9990	41.57	0.1	0.0	0.	0.00
455.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
465.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
475.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
485.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
495.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	450	TIME:	505.	TOTAL=	327.1	72.9	IONZ/TOTAL= 0.1823

10keV Sn119 in GaAs 30.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
9.398	3.730	7.323	3.310	2.830	0.656	3.430	For ions
(nm)		4.098	2.990	1.281	1.034	3.963	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.30	1.1667	0.7142	2.71	1133.9	67.0	3758.	1.63
0.90	7.1667	0.5116	2.24	1537.0	65.5	8253.	1.66
1.50	18.0000	0.4630	2.10	1451.4	63.3	11051.	1.78
2.10	40.6667	0.4467	2.35	1450.3	60.3	13137.	1.88
2.70	57.0000	0.4883	2.14	1390.6	56.6	15175.	2.04
3.30	73.1667	0.5057	2.20	1306.7	52.5	16430.	2.16
3.90	89.3333	0.5131	2.26	1148.5	47.6	16863.	2.29
4.50	115.3333	0.5014	2.43	1073.0	43.0	16867.	2.39
5.10	116.3333	0.4355	2.36	932.6	38.1	16649.	2.52
5.70	131.0000	0.4644	2.61	840.6	33.0	16044.	2.65
6.30	117.6667	0.4320	2.80	683.9	28.1	14962.	2.71
6.90	124.8333	0.4726	2.85	602.6	23.9	13604.	2.81
7.50	106.8333	0.4774	2.78	496.1	19.9	12101.	2.84
8.10	103.1667	0.4927	2.87	416.2	16.4	10666.	3.05
8.70	94.3333	0.4823	2.95	338.1	13.3	9363.	3.10
9.30	79.5000	0.4906	2.97	277.8	10.8	7653.	3.13
9.90	76.6667	0.4783	3.21	210.8	8.4	6614.	3.22
10.50	64.8333	0.5039	3.58	165.4	6.6	5561.	3.18
11.10	53.3333	0.5094	3.20	127.6	5.1	4671.	3.27
11.70	42.1667	0.5257	3.44	97.2	4.0	3694.	3.53
12.30	35.8333	0.4372	3.51	75.3	3.0	3067.	3.59
12.90	28.3333	0.4824	3.48	57.6	2.2	2479.	3.63
13.50	19.3333	0.5000	3.31	41.5	1.7	1885.	3.67
14.10	18.1667	0.5229	3.77	34.8	1.2	1548.	3.90
14.70	13.5000	0.5309	3.48	24.5	0.9	1272.	3.80
15.30	11.3333	0.5588	2.87	17.6	0.6	904.	3.86
15.90	7.5000	0.5111	3.19	13.5	0.4	744.	3.79
16.50	4.3333	0.5000	3.62	6.8	0.3	516.	3.92
17.10	5.5000	0.4242	3.93	5.8	0.2	438.	3.92
17.70	3.1667	0.6315	4.08	3.4	0.1	282.	4.18
18.30	3.1667	0.4737	3.40	2.4	0.1	201.	3.84
18.90	0.6667	0.7498	5.73	1.4	0.1	157.	4.63
19.50	1.0000	0.1666	4.67	0.7	0.0	111.	5.16
20.10	0.5000	0.3332	3.29	0.4	0.0	69.	3.67
20.70	0.0000	0.0000	0.00	0.2	0.0	65.	3.92
21.30	0.0000	0.0000	0.00	0.1	0.0	34.	5.12
21.90	0.0000	0.0000	0.00	0.3	0.0	33.	4.51
22.50	0.0000	0.0000	0.00	0.2	0.0	27.	4.87
23.10	0.1667	0.9990	0.03	0.4	0.0	13.	3.74
23.70	0.0000	0.0000	0.00	0.1	0.0	7.	6.10
24.30	0.1667	0.0000	0.45	0.1	0.0	5.	4.98
24.90	0.1667	0.0000	4.37	0.1	0.0	2.	6.20
25.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
26.10	0.0000	0.0000	0.00	0.0	0.0	1.	5.78
26.70	0.1667	0.9990	11.67	0.0	0.0	0.	0.00
27.30	0.0000	0.0000	0.00	0.0	0.0	1.	0.00
27.90	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
28.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
29.10	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
29.70	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 2910 TIME: 183. TOTAL=				9.6	0.4	IONZ/TOTAL=	0.0405

25keV Sn119 in GaAs 40.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
16.604	6.543	12.878	5.880	4.861	0.619	3.348	For ions
(nm)		7.546	5.456	2.365	0.950	3.721	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.40	1.1250	0.7777	3.00	1787.6	106.1	5024.	2.64
1.20	3.3750	0.3704	3.21	2082.6	103.7	10018.	2.59
2.00	7.8750	0.4921	3.32	1964.9	101.1	13465.	2.83
2.80	13.0000	0.3750	3.48	1946.5	98.2	16080.	2.99
3.60	21.7500	0.4770	3.73	1933.8	94.9	18587.	3.15
4.40	30.1250	0.4440	3.78	1812.8	90.8	19880.	3.28
5.20	39.5000	0.4367	3.92	1801.8	86.5	21440.	3.53
6.00	43.8750	0.5014	3.87	1775.8	81.7	22761.	3.63
6.80	51.0000	0.4828	4.04	1684.0	76.1	22803.	3.69
7.60	58.3750	0.4518	3.99	1619.8	70.4	22739.	3.82
8.40	62.3750	0.4910	4.12	1381.6	64.3	22862.	4.02
9.20	68.2500	0.4963	4.37	1378.6	58.7	22897.	4.23
10.00	66.7500	0.4888	4.51	1176.2	52.7	22003.	4.43
10.80	67.1250	0.4860	4.55	1050.8	47.0	20488.	4.65
11.60	68.3750	0.4936	5.04	958.3	41.5	19119.	4.71
12.40	67.1250	0.5028	4.92	833.2	36.4	18198.	4.85
13.20	65.8750	0.4953	4.70	735.5	32.0	16055.	4.93
14.00	62.8750	0.4811	5.01	643.8	27.3	14678.	5.00
14.80	54.1250	0.4434	5.16	547.7	23.6	13328.	4.96
15.60	55.1250	0.4354	4.99	475.5	20.1	12135.	5.19
16.40	45.0000	0.5139	5.40	411.9	17.0	11139.	5.22
17.20	42.5000	0.4794	5.68	341.3	14.0	10354.	5.56
18.00	38.7500	0.4871	5.48	264.6	12.0	8822.	5.65
18.80	30.7500	0.5325	5.55	231.6	9.7	7500.	5.86
19.60	28.1250	0.5289	5.81	197.9	8.2	6912.	5.57
20.40	25.6250	0.4634	5.59	156.5	6.8	6055.	5.60
21.20	27.0000	0.4768	5.68	146.2	5.6	5051.	5.67
22.00	18.0000	0.5347	5.52	108.3	4.5	4279.	5.92
22.80	16.1250	0.4574	5.71	83.9	3.5	3861.	6.10
23.60	14.3750	0.5478	5.59	67.8	2.7	2897.	5.91
24.40	11.0000	0.4091	5.92	50.4	2.0	2120.	6.33
25.20	8.0000	0.4687	6.14	37.0	1.6	1792.	6.62
26.00	6.1250	0.6122	6.78	29.3	1.3	1458.	6.55
26.80	5.8750	0.5745	5.92	26.5	1.1	1131.	6.56
27.60	6.5000	0.4423	6.49	20.8	0.9	866.	7.22
28.40	3.0000	0.7083	7.24	15.1	0.6	641.	7.88
29.20	3.5000	0.4286	6.35	10.3	0.4	493.	8.44
30.00	2.2500	0.4444	5.94	7.3	0.3	353.	8.20
30.80	1.6250	0.6923	6.70	6.7	0.3	271.	8.38
31.60	1.0000	0.7499	5.83	3.7	0.2	238.	6.01
32.40	0.6250	0.3999	8.54	4.1	0.2	238.	6.31
33.20	0.7500	0.6666	11.02	2.7	0.1	174.	5.19
34.00	0.8750	0.5713	6.76	2.5	0.1	176.	5.42
34.80	0.5000	0.4999	7.37	2.3	0.1	148.	4.26
35.60	0.7500	0.1666	3.38	1.1	0.1	107.	4.15
36.40	0.2500	0.4998	7.89	1.0	0.0	94.	4.71
37.20	0.2500	0.0000	0.50	0.9	0.0	59.	4.83
38.00	0.3750	0.3332	6.19	0.3	0.0	43.	3.10
38.80	0.1250	0.9990	3.87	0.7	0.0	22.	2.93
39.60	0.1250	0.9990	0.59	0.3	0.0	30.	3.02
IONS:10000, 1168 TIME: 202. TOTAL=				23.9	1.1	IONZ/TOTAL=	0.0450

50keV Sn119 in GaAs 60.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
26.453	10.527	20.621	9.474	7.578	0.580	3.175	For ions
(nm)		12.322	8.802	3.786	0.917	3.721	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.60	0.5833	0.1428	6.95	2093.8	149.6	6533.	3.79
1.80	1.8333	0.5909	4.90	2436.5	147.0	12401.	3.71
3.00	4.5833	0.6364	5.50	2367.5	143.3	15729.	3.81
4.20	7.3333	0.3750	5.63	2389.7	140.1	19184.	4.32
5.40	14.3333	0.5116	5.34	2361.9	135.8	21976.	4.60
6.60	17.8333	0.5187	5.76	2359.4	130.6	24353.	4.96
7.80	21.6667	0.5423	5.70	2296.0	124.6	25515.	5.25
9.00	26.7500	0.4829	6.09	2220.6	119.0	26830.	5.43
10.20	32.0833	0.4675	5.94	1991.6	111.5	27532.	5.68
11.40	33.9167	0.5111	6.45	2042.9	104.6	27942.	5.90
12.60	36.5000	0.4612	6.64	1833.8	96.9	27519.	6.33
13.80	34.7500	0.4844	6.44	1740.9	90.1	28158.	6.48
15.00	42.5833	0.4599	6.60	1620.4	82.4	27446.	6.66
16.20	43.2500	0.5010	6.78	1493.0	74.3	26118.	6.81
17.40	43.8333	0.4943	7.39	1321.3	67.5	24657.	7.10
18.60	41.1667	0.4352	7.33	1221.6	59.9	23518.	7.14
19.80	40.3333	0.4814	7.19	1100.7	53.7	22093.	7.28
21.00	38.8333	0.4635	7.33	972.9	47.2	20972.	7.50
22.20	38.5833	0.4557	7.69	870.1	41.2	19121.	7.76
23.40	33.2500	0.4110	8.60	742.9	35.4	17224.	7.99
24.60	33.7500	0.4543	8.02	665.6	30.9	15440.	8.28
25.80	32.9167	0.5038	8.06	545.6	26.2	13959.	8.43
27.00	29.8333	0.4916	8.83	490.6	22.5	12155.	8.70
28.20	25.8333	0.5161	8.66	398.3	19.0	10761.	8.75
29.40	21.6667	0.4769	8.20	354.0	15.9	9954.	8.94
30.60	19.4167	0.5408	8.62	297.9	13.5	9046.	8.87
31.80	17.6667	0.4575	9.27	240.7	11.2	7854.	8.72
33.00	16.5000	0.4343	9.07	209.8	9.2	6438.	8.83
34.20	13.1667	0.4557	9.14	176.1	7.5	5253.	9.07
35.40	12.2500	0.5238	9.03	123.8	5.9	4335.	9.22
36.60	9.5833	0.4522	8.18	112.8	4.9	3577.	9.29
37.80	7.9167	0.5053	10.27	85.0	4.0	3108.	9.57
39.00	6.4167	0.5714	8.69	67.8	3.3	2969.	9.99
40.20	6.5833	0.5696	10.05	60.1	2.7	2318.	10.42
41.40	5.2500	0.4762	9.26	47.5	2.0	1929.	12.03
42.60	4.0833	0.4694	9.95	34.4	1.5	1546.	11.98
43.80	4.5833	0.4364	9.65	27.9	1.3	1321.	12.15
45.00	2.5833	0.5806	10.05	20.5	0.9	903.	10.99
46.20	1.6667	0.5500	8.39	19.4	0.7	776.	11.11
47.40	1.5833	0.2631	14.03	12.8	0.6	671.	10.99
48.60	1.0833	0.3846	11.47	11.0	0.4	558.	10.70
49.80	0.6667	0.6249	9.57	8.7	0.3	340.	12.33
51.00	0.9167	0.4545	7.64	7.6	0.3	231.	12.54
52.20	1.0000	0.3333	12.59	4.2	0.2	218.	11.73
53.40	0.4167	0.5999	14.74	2.9	0.2	172.	12.48
54.60	0.4167	0.2000	9.01	2.5	0.1	171.	11.22
55.80	0.5000	0.4999	14.89	4.3	0.1	149.	7.78
57.00	0.2500	0.3332	9.20	1.4	0.1	131.	5.57
58.20	0.1667	0.4998	0.96	0.8	0.0	39.	3.91
59.40	0.0833	0.9990	0.70	0.5	0.0	23.	2.52
IONS:10000, 1000 TIME: 335. TOTAL=				47.4	2.6	IONZ/TOTAL=	0.0514

75keV Sn119 in GaAs 80.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
35.151	13.866	27.605	12.478	9.804	0.570	3.139	For ions
(nm)		16.278	11.864	4.699	0.948	3.606	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.80	0.4375	0.1428	8.04	2395.8	183.3	8215.	4.72
2.40	1.8750	0.4000	6.80	2561.9	179.6	14399.	4.69
4.00	3.3125	0.4528	5.21	2470.0	175.7	19097.	5.21
5.60	5.8125	0.4194	6.55	2561.7	171.5	22824.	5.46
7.20	8.8125	0.4823	6.49	2649.4	166.4	24994.	5.77
8.80	11.4375	0.5410	6.77	2618.0	160.6	26924.	6.10
10.40	15.8750	0.5079	7.32	2453.6	153.6	29498.	6.64
12.00	17.0000	0.5000	7.69	2477.1	146.6	30603.	7.11
13.60	22.3750	0.4972	7.43	2304.2	138.6	30976.	7.43
15.20	26.2500	0.4929	8.29	2247.0	129.6	31264.	7.53
16.80	27.6875	0.4853	8.19	2093.6	121.2	30782.	7.80
18.40	29.0000	0.5172	8.86	2003.5	111.4	29571.	8.06
20.00	32.8750	0.4981	8.74	1875.4	101.6	28835.	8.57
21.60	32.4375	0.4798	8.56	1721.5	92.3	28659.	9.22
23.20	32.8750	0.5228	9.58	1546.6	83.3	27541.	9.16
24.80	32.8750	0.4829	9.48	1367.9	74.2	25222.	9.41
26.40	31.9375	0.4658	10.14	1277.0	66.0	23538.	9.67
28.00	28.7500	0.4652	10.39	1095.3	57.7	21416.	9.66
29.60	28.8750	0.5195	10.40	953.2	50.8	19650.	9.85
31.20	25.5625	0.4474	10.66	866.1	44.7	17585.	10.49
32.80	27.2500	0.5000	10.04	750.7	38.5	15929.	10.72
34.40	22.0000	0.4659	10.59	682.4	32.8	13974.	11.11
36.00	20.4375	0.5076	10.60	532.7	27.3	12941.	11.59
37.60	20.6250	0.4424	10.74	452.8	23.3	11714.	11.78
39.20	17.3125	0.4440	11.42	399.3	20.3	10636.	11.99
40.80	14.0625	0.5022	11.39	335.7	17.0	9108.	11.99
42.40	13.0625	0.4306	12.24	285.2	14.2	8398.	12.31
44.00	12.6875	0.5025	12.06	244.8	11.8	7059.	12.23
45.60	9.4375	0.5166	11.99	218.0	9.6	5687.	12.29
47.20	9.3125	0.4631	10.53	169.9	7.8	5245.	12.49
48.80	7.5625	0.4793	11.91	138.1	6.0	4836.	12.41
50.40	6.8125	0.4587	12.39	99.8	4.7	4146.	12.82
52.00	5.1250	0.4512	11.03	86.9	3.8	3409.	12.92
53.60	4.1250	0.5606	12.54	69.8	3.1	3121.	12.17
55.20	4.0000	0.5469	11.45	53.8	2.4	2598.	14.45
56.80	2.6250	0.5000	14.13	42.8	2.0	2164.	14.47
58.40	2.4375	0.5384	12.58	32.6	1.5	1539.	14.91
60.00	2.6875	0.5349	12.79	26.3	1.1	1172.	13.53
61.60	1.8125	0.5517	13.99	18.7	0.9	836.	15.50
63.20	1.2500	0.5500	10.52	14.1	0.6	633.	16.06
64.80	0.6875	0.3636	11.93	9.4	0.4	620.	17.53
66.40	1.0000	0.6875	9.47	8.7	0.3	437.	18.23
68.00	0.6250	0.5000	12.75	5.3	0.2	303.	15.37
69.60	0.8125	0.3846	9.09	4.8	0.1	212.	16.52
71.20	0.0625	0.0000	20.72	2.1	0.1	116.	19.02
72.80	0.0625	0.9990	5.72	0.7	0.0	86.	17.53
74.40	0.3125	0.5999	10.61	0.5	0.0	46.	17.45
76.00	0.0625	0.0000	14.68	1.0	0.0	40.	21.64
77.60	0.1250	0.9995	12.74	0.6	0.0	58.	16.40
79.20	0.0000	0.0000	0.00	0.3	0.0	30.	10.27
IONS:10000, 1000 TIME: 481.			TOTAL=	70.8	4.2	IONZ/TOTAL=	0.0563

100keV Sn119 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
43.881	17.088	34.547	15.331	12.378	0.542	3.149	For ions
(nm)		20.383	14.385	6.440	0.908	3.769	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.00	0.2500	0.3999	8.77	2436.2	211.5	8303.	6.00
3.00	0.9500	0.4737	9.28	2702.6	207.6	14812.	5.94
5.00	2.5500	0.3725	8.20	2735.2	203.2	19532.	6.18
7.00	4.2500	0.4823	8.81	2721.1	197.6	23203.	6.69
9.00	6.8500	0.5036	7.13	2690.2	192.5	26069.	7.30
11.00	9.5000	0.5158	7.51	2590.8	185.4	27745.	7.73
13.00	12.9000	0.4729	8.27	2602.9	178.7	30545.	8.06
15.00	15.7500	0.4952	9.35	2537.0	169.2	31311.	8.42
17.00	17.4000	0.4971	9.31	2494.6	160.6	31701.	9.13
19.00	18.3500	0.4905	9.84	2315.7	151.0	31220.	9.47
21.00	19.8500	0.4710	10.53	2257.4	141.4	30652.	10.09
23.00	23.2500	0.4882	10.39	2089.4	131.3	31822.	10.01
25.00	25.1000	0.4701	10.47	1957.7	119.7	31238.	10.47
27.00	26.4000	0.4167	11.43	1915.0	108.9	29893.	11.03
29.00	27.3500	0.5009	11.64	1674.0	98.9	28033.	11.44
31.00	27.4500	0.4845	12.20	1544.2	88.1	27175.	11.88
33.00	25.9500	0.4451	12.56	1381.8	78.0	26250.	12.22
35.00	23.2000	0.5129	12.54	1217.8	68.3	23951.	12.46
37.00	22.6000	0.4735	13.87	1086.8	60.2	22086.	12.58
39.00	21.3500	0.4871	12.61	917.4	52.0	20352.	12.87
41.00	20.8000	0.4856	13.61	813.1	44.9	18551.	13.60
43.00	19.7500	0.4759	14.09	755.9	38.3	16615.	13.83
45.00	18.3500	0.4850	13.58	614.8	32.7	14624.	14.09
47.00	17.1500	0.5015	14.11	526.1	27.5	12512.	14.94
49.00	14.0000	0.4464	14.31	414.4	22.5	10983.	14.90
51.00	11.6000	0.4828	14.08	381.6	19.2	9360.	15.24
53.00	10.8000	0.4583	15.01	319.0	15.3	8323.	15.60
55.00	10.2000	0.4657	13.74	244.4	12.6	7287.	15.37
57.00	7.3500	0.4490	13.39	187.0	10.2	6091.	16.18
59.00	6.6000	0.4621	15.70	179.5	8.5	5015.	17.66
61.00	5.9500	0.4706	17.59	140.2	6.8	3972.	18.00
63.00	5.3000	0.4623	13.80	107.5	5.2	3192.	17.74
65.00	3.8500	0.4286	16.79	86.8	4.1	2777.	18.46
67.00	3.6000	0.3750	14.44	63.8	3.2	2439.	16.83
69.00	2.5000	0.5800	16.44	49.4	2.6	1946.	17.58
71.00	2.1000	0.4048	17.99	41.7	2.0	1684.	19.25
73.00	1.7500	0.4571	15.64	33.5	1.6	1393.	19.61
75.00	1.5000	0.4667	12.97	27.4	1.2	1218.	19.85
77.00	1.0500	0.5238	15.47	21.0	0.9	925.	19.70
79.00	0.9000	0.5000	12.54	15.0	0.7	796.	18.20
81.00	1.1000	0.5000	19.70	14.6	0.5	634.	18.12
83.00	0.8500	0.4706	16.60	5.8	0.3	487.	16.41
85.00	0.4500	0.6666	16.58	4.1	0.2	400.	18.43
87.00	0.3500	0.4285	18.80	2.4	0.1	295.	19.31
89.00	0.1000	0.0000	21.58	2.0	0.1	184.	17.26
91.00	0.1000	0.9995	22.29	0.9	0.1	150.	14.01
93.00	0.0000	0.0000	0.00	1.3	0.1	91.	10.92
95.00	0.1500	0.0000	20.25	1.3	0.1	50.	9.03
97.00	0.0500	0.9990	36.29	1.3	0.1	24.	7.44
99.00	0.0500	0.0000	28.44	1.2	0.1	19.	6.29
IONS:10000, 1000 TIME: 595. TOTAL=				93.8	6.1	IONZ/TOTAL=	0.0613

150keV Sn119 in GaAs 150.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
60.100	23.122	47.657	20.959	16.659	0.505	3.156	For ions
(nm)		29.092	20.254	8.647	0.858	3.621	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.50	0.1000	0.3332	20.34	2692.6	258.6	9338.	7.61
4.50	0.6667	0.5500	9.34	2810.1	252.9	16350.	7.76
7.50	2.4333	0.4657	11.94	2893.4	247.2	20052.	8.58
10.50	3.5667	0.5701	8.62	2914.5	240.4	23861.	9.23
13.50	5.8333	0.4743	11.48	2819.5	232.8	26203.	9.55
16.50	8.5333	0.4727	11.91	2830.4	224.1	28494.	9.85
19.50	9.4667	0.4613	11.08	2689.3	213.5	30494.	10.85
22.50	12.4333	0.5228	12.70	2619.3	200.7	30858.	11.56
25.50	13.9667	0.4773	13.15	2544.7	189.2	31520.	12.04
28.50	15.2667	0.4825	14.92	2499.2	175.7	32304.	12.36
31.50	15.8333	0.4884	14.42	2353.5	161.6	32174.	12.46
34.50	18.0000	0.5019	14.42	2076.4	148.0	31071.	13.06
37.50	17.4333	0.5086	15.20	1957.9	132.8	30610.	14.18
40.50	17.8333	0.4542	15.61	1828.9	118.6	27811.	15.01
43.50	19.0333	0.4939	16.07	1641.6	105.7	26925.	15.52
46.50	18.5000	0.4865	17.06	1492.1	93.6	24993.	16.41
49.50	18.4333	0.4684	16.70	1320.4	81.1	22999.	17.07
52.50	15.8333	0.4842	16.40	1158.8	68.1	20164.	16.67
55.50	16.4667	0.4393	17.71	996.1	58.0	18130.	17.41
58.50	15.2333	0.4748	18.49	815.2	49.0	15867.	17.49
61.50	13.7000	0.4550	18.55	699.8	40.9	13991.	17.79
64.50	11.8000	0.5198	19.15	585.2	33.3	12549.	18.07
67.50	10.8000	0.4506	20.25	460.5	27.1	11270.	19.46
70.50	9.3333	0.4964	18.44	418.5	22.4	9829.	20.34
73.50	7.8333	0.4596	20.86	304.6	17.8	8566.	18.67
76.50	6.7667	0.5123	19.87	258.0	14.3	6945.	20.31
79.50	5.2667	0.5190	22.46	198.7	10.9	5660.	20.62
82.50	5.2333	0.5287	21.35	158.2	8.5	4349.	22.31
85.50	3.8333	0.6174	20.25	123.0	6.5	3485.	22.11
88.50	3.0000	0.5333	21.63	97.7	5.1	2898.	21.94
91.50	2.6667	0.5000	20.46	70.9	3.7	2322.	22.51
94.50	1.8333	0.5091	21.07	52.7	2.8	2019.	20.82
97.50	1.6667	0.4800	20.83	38.8	2.0	1488.	21.48
100.50	0.7333	0.7272	19.19	29.8	1.6	1136.	22.37
103.50	0.9667	0.4138	24.32	23.2	1.2	864.	24.43
106.50	0.6000	0.5555	16.51	14.6	0.9	769.	21.72
109.50	0.3333	0.2000	21.99	12.6	0.7	609.	21.31
112.50	0.4667	0.3571	24.27	10.5	0.6	445.	21.45
115.50	0.3333	0.3000	16.08	6.7	0.5	374.	17.31
118.50	0.2667	0.6249	11.26	9.1	0.3	347.	21.16
121.50	0.3667	0.3636	17.12	6.1	0.2	302.	18.18
124.50	0.2667	0.2500	26.44	2.5	0.1	266.	17.91
127.50	0.0000	0.0000	0.00	1.3	0.1	198.	16.97
130.50	0.0667	0.4998	15.47	1.4	0.0	126.	18.86
133.50	0.1000	0.6664	3.84	0.4	0.0	109.	33.48
136.50	0.0000	0.0000	0.00	1.0	0.0	168.	36.65
139.50	0.0000	0.0000	0.00	0.1	0.0	127.	34.72
142.50	0.0333	0.0000	33.55	0.0	0.0	128.	26.09
145.50	0.0000	0.0000	0.00	0.0	0.0	59.	22.98
148.50	0.0000	0.0000	0.00	0.0	0.0	20.	20.62
IONS:10000, 1000 TIME: 774. TOTAL=				139.6	10.4	IONZ/TOTAL=	0.0691

200keV Sn119 in GaAs 175.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
75.703	29.128	60.273	26.490	20.709	0.462	2.980	For ions
(nm)		37.508	25.743	11.206	0.771	3.298	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.75	0.1429	0.5999	11.62	2679.4	298.6	9094.	7.49
5.25	0.8286	0.4483	12.59	2922.7	293.4	15073.	7.73
8.75	1.0571	0.5946	10.43	2998.3	287.1	18539.	9.27
12.25	2.5429	0.4607	11.63	3009.8	279.7	21226.	10.10
15.75	4.8286	0.4852	11.47	2916.5	271.9	23586.	10.60
19.25	4.9143	0.4593	14.15	2916.5	263.2	24945.	11.34
22.75	7.0571	0.4818	15.90	2983.1	253.0	26208.	12.64
26.25	8.6000	0.4850	15.16	2784.3	241.6	27983.	12.85
29.75	10.7714	0.4987	17.62	2838.0	229.5	28628.	13.37
33.25	11.1429	0.4923	15.45	2731.9	214.5	28692.	14.67
36.75	12.4571	0.5161	17.57	2462.3	200.9	28814.	15.03
40.25	12.3429	0.4722	16.61	2391.2	185.7	28900.	16.19
43.75	13.6571	0.4895	18.91	2255.8	170.5	28857.	17.39
47.25	14.3714	0.4791	19.67	2084.7	155.0	28311.	18.29
50.75	15.2857	0.4654	19.60	1936.9	140.2	26750.	18.15
54.25	14.9714	0.5057	20.02	1769.6	125.1	26789.	18.62
57.75	13.6000	0.4895	20.11	1540.3	111.6	24491.	19.59
61.25	13.5143	0.4672	20.13	1437.6	98.5	22227.	20.19
64.75	13.7429	0.4906	21.55	1286.9	86.2	20740.	21.39
68.25	13.2000	0.4589	21.89	1134.5	73.6	18201.	21.62
71.75	12.2857	0.5349	22.77	968.0	63.5	16354.	22.08
75.25	10.8286	0.5119	21.28	884.8	54.4	14655.	21.99
78.75	10.9714	0.5078	22.43	720.9	45.2	13235.	23.30
82.25	8.4857	0.5320	24.55	576.9	37.9	11405.	24.19
85.75	8.8286	0.4563	25.18	513.0	31.3	10119.	26.92
89.25	8.1143	0.4401	24.77	425.5	25.9	8508.	26.56
92.75	6.5143	0.5439	24.08	341.2	20.7	7258.	27.40
96.25	5.2857	0.5027	25.65	285.0	16.4	6127.	25.96
99.75	4.6286	0.4753	24.79	231.7	13.5	5211.	25.82
103.25	4.0286	0.5177	26.23	184.2	10.5	4754.	25.49
106.75	3.2857	0.4609	22.18	145.0	8.0	3909.	26.05
110.25	2.9429	0.4757	26.83	102.5	6.3	3052.	26.29
113.75	2.1714	0.4868	26.61	86.0	5.1	2593.	25.88
117.25	1.7714	0.5645	23.58	68.1	3.6	2220.	28.44
120.75	1.4286	0.3800	29.78	47.7	2.8	1573.	30.72
124.25	1.3143	0.5217	29.22	37.1	2.1	1383.	27.84
127.75	0.7714	0.5555	33.69	31.8	1.6	1112.	24.79
131.25	0.9429	0.3939	29.58	21.2	1.1	888.	29.88
134.75	0.5143	0.5555	19.24	13.9	0.8	637.	44.40
138.25	0.3143	0.4545	32.57	13.5	0.6	421.	45.04
141.75	0.2571	0.3333	39.07	7.1	0.4	319.	34.80
145.25	0.3429	0.6666	23.65	7.2	0.3	242.	27.36
148.75	0.1714	0.4999	26.48	4.5	0.2	296.	23.75
152.25	0.1143	0.0000	36.68	2.7	0.1	191.	30.70
155.75	0.0286	0.9990	28.06	1.8	0.1	101.	40.95
159.25	0.1143	0.9998	26.62	2.4	0.1	132.	54.37
162.75	0.0286	0.0000	20.96	0.4	0.0	59.	33.69
166.25	0.0571	0.0000	24.57	0.7	0.0	15.	29.35
169.75	0.0286	0.0000	9.45	0.0	0.0	38.	32.76
173.25	0.0000	0.0000	0.00	0.0	0.0	53.	39.11
IONS:10000, 1000 TIME: 924. TOTAL=				184.8	15.2	IONZ/TOTAL=	0.0758

300keV Sn119 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
107.729	40.009	86.340	36.388	29.237	0.386	2.956	For ions
(nm)		53.390	34.736	16.095	0.613	2.941	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	0.1333	0.3750	25.76	2764.2	365.1	8498.	11.73
9.00	0.7000	0.5000	12.63	2890.3	356.9	13220.	13.24
15.00	1.3000	0.4744	23.17	2889.1	348.1	17411.	14.03
21.00	2.2667	0.4706	15.00	2976.6	338.7	19929.	15.19
27.00	3.4167	0.5171	18.66	2956.4	325.5	22649.	16.69
33.00	4.9000	0.5034	19.24	2841.6	310.7	23389.	17.81
39.00	5.8333	0.4886	21.24	2884.1	295.0	24908.	18.45
45.00	6.2167	0.4879	21.84	2846.8	278.2	25479.	21.01
51.00	8.2500	0.4545	24.88	2740.2	258.5	24940.	22.76
57.00	8.9833	0.4731	25.32	2546.2	235.5	24244.	22.99
63.00	9.8000	0.5272	25.60	2484.7	213.7	23505.	23.34
69.00	10.1667	0.4951	27.68	2180.5	190.8	23139.	24.10
75.00	10.1333	0.4786	31.49	2022.5	168.9	22520.	25.06
81.00	10.5667	0.5047	28.28	1759.8	146.9	21407.	25.98
87.00	11.3500	0.4699	30.89	1615.1	125.3	21503.	27.65
93.00	10.1333	0.4720	30.40	1414.7	105.0	18544.	28.70
99.00	9.2333	0.5000	29.18	1192.6	86.2	16711.	30.43
105.00	8.6833	0.4607	30.92	1012.7	70.0	14279.	31.13
111.00	8.2500	0.4747	31.22	783.9	56.7	12462.	30.64
117.00	7.1333	0.4743	33.20	631.2	44.6	10724.	31.98
123.00	5.1500	0.4951	33.56	501.4	35.2	9011.	32.09
129.00	5.0667	0.4276	35.14	414.5	28.3	6768.	33.32
135.00	4.0167	0.4938	33.97	318.0	21.2	5250.	33.94
141.00	4.0167	0.4938	36.67	253.0	15.9	3794.	35.96
147.00	2.5333	0.4803	39.40	166.9	11.5	3140.	35.28
153.00	2.0667	0.4758	36.21	131.9	8.5	2689.	32.62
159.00	1.7333	0.4904	36.67	99.8	6.1	2113.	36.23
165.00	1.2667	0.5395	32.40	72.2	4.3	1290.	35.42
171.00	0.9833	0.4068	37.01	45.1	2.8	793.	35.91
177.00	0.7000	0.3333	38.63	30.6	2.0	603.	35.16
183.00	0.5000	0.4000	34.98	25.6	1.5	404.	39.28
189.00	0.4000	0.4166	33.24	15.9	0.9	326.	33.05
195.00	0.2500	0.7333	22.99	13.0	0.6	184.	45.34
201.00	0.2000	0.5833	37.88	6.6	0.4	111.	46.23
207.00	0.1333	0.6249	39.42	4.2	0.2	136.	39.45
213.00	0.0667	0.4999	12.00	0.8	0.1	59.	27.80
219.00	0.0167	0.9990	33.72	2.3	0.1	51.	21.82
225.00	0.0500	0.6664	41.84	0.8	0.0	12.	16.35
231.00	0.0167	0.9990	26.76	0.8	0.0	1.	15.86
237.00	0.0167	0.9990	14.29	0.1	0.0	0.	0.00
243.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
261.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	800	TIME: 1007.	TOTAL=	273.2	26.8	IONZ/TOTAL=	0.0892

400keV Sn119 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
139.610	51.700	112.666	47.103	38.296	0.401	2.963	For ions
(nm)		73.135	48.375	23.095	0.696	3.073	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	0.1000	0.3332	18.95	2720.7	422.4	6703.	11.37
9.00	0.2667	0.4999	27.50	2639.1	416.2	10126.	12.82
15.00	0.6333	0.3158	18.43	2835.2	409.6	12400.	13.96
21.00	0.9667	0.4138	17.94	2842.0	402.0	14100.	15.67
27.00	1.6000	0.5625	27.92	2966.2	393.5	16374.	17.69
33.00	2.0333	0.5410	29.81	2968.0	382.7	18624.	18.34
39.00	3.0000	0.5333	26.15	3013.6	370.8	20043.	21.55
45.00	3.6000	0.4167	27.81	2999.1	357.3	20720.	21.55
51.00	5.0000	0.4800	25.45	2849.7	344.0	21668.	23.06
57.00	5.4333	0.4172	29.35	2942.7	326.1	21474.	24.14
63.00	5.2667	0.4557	34.25	2869.9	309.2	22082.	26.30
69.00	6.8000	0.5294	33.65	2622.6	290.1	21991.	28.04
75.00	7.2000	0.4907	31.78	2584.8	269.0	22021.	28.91
81.00	7.2333	0.4608	34.08	2430.9	252.1	21643.	29.79
87.00	7.3333	0.4636	35.61	2407.2	233.2	21442.	31.95
93.00	7.9667	0.4519	37.06	2185.4	212.4	21482.	34.51
99.00	8.9000	0.4232	34.45	2048.4	191.1	19424.	35.83
105.00	8.4667	0.5079	35.67	1848.3	170.8	18556.	37.03
111.00	8.3333	0.4760	40.43	1737.6	152.5	18246.	39.07
117.00	7.1333	0.4533	38.01	1637.8	134.8	16361.	39.48
123.00	7.3333	0.4818	40.47	1255.7	116.5	15211.	39.30
129.00	7.3333	0.5045	41.06	1223.7	101.0	13595.	40.16
135.00	6.8667	0.4903	40.72	1021.3	86.9	13030.	42.19
141.00	6.6333	0.5276	37.65	904.1	74.0	11835.	40.78
147.00	5.9000	0.5198	47.85	748.4	63.7	9978.	40.84
153.00	5.4333	0.5276	43.97	724.7	53.9	9613.	39.65
159.00	4.5000	0.5333	43.60	563.0	43.8	8376.	38.88
165.00	4.5000	0.5704	42.71	448.6	36.2	7727.	40.48
171.00	3.6667	0.5273	45.66	396.8	29.4	6100.	42.48
177.00	2.9000	0.4828	44.60	326.9	24.0	4611.	44.77
183.00	2.3000	0.5362	48.66	242.6	19.4	4209.	44.65
189.00	2.3667	0.5070	47.68	201.3	14.7	3481.	47.25
195.00	1.9667	0.3051	49.85	181.1	11.4	3262.	47.54
201.00	1.8667	0.4286	40.60	136.9	8.6	2719.	48.66
207.00	1.4333	0.5581	46.85	86.4	6.6	2497.	50.04
213.00	0.7667	0.3913	43.35	64.1	5.2	2038.	51.09
219.00	0.7333	0.4091	54.35	70.6	4.3	1616.	55.71
225.00	0.7667	0.3913	58.61	46.1	3.0	1247.	64.15
231.00	0.4333	0.3077	51.09	35.1	2.0	950.	59.69
237.00	0.5000	0.5333	41.74	20.9	1.6	703.	53.68
243.00	0.3667	0.5454	38.00	16.4	1.1	639.	54.90
249.00	0.1667	0.3999	68.64	13.1	0.9	453.	56.79
255.00	0.2000	0.6666	66.95	12.2	0.7	304.	67.21
261.00	0.1000	0.3332	35.45	10.7	0.6	253.	78.30
267.00	0.0667	0.0000	10.48	2.6	0.3	167.	70.92
273.00	0.1000	0.6664	88.74	4.5	0.3	130.	84.18
279.00	0.0000	0.0000	0.00	3.9	0.2	80.	89.83
285.00	0.0667	0.9995	21.36	1.6	0.1	70.	91.51
291.00	0.1000	0.3332	31.07	1.2	0.0	17.	20.00
297.00	0.0333	0.0000	13.98	0.3	0.0	16.	23.74
IONS: 5000,	700	TIME: 927.	TOTAL=	359.5	40.5	IONZ/TOTAL=	0.1013

10keV Te128 in GaAs 30.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
9.254	3.604	7.329	3.215	2.748	0.638	3.268	For ions
(nm)		4.113	2.975	1.179	1.008	3.905	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.30	1.5000	0.5555	3.36	1178.8	65.0	3789.	1.63
0.90	4.1667	0.3200	2.75	1573.1	63.0	7971.	1.60
1.50	15.0000	0.4889	1.88	1502.3	60.8	10929.	1.73
2.10	33.8333	0.5419	2.09	1464.0	57.8	13132.	1.86
2.70	51.5000	0.5307	2.23	1413.1	54.0	15090.	2.02
3.30	74.0000	0.4730	2.12	1284.0	50.1	16096.	2.12
3.90	94.3333	0.5265	2.31	1215.0	45.4	16864.	2.23
4.50	112.5000	0.5304	2.43	1059.6	40.6	16901.	2.31
5.10	117.6667	0.4915	2.44	946.5	35.7	16519.	2.37
5.70	133.1667	0.5119	2.51	826.8	31.1	15874.	2.49
6.30	127.1667	0.5125	2.56	681.8	26.3	15005.	2.56
6.90	132.0000	0.5139	2.61	580.8	22.1	13836.	2.67
7.50	110.0000	0.5273	2.75	467.5	18.2	12375.	2.76
8.10	104.8333	0.5008	2.97	392.1	15.0	10866.	2.83
8.70	95.0000	0.4754	2.92	315.3	12.1	9574.	2.96
9.30	82.0000	0.5366	3.07	262.3	9.8	8236.	3.01
9.90	71.1667	0.5246	2.87	215.8	7.8	6932.	3.11
10.50	58.6667	0.5227	3.43	166.8	6.1	5893.	3.14
11.10	55.6667	0.5240	3.12	121.7	4.6	4821.	3.28
11.70	45.8333	0.5236	3.39	91.6	3.5	3952.	3.43
12.30	34.0000	0.5490	3.28	67.8	2.6	3158.	3.51
12.90	29.3333	0.5170	3.51	54.7	2.0	2481.	3.49
13.50	19.3333	0.5690	3.34	36.0	1.4	1983.	3.62
14.10	17.8333	0.5421	3.33	28.1	1.0	1424.	3.70
14.70	11.3333	0.4412	3.53	18.5	0.7	1061.	3.52
15.30	10.0000	0.5167	2.72	15.2	0.5	780.	3.35
15.90	8.3333	0.4600	2.88	7.5	0.3	609.	3.51
16.50	5.0000	0.3667	3.49	7.1	0.2	441.	3.82
17.10	3.5000	0.4762	3.34	4.3	0.1	336.	4.17
17.70	3.1667	0.6315	3.54	2.7	0.1	264.	4.32
18.30	1.6667	0.5000	2.81	1.8	0.1	194.	3.60
18.90	1.0000	0.3333	3.90	0.8	0.0	121.	4.30
19.50	0.8333	0.3999	3.35	0.5	0.0	99.	4.48
20.10	1.0000	0.4999	4.26	0.3	0.0	57.	4.77
20.70	0.0000	0.0000	0.00	0.0	0.0	42.	4.81
21.30	0.0000	0.0000	0.00	0.0	0.0	11.	6.67
21.90	0.0000	0.0000	0.00	0.0	0.0	9.	5.16
22.50	0.0000	0.0000	0.00	0.0	0.0	7.	5.28
23.10	0.0000	0.0000	0.00	0.0	0.0	3.	2.74
23.70	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
24.30	0.0000	0.0000	0.00	0.0	0.0	1.	0.00
24.90	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
25.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
26.10	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
26.70	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
27.30	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
27.90	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
28.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
29.10	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
29.70	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 3000 TIME:		19.	TOTAL=	9.6	0.4	IONZ/TOTAL=	0.0383

25keV Te128 in GaAs 40.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
16.246	6.388	12.829	5.776	4.638	0.641	3.382	For ions
(nm)		7.093	5.194	2.112	0.997	4.003	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.40	0.6250	0.3999	5.35	1785.4	102.9	5299.	2.54
1.20	2.1250	0.5882	4.28	2130.2	100.3	10565.	2.63
2.00	5.6250	0.3555	3.59	2053.2	97.3	14289.	2.89
2.80	13.5000	0.4259	3.51	2089.5	94.3	17285.	2.97
3.60	20.7500	0.5482	3.69	2041.7	90.8	19055.	3.08
4.40	29.3750	0.4979	3.06	1941.4	86.9	21149.	3.21
5.20	37.6250	0.4651	3.41	1894.1	82.2	22166.	3.33
6.00	43.3750	0.5043	3.52	1728.6	76.8	23603.	3.53
6.80	53.0000	0.5118	3.63	1616.1	71.7	23536.	3.74
7.60	60.6250	0.4887	4.13	1560.4	65.9	24689.	3.83
8.40	67.8750	0.4991	4.20	1353.2	60.3	23391.	4.02
9.20	66.6250	0.4690	4.10	1308.1	54.6	22911.	4.23
10.00	70.0000	0.5304	4.30	1172.0	49.5	21920.	4.35
10.80	72.0000	0.5191	4.70	1054.6	43.8	20420.	4.54
11.60	68.6250	0.5046	4.55	919.3	38.9	19421.	4.61
12.40	65.3750	0.4570	4.42	855.5	33.6	18056.	4.74
13.20	68.8750	0.5100	5.00	721.0	29.1	16615.	4.83
14.00	60.1250	0.4823	4.67	629.0	25.1	15197.	4.99
14.80	56.6250	0.5166	4.82	525.1	21.4	13857.	5.13
15.60	47.8750	0.5091	5.09	437.5	18.4	12178.	5.22
16.40	46.6250	0.4933	4.94	393.6	15.5	10608.	5.30
17.20	44.2500	0.5000	4.80	324.6	12.9	9552.	5.38
18.00	38.0000	0.5296	4.90	258.9	10.6	8279.	5.43
18.80	32.6250	0.5172	5.42	248.5	8.8	7196.	5.55
19.60	32.3750	0.4749	5.93	188.1	7.0	6016.	5.49
20.40	26.0000	0.4760	4.97	145.5	5.7	5037.	5.56
21.20	19.2500	0.4545	5.70	115.0	4.5	4152.	5.74
22.00	19.3750	0.5226	5.32	82.3	3.7	3443.	5.66
22.80	16.8750	0.5111	5.73	70.9	2.9	2787.	5.93
23.60	12.3750	0.4444	5.76	55.3	2.3	2230.	6.10
24.40	11.1250	0.4944	6.08	48.4	1.8	1866.	5.85
25.20	8.7500	0.5000	6.14	34.5	1.5	1460.	6.25
26.00	6.8750	0.5454	5.59	25.5	1.1	1121.	6.01
26.80	4.3750	0.6000	6.90	20.5	0.9	875.	6.39
27.60	3.6250	0.3103	6.12	17.0	0.7	726.	6.34
28.40	3.3750	0.5926	6.34	13.8	0.5	612.	7.55
29.20	2.1250	0.4117	5.60	10.2	0.4	528.	7.68
30.00	2.5000	0.5500	5.66	9.1	0.3	384.	7.65
30.80	2.1250	0.2353	4.55	7.0	0.2	303.	8.14
31.60	1.8750	0.5333	8.22	4.4	0.2	226.	8.66
32.40	1.0000	0.6249	5.79	2.8	0.1	162.	8.42
33.20	0.7500	0.3333	4.49	3.8	0.1	135.	6.53
34.00	0.6250	0.9998	3.78	3.2	0.1	121.	7.02
34.80	0.2500	0.4998	4.69	1.9	0.1	111.	8.41
35.60	0.1250	0.0000	2.27	0.7	0.1	89.	7.11
36.40	0.3750	0.0000	4.49	1.4	0.0	66.	6.20
37.20	0.7500	0.6666	1.70	1.4	0.0	66.	5.07
38.00	0.1250	0.9990	4.28	0.5	0.0	47.	4.38
38.80	0.1250	0.9990	17.68	0.1	0.0	27.	4.29
39.60	0.0000	0.0000	0.00	0.0	0.0	8.	4.50
IONS:10000, 2000 TIME:		37.	TOTAL=	23.9	1.1	IONZ/TOTAL=	0.0425

50keV Te128 in GaAs 60.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
25.602	10.042	20.258	9.035	7.238	0.572	3.147	For ions
(nm)		11.648	8.358	3.549	0.892	3.549	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.60	0.2500	0.3332	8.57	2168.7	144.9	7068.	3.91
1.80	1.0000	0.4166	4.00	2506.8	141.9	13225.	4.11
3.00	3.7500	0.5333	4.11	2642.7	138.3	17448.	4.21
4.20	7.3333	0.3977	4.05	2549.6	134.0	20263.	4.38
5.40	11.7500	0.5106	5.29	2333.7	129.6	23118.	4.67
6.60	16.5833	0.5477	5.52	2427.9	124.8	25069.	4.93
7.80	22.2500	0.5506	5.26	2268.9	119.0	26535.	5.12
9.00	28.6667	0.4738	5.38	2269.2	112.7	27672.	5.41
10.20	30.1667	0.4724	5.40	2162.3	106.3	28538.	5.63
11.40	37.7500	0.5055	5.82	2016.1	98.3	29313.	5.94
12.60	38.8333	0.5300	6.47	1869.4	91.2	28826.	6.21
13.80	43.2500	0.4894	6.61	1766.6	83.9	28390.	6.38
15.00	41.7500	0.4611	6.29	1637.6	75.9	27735.	6.42
16.20	42.3333	0.5256	6.54	1507.1	68.2	26586.	6.59
17.40	45.6667	0.5201	6.88	1305.6	60.6	25214.	6.78
18.60	42.5833	0.5049	6.67	1187.3	53.7	23662.	7.04
19.80	40.5000	0.5062	7.42	1072.1	47.7	22316.	7.30
21.00	43.1667	0.5058	7.41	892.3	41.9	20130.	7.63
22.20	37.7500	0.5232	7.69	779.8	36.5	18390.	7.92
23.40	32.0833	0.4805	7.81	704.7	31.3	16866.	8.18
24.60	34.8333	0.5072	8.08	652.3	27.1	14982.	8.02
25.80	32.0000	0.5026	8.25	506.3	22.5	13596.	8.17
27.00	29.8333	0.4972	7.89	446.0	19.0	11799.	8.42
28.20	24.3333	0.5034	8.31	381.6	15.7	10356.	8.92
29.40	22.4167	0.5056	8.60	301.8	13.2	9067.	8.99
30.60	19.1667	0.4696	7.72	252.7	10.9	8091.	9.08
31.80	17.0833	0.4732	8.61	218.7	9.0	6899.	9.16
33.00	15.2500	0.5082	8.75	181.3	7.2	6070.	9.03
34.20	13.3333	0.5312	8.68	141.4	5.7	5030.	9.13
35.40	10.4167	0.4880	9.39	111.8	4.5	4016.	9.61
36.60	9.3333	0.5357	9.31	89.0	3.6	3463.	10.02
37.80	6.9167	0.6024	8.98	64.9	2.9	2745.	9.91
39.00	6.0833	0.4931	8.79	58.6	2.3	2288.	9.58
40.20	5.9167	0.4789	7.83	41.6	1.8	1788.	9.81
41.40	3.4167	0.6097	9.38	36.1	1.5	1488.	9.58
42.60	3.5000	0.5714	8.95	31.0	1.1	1280.	9.99
43.80	2.8333	0.4706	11.41	18.9	0.9	982.	10.15
45.00	2.0000	0.5833	8.72	13.1	0.6	740.	9.92
46.20	1.6667	0.3000	10.59	16.5	0.5	599.	9.93
47.40	1.3333	0.5000	7.73	8.3	0.3	446.	9.87
48.60	1.0000	0.1667	7.58	5.1	0.3	328.	9.92
49.80	0.6667	0.2500	14.97	4.1	0.2	234.	8.83
51.00	0.5000	0.6666	7.47	3.9	0.1	187.	8.08
52.20	0.1667	0.4998	1.66	1.7	0.1	155.	9.39
53.40	0.5000	0.3333	10.14	1.9	0.1	106.	10.76
54.60	0.1667	0.4998	20.57	1.4	0.1	94.	11.51
55.80	0.0833	0.9990	8.57	1.0	0.0	73.	7.13
57.00	0.1667	0.9995	10.90	0.3	0.0	33.	5.11
58.20	0.1667	0.4998	6.77	0.3	0.0	10.	4.29
59.40	0.0833	0.0000	17.22	0.4	0.0	5.	25.02
IONS:10000, 2000 TIME:		56.	TOTAL=	47.6	2.4	IONZ/TOTAL=	0.0478

75keV Te128 in GaAs 80.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
34.099	13.318	27.107	12.032	9.496	0.589	3.295	For ions
(nm)		16.308	11.671	4.729	0.910	3.685	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.80	0.3750	0.3333	5.41	2497.2	177.2	8224.	4.61
2.40	1.5000	0.5000	7.19	2701.2	173.3	14731.	4.81
4.00	2.3750	0.4737	5.91	2627.1	169.3	18454.	5.08
5.60	5.2500	0.4405	6.22	2657.9	164.8	22200.	5.27
7.20	9.3750	0.4933	5.81	2758.0	159.0	24652.	5.72
8.80	11.0000	0.5455	6.45	2675.4	153.4	26850.	6.14
10.40	15.8125	0.4941	6.83	2558.2	146.3	28683.	6.58
12.00	20.2500	0.5216	6.68	2544.5	139.1	29209.	6.93
13.60	24.9375	0.4687	7.58	2335.0	130.4	29854.	7.34
15.20	25.6250	0.5049	8.75	2215.3	121.8	30962.	7.63
16.80	27.6875	0.4673	8.68	2124.6	113.3	31659.	8.00
18.40	31.9375	0.4892	8.21	2028.9	104.1	31125.	8.03
20.00	33.3750	0.5037	8.96	1833.9	94.4	29807.	8.25
21.60	32.1250	0.5000	8.47	1690.1	84.9	28465.	8.61
23.20	32.5625	0.5086	9.30	1551.8	76.6	27872.	8.94
24.80	30.9375	0.5050	9.10	1416.7	67.6	26631.	9.31
26.40	31.9375	0.4618	9.18	1295.0	60.2	25122.	9.58
28.00	31.8750	0.5294	9.23	1055.7	52.3	22963.	9.78
29.60	29.8125	0.5178	9.69	937.0	45.0	20713.	9.66
31.20	26.8125	0.5268	9.45	815.0	38.8	18779.	9.80
32.80	27.8125	0.5258	10.64	699.6	33.0	16835.	10.36
34.40	22.8125	0.4959	10.48	614.8	28.4	15557.	10.64
36.00	20.7500	0.5030	10.58	529.0	23.8	13938.	10.82
37.60	21.6875	0.4986	10.62	431.4	19.7	12182.	11.33
39.20	17.6875	0.5512	11.59	337.0	16.2	10631.	11.29
40.80	14.6250	0.5214	10.34	295.4	13.2	9001.	11.71
42.40	12.1250	0.5206	10.47	235.4	10.7	7821.	12.09
44.00	10.5625	0.5325	11.46	194.2	8.7	6674.	12.27
45.60	8.5000	0.5662	11.26	146.7	7.2	5475.	11.96
47.20	6.8125	0.4954	12.06	142.2	5.9	4510.	11.95
48.80	7.7500	0.5323	13.00	105.4	4.7	3911.	12.32
50.40	5.7500	0.5326	11.15	80.6	3.6	3316.	12.00
52.00	4.9375	0.4683	11.77	63.8	2.8	2774.	12.64
53.60	3.3125	0.4528	12.43	48.0	2.2	2334.	12.70
55.20	2.8125	0.4667	14.13	38.2	1.7	1867.	13.73
56.80	2.0000	0.4687	13.01	30.5	1.3	1589.	14.22
58.40	1.9375	0.6129	12.94	19.3	1.0	1332.	14.22
60.00	1.5000	0.5833	10.38	16.2	0.8	1154.	13.68
61.60	1.2500	0.4500	12.81	13.6	0.6	977.	14.29
63.20	1.1875	0.5789	13.77	10.5	0.5	829.	14.61
64.80	0.8750	0.5714	14.25	10.0	0.4	569.	15.59
66.40	0.5625	0.7777	13.39	9.6	0.3	444.	15.93
68.00	0.5625	0.3333	12.85	4.1	0.2	332.	17.78
69.60	0.3125	0.0000	14.28	4.8	0.2	278.	19.76
71.20	0.3125	0.5999	22.68	3.4	0.1	190.	22.01
72.80	0.3125	0.5999	15.15	3.1	0.1	111.	24.41
74.40	0.2500	0.7498	5.57	0.4	0.0	63.	32.46
76.00	0.1250	0.4998	15.30	0.5	0.0	57.	31.98
77.60	0.1250	0.0000	23.43	0.1	0.0	32.	37.15
79.20	0.0000	0.0000	0.00	0.0	0.0	33.	36.80
IONS:10000, 2000 TIME:		73.	TOTAL=	71.1	3.9	IONZ/TOTAL=	0.0525

100keV Te128 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
42.283	16.418	33.644	14.812	11.750	0.565	3.195	For ions
(nm)		20.136	14.167	5.902	0.842	3.491	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.00	0.0500	0.9990	1.77	2575.7	204.8	8653.	5.66
3.00	0.5000	0.5000	12.42	2846.0	200.3	15726.	6.32
5.00	2.4500	0.4694	7.33	2857.5	195.8	20261.	6.50
7.00	5.1000	0.5686	7.54	2808.4	190.9	23950.	6.77
9.00	7.2500	0.5310	7.39	2818.4	184.8	27200.	7.12
11.00	9.9500	0.4523	8.61	2768.0	177.9	30114.	7.49
13.00	11.7000	0.5556	7.50	2752.8	170.0	31488.	8.17
15.00	15.9500	0.5204	8.74	2571.2	160.8	32504.	8.44
17.00	19.3500	0.5245	8.91	2605.3	151.7	33073.	8.72
19.00	20.8500	0.5156	10.01	2430.4	141.6	33173.	9.17
21.00	23.1000	0.4697	9.76	2328.2	131.4	33088.	9.50
23.00	24.2500	0.5196	9.81	2167.1	120.2	32934.	10.10
25.00	25.9500	0.5087	11.15	1901.4	109.4	31691.	10.13
27.00	28.4000	0.4824	10.48	1811.1	99.0	30821.	10.54
29.00	26.1500	0.4857	10.75	1659.1	88.4	29046.	11.11
31.00	26.2500	0.5105	12.14	1537.4	78.6	26691.	11.26
33.00	27.0500	0.5194	11.61	1339.2	68.8	24974.	11.38
35.00	26.1500	0.4627	12.28	1148.0	59.7	22450.	11.78
37.00	23.6500	0.5243	12.31	996.1	51.2	21236.	12.02
39.00	21.3000	0.4695	12.53	915.3	44.7	19374.	12.07
41.00	20.7000	0.5242	12.25	765.5	38.1	17279.	12.27
43.00	20.1500	0.4466	13.25	633.6	31.6	15334.	12.79
45.00	16.0000	0.5250	14.02	502.0	26.4	13566.	12.97
47.00	14.3500	0.4948	12.05	460.9	22.7	12006.	12.73
49.00	12.1500	0.5144	14.32	396.7	18.4	10842.	13.21
51.00	12.0500	0.4855	13.69	302.4	15.2	9685.	13.57
53.00	9.6000	0.5000	14.73	246.3	12.4	7737.	14.25
55.00	9.0500	0.4917	14.27	224.8	10.1	6620.	14.54
57.00	6.9000	0.5435	14.00	182.3	8.2	5684.	15.45
59.00	7.2000	0.4722	15.35	140.4	6.4	4973.	16.58
61.00	5.2500	0.5333	12.13	102.1	4.7	4032.	16.37
63.00	4.6500	0.4516	14.61	81.0	3.8	3383.	16.74
65.00	3.3000	0.5606	15.47	63.4	3.0	2705.	16.94
67.00	3.0500	0.5574	15.90	45.8	2.4	2176.	18.73
69.00	2.1000	0.5000	16.07	44.3	1.9	1739.	20.76
71.00	1.6000	0.6562	15.68	28.4	1.4	1350.	17.85
73.00	1.4000	0.6071	18.32	24.9	1.1	1030.	18.15
75.00	1.4500	0.4138	14.29	18.1	0.8	837.	20.76
77.00	0.8500	0.4117	17.74	13.0	0.6	543.	19.89
79.00	0.7000	0.5714	22.07	10.4	0.5	430.	20.05
81.00	0.3000	0.6666	10.43	7.9	0.3	396.	23.84
83.00	0.5000	0.5999	11.58	5.8	0.3	396.	29.81
85.00	0.3000	0.3333	17.95	5.6	0.2	277.	26.09
87.00	0.3000	0.3333	13.17	2.2	0.1	194.	25.18
89.00	0.0000	0.0000	0.00	2.0	0.1	184.	18.31
91.00	0.1500	0.6664	8.09	2.6	0.1	205.	26.85
93.00	0.2000	0.7498	8.79	0.5	0.0	152.	30.62
95.00	0.1000	0.4998	21.14	0.2	0.0	108.	24.70
97.00	0.0500	0.9990	29.74	0.8	0.0	73.	22.80
99.00	0.0000	0.0000	0.00	0.1	0.0	35.	14.76
IONS:10000, 2000 TIME:		90.	TOTAL=	94.3	5.7	IONZ/TOTAL=	0.0568

200keV Te128 in GaAs 175.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
72.927	27.578	58.773	25.238	19.464	0.487	3.074	For ions
(nm)		34.770	24.090	10.198	0.870	3.728	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.75	0.0571	0.9995	29.41	2809.7	289.2	9760.	9.31
5.25	0.3429	0.5833	10.98	3082.3	283.4	15835.	9.61
8.75	1.4286	0.5200	13.73	2967.9	277.1	19207.	10.12
12.25	2.5714	0.4444	12.20	3066.4	270.0	22450.	10.94
15.75	3.8571	0.4963	11.94	3082.9	261.7	25264.	11.38
19.25	5.3143	0.6021	13.45	3062.7	252.4	28107.	12.12
22.75	7.2857	0.5137	14.07	3029.6	242.1	29397.	13.21
26.25	8.6857	0.4671	14.43	2982.8	231.1	30536.	14.13
29.75	11.0000	0.4753	14.94	2846.9	217.0	31841.	14.60
33.25	11.8286	0.4855	14.85	2808.9	202.9	32283.	14.61
36.75	13.6000	0.5021	16.65	2565.1	188.5	31076.	15.38
40.25	13.0286	0.5175	17.67	2524.3	173.4	29189.	15.91
43.75	14.3429	0.5199	18.56	2321.7	157.8	28998.	16.75
47.25	15.5143	0.5064	18.37	2183.3	142.1	28624.	17.30
50.75	16.1429	0.4991	18.77	1880.4	127.8	27397.	18.37
54.25	15.3714	0.5056	18.81	1754.8	112.0	25840.	19.00
57.75	15.0571	0.5313	18.54	1562.6	98.7	23667.	19.55
61.25	14.6857	0.5019	18.77	1365.9	86.2	21069.	19.40
64.75	13.6857	0.5031	21.13	1167.4	74.4	19271.	19.99
68.25	12.9429	0.4724	20.97	1102.2	63.9	16721.	20.21
71.75	12.1429	0.5341	20.97	860.4	53.0	15561.	21.11
75.25	11.3429	0.5189	22.26	782.2	45.2	13842.	22.30
78.75	9.9714	0.4785	20.95	646.8	37.2	12139.	23.80
82.25	9.0286	0.5158	22.34	557.2	30.5	10666.	23.65
85.75	7.4286	0.4846	24.57	431.0	24.6	8691.	24.32
89.25	7.0286	0.5650	23.58	363.9	19.9	7613.	24.95
92.75	6.4286	0.5467	23.37	297.9	16.2	6251.	22.75
96.25	5.4571	0.5550	25.11	236.3	12.6	5471.	22.24
99.75	3.8000	0.4286	21.65	187.7	9.8	4433.	22.88
103.25	3.4571	0.5207	22.97	142.3	7.5	3235.	26.12
106.75	2.7143	0.4947	24.00	101.2	5.7	2742.	25.67
110.25	2.3143	0.4197	22.53	89.3	4.5	2502.	24.07
113.75	1.7143	0.4833	24.73	58.9	3.3	2149.	27.54
117.25	1.4857	0.4423	25.52	52.7	2.5	1573.	26.90
120.75	1.0000	0.5143	25.98	36.4	1.8	1439.	28.07
124.25	1.0000	0.5714	22.06	25.9	1.3	1064.	28.06
127.75	0.5714	0.5500	15.07	20.2	1.0	774.	29.16
131.25	0.5714	0.5500	31.83	14.4	0.7	554.	30.48
134.75	0.3714	0.6153	20.41	7.3	0.5	512.	29.21
138.25	0.2857	0.5999	20.72	7.1	0.4	325.	28.39
141.75	0.2286	0.6249	23.93	7.0	0.3	260.	30.51
145.25	0.1714	0.8332	20.16	4.2	0.2	237.	32.50
148.75	0.1143	0.7498	22.76	3.0	0.1	159.	29.65
152.25	0.0571	0.4998	63.86	1.7	0.1	185.	26.05
155.75	0.0857	0.3332	23.44	0.9	0.1	109.	25.67
159.25	0.0286	0.0000	38.41	2.6	0.0	77.	24.96
162.75	0.0000	0.0000	0.00	0.8	0.0	99.	31.55
166.25	0.1143	0.7498	27.04	0.3	0.0	70.	31.00
169.75	0.0000	0.0000	0.00	0.0	0.0	7.	26.17
173.25	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000, 1000 TIME: 170. TOTAL=				185.9	14.1	IONZ/TOTAL=	0.0705

300keV Te128 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
103.257	38.467	83.746	35.083	27.419	0.417	3.014	For ions
(nm)		53.768	35.362	15.434	0.634	2.932	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
3.00	0.0833	0.2000	35.01	2894.9	353.7	8306.	9.82
9.00	0.5333	0.4375	21.43	3186.0	344.6	13358.	10.37
15.00	1.2833	0.4416	16.89	3165.2	335.2	16985.	12.74
21.00	2.6167	0.5414	14.86	3049.5	323.8	20279.	14.53
27.00	3.5500	0.4366	16.38	3095.2	310.3	22040.	15.94
33.00	4.9500	0.5286	20.40	3063.9	295.6	23041.	17.88
39.00	5.6833	0.4751	19.52	2989.8	278.1	23954.	18.65
45.00	8.0833	0.4804	21.73	2905.4	260.6	24100.	19.55
51.00	8.0833	0.5381	22.79	2826.8	238.9	25941.	21.69
57.00	10.2500	0.4943	24.76	2605.0	217.4	25355.	21.47
63.00	10.0000	0.5200	26.47	2411.7	194.0	25472.	22.85
69.00	11.4833	0.5007	26.16	2176.2	172.3	24015.	24.74
75.00	10.8500	0.5054	28.04	1939.7	150.2	23076.	26.22
81.00	10.9833	0.5038	27.86	1711.4	128.7	21404.	26.00
87.00	10.2333	0.4984	27.61	1494.2	108.0	20268.	27.50
93.00	10.0833	0.4975	26.54	1287.7	90.9	18145.	28.12
99.00	8.9333	0.5056	29.12	1107.3	74.9	16080.	28.20
105.00	9.1167	0.5192	31.43	970.9	60.2	14656.	29.08
111.00	7.8000	0.5192	32.40	703.6	46.5	12148.	31.14
117.00	6.6500	0.4912	29.58	583.5	35.5	10460.	30.70
123.00	5.5000	0.4758	30.59	427.7	27.6	8697.	30.36
129.00	4.1500	0.5261	30.50	333.8	20.9	6773.	30.50
135.00	3.4833	0.5263	34.28	258.2	16.1	5395.	31.92
141.00	3.2500	0.5333	33.15	211.8	12.0	4381.	35.08
147.00	2.3833	0.5105	32.45	157.0	8.5	3203.	36.65
153.00	1.9333	0.4741	32.23	98.0	6.0	2723.	35.38
159.00	1.3000	0.4615	31.93	69.5	4.3	1903.	40.41
165.00	1.0167	0.4098	35.91	53.6	2.9	1566.	43.48
171.00	0.6333	0.5000	34.91	31.7	2.0	1195.	44.85
177.00	0.5500	0.4545	44.38	25.4	1.3	998.	48.00
183.00	0.4000	0.4166	38.51	14.1	0.9	848.	48.91
189.00	0.2833	0.4706	38.58	9.8	0.6	435.	46.98
195.00	0.2000	0.5000	22.51	6.3	0.3	173.	46.99
201.00	0.1333	0.7499	38.82	3.8	0.2	119.	49.16
207.00	0.0833	0.3999	11.60	1.2	0.1	89.	50.48
213.00	0.0167	0.9990	11.11	0.8	0.1	53.	27.33
219.00	0.0167	0.0000	22.26	0.4	0.0	8.	30.79
225.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
231.00	0.0000	0.0000	0.00	0.2	0.0	0.	0.00
237.00	0.0167	0.9990	0.70	0.2	0.0	0.	0.00
243.00	0.0167	0.0000	5.34	0.1	0.0	0.	0.00
249.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
255.00	0.0000	0.0000	0.00	0.1	0.0	0.	0.00
261.00	0.0167	0.0000	65.73	0.7	0.0	0.	0.00
267.00	0.0000	0.0000	0.00	0.7	0.0	0.	0.00
273.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
279.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
285.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
291.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
297.00	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
IONS:10000,	800	TIME: 241.	TOTAL=	275.2	24.7	IONZ/TOTAL=	0.0825

400keV Te128 in GaAs 300.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
133.819	48.981	109.389	44.952	35.172	0.395	2.925	For ions
(nm)		68.118	45.596	17.845	0.703	2.992	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
3.00	0.0333	0.4998	11.85	2793.0	409.2	7003.	12.63
9.00	0.1000	0.8332	13.55	3056.9	402.2	11892.	15.77
15.00	0.4500	0.5185	17.31	2957.7	394.9	14103.	15.35
21.00	1.0833	0.5692	17.85	3157.0	386.6	15813.	17.53
27.00	1.6167	0.4433	26.91	2968.9	376.8	18354.	18.27
33.00	2.6000	0.4872	23.66	3115.7	365.5	20135.	18.76
39.00	3.0167	0.5304	24.63	3185.4	352.8	22255.	20.07
45.00	4.0000	0.5083	26.24	3144.7	339.2	23049.	21.13
51.00	5.2333	0.4873	26.24	3080.5	323.8	24118.	23.61
57.00	5.2500	0.5429	26.19	2977.4	305.6	23303.	25.77
63.00	6.0167	0.5180	28.89	2889.5	289.1	23403.	26.20
69.00	6.6167	0.4887	30.35	2645.8	269.6	23533.	26.44
75.00	7.6333	0.5065	30.34	2725.2	250.8	22584.	26.93
81.00	8.1333	0.4918	32.68	2492.1	231.8	21475.	29.43
87.00	8.6500	0.4759	33.55	2350.2	210.4	21768.	30.35
93.00	7.8167	0.5139	33.02	2174.7	188.6	20092.	30.15
99.00	9.0500	0.5083	33.65	1989.7	169.7	19385.	32.20
105.00	8.2500	0.5091	35.83	1843.8	151.6	17988.	33.00
111.00	8.2667	0.5141	36.20	1628.7	133.6	17403.	32.48
117.00	8.2667	0.4879	37.94	1498.7	116.4	16304.	32.53
123.00	7.9167	0.5074	37.92	1326.7	99.6	14923.	33.47
129.00	7.3667	0.4932	37.17	1137.2	84.8	12920.	35.65
135.00	6.9333	0.5072	38.35	938.6	71.6	11263.	38.34
141.00	6.3333	0.5395	38.55	803.2	60.6	10749.	40.99
147.00	5.4833	0.4833	39.81	681.0	49.9	9730.	41.09
153.00	4.8667	0.5103	39.54	576.5	41.5	8406.	40.15
159.00	4.1833	0.4861	40.76	464.3	33.7	7365.	40.42
165.00	3.7167	0.4843	38.30	392.8	27.3	6910.	43.04
171.00	3.2333	0.4742	43.55	333.3	22.4	6078.	45.92
177.00	2.5833	0.5935	43.38	265.9	17.3	4584.	44.36
183.00	2.9667	0.5112	41.91	213.5	13.5	3809.	43.66
189.00	1.7833	0.4766	42.28	158.2	10.3	2813.	42.76
195.00	1.7500	0.4476	42.97	105.8	7.7	2473.	43.51
201.00	1.2500	0.4933	42.65	88.6	5.8	1613.	46.07
207.00	0.8333	0.5400	40.65	69.1	4.5	1581.	46.48
213.00	0.6167	0.4594	42.84	54.0	3.3	1459.	47.99
219.00	0.8500	0.6274	39.85	46.2	2.5	952.	64.51
225.00	0.5167	0.3871	52.76	32.5	1.8	639.	70.00
231.00	0.4167	0.4800	48.46	21.9	1.2	671.	73.22
237.00	0.2500	0.5333	34.99	15.4	0.9	383.	76.56
243.00	0.1667	0.5999	35.08	10.0	0.6	314.	65.56
249.00	0.2000	0.4166	44.13	5.9	0.4	175.	83.25
255.00	0.1000	0.6666	52.17	7.7	0.3	181.	130.03
261.00	0.0833	0.3999	43.60	4.4	0.3	186.	105.49
267.00	0.0333	0.9995	47.57	1.0	0.1	112.	110.36
273.00	0.0333	0.0000	48.22	1.7	0.1	26.	37.62
279.00	0.0333	0.4998	3.00	0.9	0.1	77.	56.85
285.00	0.0000	0.0000	0.00	0.6	0.0	103.	54.64
291.00	0.0333	0.4998	27.96	0.8	0.0	48.	14.59
297.00	0.0167	0.9990	27.14	0.6	0.0	35.	9.89
IONS:10000,	600 TIME:	317.	TOTAL=	362.6	37.4	IONZ/TOTAL=	0.0935

10keV 197 in GaAs 30.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
8.069	2.641	6.984	2.440	2.124	0.611	3.404	For ions
(nm)		3.313	2.379	0.805	0.993	3.897	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.30	0.0000	0.0000	0.00	1447.2	124.8	4210.	1.45
0.90	0.0000	0.0000	0.00	1932.2	118.3	9480.	1.46
1.50	2.1667	0.5384	2.05	1786.0	111.4	13233.	1.60
2.10	11.0000	0.6212	1.60	1665.7	103.6	16274.	1.68
2.70	25.3333	0.6447	1.81	1522.9	94.4	18339.	1.77
3.30	59.0000	0.6610	1.75	1356.7	84.9	19537.	1.88
3.90	98.6667	0.6639	1.76	1203.7	74.7	20004.	1.94
4.50	121.1667	0.6204	1.85	1042.0	64.2	19930.	2.05
5.10	151.0000	0.6280	1.86	861.8	54.4	19129.	2.12
5.70	163.5000	0.6228	1.97	700.2	44.3	17433.	2.21
6.30	173.1667	0.6468	2.03	548.8	35.4	15089.	2.33
6.90	149.3333	0.6618	2.05	444.1	27.9	12880.	2.38
7.50	150.8333	0.6276	2.15	333.2	21.1	10884.	2.41
8.10	128.0000	0.6888	2.30	236.0	15.7	9042.	2.55
8.70	109.3333	0.6753	2.38	175.4	11.5	7104.	2.51
9.30	83.6667	0.6673	2.35	123.3	8.2	5699.	2.68
9.90	66.0000	0.6465	2.36	83.8	5.8	4341.	2.73
10.50	53.8333	0.6502	2.47	60.3	3.9	3316.	2.98
11.10	37.0000	0.6712	2.71	39.8	2.6	2341.	2.92
11.70	26.3333	0.7025	2.22	24.4	1.7	1680.	3.01
12.30	19.6667	0.6780	2.56	14.8	1.1	1230.	3.09
12.90	14.1667	0.6588	2.92	9.6	0.7	851.	2.97
13.50	8.3333	0.6600	3.01	6.0	0.4	607.	3.27
14.10	5.8333	0.6286	2.86	4.3	0.3	456.	3.10
14.70	2.6667	0.7500	2.25	2.5	0.2	299.	3.49
15.30	3.1667	0.9999	3.02	1.3	0.1	227.	3.41
15.90	1.3333	0.7499	2.34	0.7	0.1	157.	3.72
16.50	1.1667	0.5713	2.66	0.3	0.0	94.	3.47
17.10	0.6667	0.9998	3.30	0.2	0.0	63.	4.00
17.70	0.0000	0.0000	0.00	0.0	0.0	38.	4.56
18.30	0.0000	0.0000	0.00	0.2	0.0	22.	3.40
18.90	0.3333	0.9995	0.83	0.0	0.0	13.	2.73
19.50	0.0000	0.0000	0.00	0.0	0.0	5.	4.17
20.10	0.0000	0.0000	0.00	0.0	0.0	4.	4.59
20.70	0.0000	0.0000	0.00	0.0	0.0	2.	6.21
21.30	0.0000	0.0000	0.00	0.0	0.0	2.	5.35
21.90	0.0000	0.0000	0.00	0.0	0.0	1.	5.95
22.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
23.10	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
23.70	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
24.30	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
24.90	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
25.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
26.10	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
26.70	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
27.30	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
27.90	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
28.50	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
29.10	0.0000	0.0000	0.00	0.0	0.0	0.	0.00
29.70	0.0000	0.0000	0.00	0.0	0.0	0.	0.00

IONS:10000, 3129 TIME: 189. TOTAL= 9.4 0.6 IONZ/TOTAL= 0.0608

25keV 197 in GaAs 30.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
13.503	4.454	11.598	4.148	3.452	0.572	3.254	For ions
(nm)		5.713	4.119	1.398	0.937	3.697	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.30	0.0000	0.0000	0.00	2051.7	198.1	5132.	2.40
0.90	0.0000	0.0000	0.00	2692.8	193.1	10758.	2.23
1.50	0.1667	0.9990	3.82	2694.2	186.5	14966.	2.41
2.10	1.3333	0.6249	2.91	2565.9	179.4	17635.	2.51
2.70	2.3333	0.6428	2.80	2505.7	172.6	20129.	2.58
3.30	5.0000	0.6333	1.93	2499.2	164.9	22065.	2.59
3.90	11.8333	0.5775	3.20	2297.9	157.8	23718.	2.76
4.50	21.5000	0.6279	2.93	2250.2	149.1	25603.	2.89
5.10	29.8333	0.6536	2.62	2115.4	140.8	27054.	3.04
5.70	43.5000	0.6475	2.72	1954.5	131.5	28433.	3.14
6.30	51.6667	0.6645	2.75	1868.9	121.6	28665.	3.15
6.90	67.5000	0.6272	2.99	1615.3	111.6	29043.	3.26
7.50	70.3333	0.6185	3.03	1605.7	102.5	29021.	3.39
8.10	84.8333	0.6208	2.93	1416.0	92.4	27184.	3.45
8.70	92.6667	0.6529	2.99	1294.9	82.9	26475.	3.52
9.30	99.0000	0.6364	3.34	1126.8	73.7	25789.	3.68
9.90	95.3333	0.6346	3.23	965.3	65.1	23590.	3.66
10.50	96.0000	0.6233	3.42	924.5	56.7	22053.	3.76
11.10	96.6667	0.6655	3.44	797.4	49.1	19999.	3.81
11.70	98.0000	0.6548	3.60	650.7	42.1	18268.	3.84
12.30	88.0000	0.6818	3.24	549.9	35.8	16542.	4.05
12.90	82.3333	0.6640	3.70	466.3	30.2	14605.	4.16
13.50	66.6667	0.6300	3.57	383.6	25.1	12799.	4.13
14.10	66.1667	0.6902	3.40	323.1	21.4	10897.	4.33
14.70	60.5000	0.6419	3.57	288.5	17.7	9799.	4.65
15.30	58.8333	0.6431	3.98	215.7	14.4	8806.	4.58
15.90	49.3333	0.6689	4.12	185.1	11.7	7536.	4.68
16.50	36.3333	0.6468	3.83	157.1	9.4	6989.	4.89
17.10	35.1667	0.6066	4.25	113.5	7.4	6041.	5.18
17.70	33.3333	0.6750	4.33	83.6	5.7	4847.	5.10
18.30	18.8333	0.6814	4.10	66.2	4.7	4232.	4.78
18.90	20.5000	0.6829	4.09	57.2	3.7	3449.	4.88
19.50	17.0000	0.6471	4.06	43.3	2.9	2886.	5.05
20.10	16.6667	0.7700	4.53	32.3	2.3	2423.	5.15
20.70	8.1667	0.6735	4.25	26.1	1.8	1849.	5.34
21.30	9.8333	0.5254	3.83	20.3	1.3	1488.	5.72
21.90	8.8333	0.5660	4.72	18.7	1.0	1173.	5.84
22.50	5.5000	0.7576	4.68	13.1	0.7	922.	6.06
23.10	3.8333	0.6521	4.75	7.7	0.5	765.	5.65
23.70	2.8333	0.8235	4.55	6.8	0.4	637.	5.15
24.30	2.8333	0.6470	3.67	5.4	0.3	529.	4.61
24.90	1.8333	0.7272	3.02	3.5	0.2	547.	5.03
25.50	1.6667	0.5999	2.76	1.7	0.1	417.	4.86
26.10	1.1667	0.8570	3.38	2.5	0.1	306.	4.65
26.70	0.8333	0.5999	2.50	1.0	0.1	183.	4.98
27.30	0.8333	0.5999	2.55	0.6	0.1	147.	4.15
27.90	0.3333	0.9995	5.21	0.7	0.0	193.	4.19
28.50	0.3333	0.4998	5.52	0.5	0.0	165.	4.51
29.10	0.0000	0.0000	0.00	0.7	0.0	110.	4.19
29.70	0.1667	0.9990	0.73	0.3	0.0	86.	4.49
IONS:10000, 1122 TIME: 186. TOTAL=				23.4	1.6	IONZ/TOTAL=	0.0641

50keV 197 in GaAs 50.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
20.452	6.881	17.495	6.416	5.138	0.533	3.217	For ions
(nm)		8.879	6.373	2.163	0.868	3.350	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
0.50	0.0000	0.0000	0.00	2902.6	279.8	7575.	3.05
1.50	0.1000	0.0000	6.73	3321.0	270.0	14168.	3.22
2.50	0.2000	0.4998	5.65	3231.4	260.9	18508.	3.36
3.50	1.9000	0.6842	4.30	3322.0	250.3	22480.	3.64
4.50	4.4000	0.7045	3.88	3188.0	240.5	26091.	3.93
5.50	6.6000	0.6818	4.16	3055.0	228.1	28922.	4.06
6.50	14.2000	0.6338	3.80	2961.0	216.3	32184.	4.22
7.50	21.1000	0.5877	3.97	2787.4	202.9	34894.	4.37
8.50	26.3000	0.6008	3.87	2570.6	188.1	35432.	4.49
9.50	35.1000	0.6496	4.22	2382.5	174.3	35440.	4.55
10.50	44.6000	0.6435	4.39	2220.6	159.0	34747.	4.79
11.50	53.1000	0.6459	4.37	2044.1	143.8	33954.	5.05
12.50	55.8000	0.6667	4.65	1858.6	128.9	32801.	5.20
13.50	60.4000	0.6457	4.72	1712.2	114.3	31681.	5.49
14.50	61.7000	0.6305	4.87	1408.1	100.3	30254.	5.48
15.50	61.9000	0.6236	4.78	1271.6	87.8	28894.	5.64
16.50	58.7000	0.6201	4.98	1115.1	75.7	27243.	5.83
17.50	59.6000	0.6409	4.94	1011.8	64.3	25193.	5.92
18.50	57.7000	0.6204	5.22	774.7	54.1	22739.	6.06
19.50	52.7000	0.6565	5.63	673.8	45.5	20442.	6.57
20.50	47.7000	0.6604	5.47	567.9	37.7	17577.	6.78
21.50	43.4000	0.6429	5.64	444.9	30.6	15333.	7.00
22.50	40.7000	0.6413	5.53	388.8	24.9	13899.	7.04
23.50	36.2000	0.6326	5.89	309.9	19.5	12247.	7.36
24.50	28.0000	0.6071	5.67	237.3	15.6	10298.	7.21
25.50	24.2000	0.6736	6.00	182.3	12.1	9214.	7.20
26.50	22.5000	0.5733	5.99	142.1	9.5	7860.	7.28
27.50	17.3000	0.6012	6.10	108.2	7.2	6441.	7.85
28.50	14.5000	0.6138	6.42	84.0	5.5	5182.	7.59
29.50	11.4000	0.6842	6.68	67.2	4.2	4007.	8.27
30.50	8.8000	0.6704	5.85	52.8	3.1	3205.	8.07
31.50	7.2000	0.6250	6.56	32.8	2.3	2725.	7.29
32.50	6.2000	0.6935	6.58	25.8	1.7	2090.	7.93
33.50	3.8000	0.4474	6.70	19.9	1.3	1659.	8.62
34.50	2.8000	0.7857	7.36	14.4	0.9	1345.	9.20
35.50	2.7000	0.6296	6.19	9.0	0.6	1221.	8.84
36.50	1.8000	0.7777	5.88	6.4	0.4	930.	9.30
37.50	1.3000	0.6153	5.69	4.7	0.3	788.	10.53
38.50	0.9000	0.6666	4.57	4.3	0.2	596.	9.05
39.50	0.7000	0.7142	5.79	2.5	0.1	427.	9.61
40.50	0.9000	0.7777	6.94	1.0	0.1	354.	10.19
41.50	0.2000	0.4998	1.48	0.8	0.1	281.	9.04
42.50	0.2000	0.9995	7.35	0.7	0.0	203.	12.21
43.50	0.0000	0.0000	0.00	0.8	0.0	193.	15.27
44.50	0.2000	0.4998	6.32	0.1	0.0	233.	16.53
45.50	0.1000	0.9990	1.79	0.1	0.0	187.	13.87
46.50	0.0000	0.0000	0.00	0.2	0.0	126.	14.97
47.50	0.2000	0.4998	4.72	0.0	0.0	102.	14.03
48.50	0.0000	0.0000	0.00	0.0	0.0	103.	11.62
49.50	0.0000	0.0000	0.00	0.0	0.0	51.	10.33
IONS:10000, 1000 TIME: 316. TOTAL=				46.5	3.5	IONZ/TOTAL=	0.0693

75keV 197 in GaAs 60.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
26.436	8.962	22.664	8.315	6.620	0.543	3.200	For ions
(nm)		11.953	8.294	2.819	0.823	3.303	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.60	0.0000	0.0000	0.00	3403.9	341.8	8854.	4.57
1.80	0.0000	0.0000	0.00	3600.8	331.7	16445.	4.62
3.00	0.0833	0.9990	3.35	3679.1	321.1	21266.	4.83
4.20	0.9167	0.3636	2.80	3712.3	310.3	25048.	4.97
5.40	2.1667	0.5384	4.53	3540.2	298.9	28330.	5.04
6.60	4.1667	0.7200	4.62	3531.4	286.4	31010.	5.11
7.80	9.1667	0.6818	4.96	3388.9	273.4	34143.	5.35
9.00	13.0000	0.6474	4.90	3212.6	258.8	36368.	5.51
10.20	18.1667	0.7110	4.79	3006.1	243.9	37768.	5.94
11.40	21.6667	0.6423	4.62	3027.3	228.8	39419.	6.02
12.60	29.1667	0.6686	5.62	2705.6	211.4	39851.	6.22
13.80	32.9167	0.6380	5.39	2607.7	195.5	40283.	6.32
15.00	41.7500	0.6208	5.32	2356.4	177.2	39590.	6.41
16.20	44.5000	0.6742	5.60	2203.7	161.0	38376.	6.58
17.40	44.3333	0.6560	5.72	1957.0	143.9	36927.	6.61
18.60	47.4167	0.6257	5.92	1786.7	127.9	36488.	6.63
19.80	50.3333	0.6225	6.23	1593.8	112.7	34769.	6.86
21.00	47.6667	0.6346	6.80	1371.9	98.6	32161.	6.99
22.20	47.5000	0.6491	6.12	1230.3	85.0	29405.	7.14
23.40	46.3333	0.6547	6.90	1061.4	73.0	26448.	7.42
24.60	40.3333	0.6467	6.60	904.4	61.7	23958.	7.64
25.80	38.8333	0.6330	7.43	732.8	52.0	21414.	7.97
27.00	35.3333	0.6745	7.28	627.5	43.2	19043.	8.02
28.20	33.3333	0.6375	7.46	511.8	36.4	16643.	8.16
29.40	30.0833	0.6454	7.26	432.9	30.0	14403.	8.06
30.60	27.0833	0.6708	7.54	348.4	24.4	13340.	8.43
31.80	20.8333	0.6440	7.92	282.8	19.5	11250.	8.49
33.00	18.1667	0.6422	7.53	233.1	15.8	9843.	9.12
34.20	16.5000	0.6667	7.60	178.8	12.7	8306.	9.02
35.40	14.8333	0.6854	8.50	140.5	10.1	6817.	9.44
36.60	11.0000	0.6667	8.15	115.6	7.9	5876.	9.68
37.80	9.0000	0.6852	9.56	100.3	6.1	5013.	9.65
39.00	8.8333	0.6415	8.71	81.5	4.7	4018.	9.73
40.20	6.4167	0.6753	8.47	46.6	3.5	3229.	9.36
41.40	4.5833	0.5818	7.75	36.9	2.6	2762.	10.02
42.60	3.5833	0.8139	7.25	35.8	2.0	2344.	10.55
43.80	3.0833	0.7027	9.40	22.6	1.4	1737.	10.85
45.00	2.5833	0.6451	9.28	23.1	1.0	1490.	11.49
46.20	1.8333	0.5909	6.97	10.1	0.7	1408.	12.03
47.40	2.5000	0.6000	6.89	7.6	0.5	1164.	12.37
48.60	1.0833	0.5384	10.02	4.9	0.4	912.	11.75
49.80	0.5833	0.5713	6.26	5.0	0.3	703.	12.73
51.00	0.4167	0.5999	5.58	2.7	0.2	629.	11.36
52.20	0.1667	0.0000	16.60	1.7	0.1	656.	11.07
53.40	0.3333	0.7498	10.40	1.1	0.1	613.	9.76
54.60	0.0833	0.0000	3.72	1.7	0.1	473.	9.31
55.80	0.5000	0.9998	9.52	0.4	0.0	408.	7.96
57.00	0.0000	0.0000	0.00	0.3	0.0	429.	8.72
58.20	0.0833	0.9990	11.16	0.1	0.0	341.	11.58
59.40	0.0833	0.9990	0.64	0.1	0.0	191.	16.18
IONS:10000, 1000 TIME: 452. TOTAL=				69.4	5.5	IONZ/TOTAL=	0.0739

100keV 197 in GaAs 80.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
31.838	10.753	27.288	10.066	7.854	0.575	3.383	For ions
(nm)		13.844	9.879	3.423	0.913	3.831	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
0.80	0.0000	0.0000	0.00	3774.2	393.1	10559.	5.10
2.40	0.0625	0.9990	8.60	4090.1	380.4	19259.	5.16
4.00	0.1875	0.6664	7.65	3876.8	367.9	25148.	5.35
5.60	1.4375	0.6087	4.55	4060.8	354.2	29634.	5.61
7.20	2.2500	0.6666	4.49	3729.5	338.3	33181.	5.80
8.80	5.1250	0.6341	5.46	3778.4	322.5	36364.	6.15
10.40	9.6250	0.6234	5.41	3575.6	305.1	39971.	6.44
12.00	14.9375	0.6653	5.84	3505.2	286.6	41734.	6.66
13.60	19.2500	0.6429	6.60	3188.8	266.4	42968.	7.06
15.20	26.0000	0.6322	6.28	3000.3	246.0	44488.	7.43
16.80	28.4375	0.6681	6.66	2892.6	224.3	44751.	7.71
18.40	34.0625	0.6716	6.82	2652.5	202.2	43207.	7.87
20.00	33.8750	0.6753	6.90	2289.1	179.6	41946.	8.11
21.60	39.6250	0.6656	7.34	2087.7	159.0	39209.	8.50
23.20	40.7500	0.6457	7.24	1870.5	138.6	36814.	8.74
24.80	39.6250	0.6404	7.21	1600.4	120.2	34407.	8.92
26.40	39.5000	0.6408	7.50	1414.1	102.6	31649.	9.14
28.00	36.6875	0.6542	7.87	1219.9	86.9	29120.	9.59
29.60	35.4375	0.6649	8.35	968.9	72.5	26217.	9.93
31.20	33.7500	0.6648	8.38	839.5	59.9	23651.	10.99
32.80	27.7500	0.6622	8.83	690.7	48.5	20724.	11.28
34.40	27.4375	0.6036	8.91	571.9	39.1	18084.	11.37
36.00	22.1250	0.6384	9.70	423.8	31.2	15223.	11.85
37.60	20.5625	0.6748	9.08	376.0	25.1	12691.	11.76
39.20	16.8750	0.6704	8.62	300.0	19.7	10996.	11.98
40.80	13.1250	0.6048	9.03	215.4	15.2	9014.	12.09
42.40	11.9375	0.6178	8.74	169.6	11.9	7572.	12.19
44.00	10.2500	0.6646	10.40	125.2	9.3	6555.	11.91
45.60	7.5625	0.5702	9.11	105.3	7.0	5414.	12.23
47.20	7.3125	0.6838	9.26	76.0	5.1	4390.	13.37
48.80	5.2500	0.6428	9.32	51.4	3.7	3526.	13.21
50.40	3.7500	0.6333	9.57	39.0	2.6	2735.	12.81
52.00	2.5625	0.7317	10.69	24.3	1.9	2171.	12.92
53.60	2.0000	0.6875	10.22	17.4	1.4	1394.	13.68
55.20	1.6875	0.5185	9.99	13.2	1.1	1265.	13.34
56.80	1.0000	0.6250	6.20	9.4	0.8	1043.	13.14
58.40	0.5000	0.4999	12.16	10.4	0.6	903.	14.57
60.00	0.5000	0.9999	6.68	6.6	0.5	746.	14.71
61.60	0.1875	0.6664	6.32	4.1	0.4	625.	13.43
63.20	0.4375	0.5713	6.52	3.4	0.3	494.	12.35
64.80	0.4375	0.2857	8.23	3.7	0.2	355.	12.00
66.40	0.3125	0.5999	12.11	2.3	0.2	304.	11.82
68.00	0.2500	0.7498	8.80	1.4	0.1	343.	10.87
69.60	0.3125	0.7998	13.34	1.1	0.1	294.	12.40
71.20	0.0625	0.9990	18.34	0.5	0.0	184.	14.03
72.80	0.1250	0.9995	7.66	0.1	0.0	221.	16.64
74.40	0.0625	0.0000	10.15	0.0	0.0	90.	18.09
76.00	0.0000	0.0000	0.00	0.0	0.0	30.	17.11
77.60	0.0000	0.0000	0.00	0.0	0.0	24.	18.90
79.20	0.0000	0.0000	0.00	0.0	0.0	6.	5.80
IONS:10000, 1000 TIME: 559. TOTAL=				92.3	7.7	IONZ/TOTAL=	0.0773

150keV 197 in GaAs 100.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
41.928	13.941	36.136	13.025	10.077	0.540	3.257	For ions
(nm)		18.884	13.288	4.486	0.846	3.482	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.00	0.0000	0.0000	0.00	3985.5	482.3	11095.	5.94
3.00	0.0000	0.0000	0.00	4279.1	468.5	20225.	6.20
5.00	0.1000	0.4998	4.30	4478.5	454.1	25590.	6.52
7.00	0.4500	0.5555	7.34	4177.4	437.8	28811.	7.24
9.00	1.7000	0.5294	5.05	4197.2	422.5	33041.	7.46
11.00	2.6500	0.7358	5.91	4204.4	404.8	36327.	7.97
13.00	6.0000	0.7000	7.09	4035.6	385.6	38213.	8.42
15.00	8.5000	0.6882	7.14	4050.7	364.9	42033.	8.96
17.00	11.7000	0.6496	7.25	3792.9	342.7	44043.	8.93
19.00	16.8000	0.6429	8.28	3610.9	319.0	44206.	9.19
21.00	19.9000	0.7035	7.79	3449.8	294.1	44271.	9.59
23.00	21.8000	0.6216	8.20	3175.8	269.6	43922.	9.80
25.00	26.9500	0.6382	8.63	2933.2	243.2	43984.	10.19
27.00	29.9000	0.6271	8.79	2661.8	218.0	42037.	10.34
29.00	29.6500	0.6307	9.79	2411.7	192.9	41188.	10.84
31.00	29.1500	0.6329	9.79	2102.8	169.5	38958.	10.83
33.00	30.6000	0.6307	10.01	1854.7	147.5	37365.	11.10
35.00	31.3500	0.6491	9.65	1624.8	125.5	34215.	11.45
37.00	27.0500	0.6543	10.69	1368.1	107.9	30637.	11.84
39.00	27.0000	0.6833	10.49	1178.9	91.2	27279.	12.08
41.00	27.8500	0.6589	10.70	974.0	75.7	24535.	12.79
43.00	22.6500	0.6556	10.26	833.4	62.5	21417.	13.17
45.00	19.6000	0.6429	10.90	700.7	51.6	18725.	13.53
47.00	18.2500	0.6822	11.36	598.0	41.8	16330.	13.60
49.00	17.9000	0.6397	11.89	480.1	33.0	14481.	14.16
51.00	13.7000	0.6679	11.12	369.0	25.6	12163.	14.62
53.00	12.1000	0.6446	12.43	264.5	20.1	10406.	14.89
55.00	8.2500	0.6606	11.68	202.8	15.8	8526.	15.69
57.00	7.9000	0.6456	11.78	156.4	12.4	7342.	15.23
59.00	6.5500	0.6030	11.61	138.8	9.6	6142.	16.40
61.00	6.4000	0.6250	12.77	93.4	7.1	5132.	17.47
63.00	4.4000	0.6704	12.53	74.5	5.2	4139.	17.62
65.00	2.7000	0.6111	14.12	52.4	4.1	3582.	18.40
67.00	2.1500	0.6744	14.20	45.2	3.0	2991.	19.38
69.00	1.8500	0.6757	10.92	34.3	2.3	2365.	18.36
71.00	1.4500	0.7241	10.16	22.9	1.7	1761.	17.41
73.00	2.0500	0.7317	13.42	20.5	1.3	1550.	20.81
75.00	0.9500	0.6315	15.96	10.8	0.8	1357.	20.38
77.00	0.7000	0.7857	11.37	6.6	0.5	949.	19.36
79.00	0.1500	0.3332	16.36	8.5	0.4	575.	20.20
81.00	0.4500	0.6666	14.56	4.7	0.3	531.	21.52
83.00	0.1500	0.6664	8.57	3.2	0.2	380.	19.88
85.00	0.1000	0.4998	14.85	2.5	0.1	292.	17.64
87.00	0.1500	0.6664	11.03	1.3	0.1	283.	21.12
89.00	0.0500	0.0000	4.14	1.6	0.1	259.	21.96
91.00	0.1500	0.6664	5.94	0.9	0.0	230.	20.10
93.00	0.0500	0.0000	6.63	0.2	0.0	257.	19.32
95.00	0.0000	0.0000	0.00	0.2	0.0	222.	17.49
97.00	0.1000	0.4998	3.73	0.1	0.0	176.	16.59
99.00	0.0000	0.0000	0.00	0.0	0.0	96.	16.02
IONS:10000, 1000 TIME: 720. TOTAL=				137.4	12.6	IONZ/TOTAL=	0.0842

200keV 197 in GaAs 125.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
51.381	17.239	44.207	16.111	12.273	0.472	3.098	For ions
(nm)		23.591	16.572	5.665	0.779	3.226	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.25	0.0000	0.0000	0.00	4343.2	556.1	11062.	6.84
3.75	0.0000	0.0000	0.00	4717.3	540.2	18631.	7.05
6.25	0.2800	0.5713	7.95	4696.2	522.7	24029.	7.56
8.75	0.6000	0.6000	10.31	4480.6	504.6	28564.	8.39
11.25	1.4000	0.5143	12.65	4627.4	485.8	31470.	8.95
13.75	2.7200	0.6618	7.76	4461.9	464.8	35238.	9.42
16.25	6.1200	0.6013	7.25	4200.8	442.3	38140.	9.94
18.75	7.9200	0.6515	8.00	4242.7	418.1	39637.	10.58
21.25	11.2800	0.6667	9.36	4020.7	390.7	41925.	10.97
23.75	14.6000	0.6877	8.93	3660.9	363.1	41992.	10.86
26.25	17.3200	0.6189	9.52	3581.4	336.4	43192.	11.44
28.75	18.4000	0.6522	10.99	3271.8	308.5	41853.	12.07
31.25	19.8800	0.6358	10.79	3157.0	279.1	40276.	12.30
33.75	22.6000	0.6566	11.50	2866.0	249.0	38817.	12.86
36.25	23.8000	0.6286	11.58	2496.7	220.0	37380.	13.43
38.75	25.2000	0.6524	11.61	2260.2	193.2	35400.	14.03
41.25	24.4800	0.6503	11.19	2012.3	166.8	32968.	14.52
43.75	23.7600	0.6279	12.58	1731.3	143.1	29791.	14.56
46.25	23.0000	0.6261	12.59	1516.5	121.0	27439.	14.64
48.75	20.9600	0.6679	12.70	1259.4	101.4	25320.	14.90
51.25	19.8000	0.6323	13.41	1028.2	83.9	22710.	15.50
53.75	19.0400	0.6281	13.01	882.3	68.6	20276.	15.51
56.25	15.9600	0.6366	14.31	726.4	55.7	17801.	16.36
58.75	14.4000	0.6417	14.24	603.3	44.7	15892.	16.97
61.25	13.0800	0.6483	14.04	459.3	35.3	13703.	17.52
63.75	10.4400	0.6207	13.52	365.8	27.4	11923.	17.66
66.25	9.7200	0.6749	14.51	286.8	21.1	9856.	18.78
68.75	6.9200	0.6879	14.46	223.1	16.2	7958.	19.98
71.25	5.6000	0.5786	13.96	155.1	12.1	6423.	20.08
73.75	4.7600	0.5798	14.59	113.6	9.1	5109.	20.54
76.25	4.1200	0.6796	17.69	94.7	6.8	4110.	21.14
78.75	2.9200	0.6575	12.54	68.7	5.1	3427.	23.09
81.25	2.0000	0.6600	15.13	50.9	3.7	2882.	22.67
83.75	1.7200	0.6744	19.32	40.3	2.7	2610.	24.07
86.25	1.2800	0.7812	14.03	28.0	2.0	2299.	26.09
88.75	1.2800	0.7187	18.79	18.2	1.4	2137.	26.65
91.25	0.8400	0.5238	13.71	12.1	1.0	1882.	27.50
93.75	0.6000	0.7999	11.91	7.4	0.7	1491.	27.32
96.25	0.3600	0.7777	11.34	5.3	0.5	1091.	27.81
98.75	0.3200	0.7499	22.64	3.5	0.3	882.	27.58
101.25	0.1200	0.3332	7.94	1.5	0.2	601.	28.15
103.75	0.0800	0.9995	4.89	1.5	0.2	482.	34.25
106.25	0.0000	0.0000	0.00	2.9	0.1	296.	26.28
108.75	0.1600	0.7498	32.01	1.8	0.1	208.	24.14
111.25	0.0400	0.0000	8.55	1.2	0.1	148.	26.97
113.75	0.0400	0.9990	20.93	0.2	0.0	182.	23.23
116.25	0.0400	0.0000	6.71	0.1	0.0	164.	24.95
118.75	0.0000	0.0000	0.00	0.5	0.0	144.	28.26
121.25	0.0000	0.0000	0.00	0.0	0.0	100.	28.51
123.75	0.0000	0.0000	0.00	0.1	0.0	30.	29.99
IONS:10000, 1000 TIME: 853. TOTAL=				182.0	18.0	IONZ/TOTAL=	0.0901

300keV 197 in GaAs 150.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
69.952	23.159	60.454	21.642	16.465	0.439	3.026	For ions
(nm)		33.393	22.223	8.004	0.702	3.080	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion	Ioniz. --	Vacancies /um/ion	Sig Lat nm
1.50	0.0000	0.0000	0.00	4458.0	682.7	9295.	9.55
4.50	0.0333	0.9990	11.51	4781.7	665.8	15301.	9.73
7.50	0.1000	0.3332	3.09	4625.7	649.7	19821.	9.97
10.50	0.3000	0.5555	13.45	5020.0	632.4	22893.	10.63
13.50	0.6667	0.7500	9.85	4613.1	612.3	26013.	11.52
16.50	1.4667	0.7727	9.16	4827.5	592.0	28929.	11.88
19.50	2.5667	0.5844	10.42	4730.8	570.5	30843.	12.77
22.50	3.2000	0.6042	10.95	4601.1	546.7	33398.	13.23
25.50	5.7000	0.6374	11.76	4659.9	521.6	34950.	13.32
28.50	7.2000	0.6296	13.15	4460.0	493.5	35866.	13.55
31.50	9.5333	0.6189	11.94	4186.9	464.0	37376.	13.99
34.50	10.7667	0.6037	13.49	4164.3	433.6	38597.	14.65
37.50	13.7333	0.6311	13.99	3949.2	401.9	38252.	14.99
40.50	14.6333	0.6059	13.71	3556.2	368.7	36860.	15.82
43.50	17.2000	0.6318	13.78	3363.3	337.0	36289.	16.19
46.50	16.3333	0.6265	15.10	3135.9	305.1	36036.	17.12
49.50	17.1333	0.6323	14.80	2805.5	273.9	34785.	16.94
52.50	18.2667	0.6606	15.98	2585.2	245.0	33454.	17.89
55.50	17.2000	0.6260	15.57	2248.7	217.1	31442.	18.34
58.50	17.7333	0.6203	17.39	2045.0	190.8	28911.	19.07
61.50	16.0333	0.6694	16.35	1813.6	165.2	27177.	20.20
64.50	17.3667	0.6468	18.24	1584.1	142.5	25647.	20.94
67.50	16.5000	0.6848	17.71	1395.2	121.2	23302.	21.27
70.50	14.0333	0.6651	18.12	1167.4	101.4	20084.	21.76
73.50	14.9667	0.6481	18.03	931.0	84.0	18015.	22.31
76.50	12.7667	0.6919	17.90	788.8	69.1	15883.	22.16
79.50	11.1333	0.6946	17.65	683.3	56.5	14128.	23.80
82.50	9.4333	0.7244	17.72	558.2	46.4	12091.	23.64
85.50	8.1667	0.6286	17.82	443.6	37.7	10662.	24.82
88.50	7.3000	0.6301	20.96	366.4	30.1	9336.	25.30
91.50	5.7333	0.6163	18.59	297.7	24.1	7875.	26.09
94.50	5.2333	0.7006	18.91	257.4	19.1	6900.	29.12
97.50	4.3667	0.6336	19.55	201.2	14.8	5849.	29.58
100.50	3.5667	0.7009	20.93	116.9	11.1	5195.	30.41
103.50	2.9667	0.6404	20.67	100.4	8.6	4409.	32.85
106.50	2.1667	0.6615	22.20	79.9	6.5	3526.	32.51
109.50	1.9000	0.7368	20.10	72.2	4.8	2823.	33.22
112.50	1.6667	0.6200	18.00	43.2	3.5	2523.	32.54
115.50	1.2667	0.6579	24.78	34.6	2.5	2112.	33.46
118.50	0.6333	0.7894	21.19	25.5	1.8	1694.	36.09
121.50	0.8000	0.7500	17.72	13.9	1.3	1439.	37.27
124.50	0.3333	0.5999	25.91	9.4	0.9	1246.	35.64
127.50	0.2333	0.5713	13.88	10.5	0.7	917.	37.70
130.50	0.2667	0.7499	19.86	7.5	0.5	748.	41.43
133.50	0.2000	0.6666	25.28	4.1	0.4	692.	41.31
136.50	0.0667	0.4998	24.97	2.9	0.3	544.	34.71
139.50	0.1667	0.3999	17.54	4.3	0.2	450.	37.33
142.50	0.1667	0.3999	12.22	3.4	0.2	342.	33.40
145.50	0.1000	0.6664	15.81	0.1	0.0	269.	31.76
148.50	0.0000	0.0000	0.00	0.0	0.0	191.	36.76
IONS:10000, 1000 TIME: 1082. TOTAL=				269.5	30.5	IONZ/TOTAL=	0.1016

400keV 197 in GaAs 175.00 nm, density= 5.32

Av. path	Sig path	Rp	Sigma Rp	Sigma Lat.	Gamma	Beta	
87.128	28.731	75.720	26.847	20.182	0.378	2.885	For ions
(nm)		43.273	29.151	10.152	0.659	2.968	For vacs.

Depth nm	Ions /um/ion	Istl/Ion ratio	Sig Lat nm	Damage -- keV/um/ion --	Ioniz.	Vacancies /um/ion	Sig Lat nm
1.75	0.0000	0.0000	0.00	4760.2	788.7	9009.	13.21
5.25	0.0286	0.0000	11.08	4895.6	770.2	14473.	13.16
8.75	0.0286	0.9990	14.11	4754.0	753.2	17929.	14.74
12.25	0.1714	0.3333	11.05	4973.2	735.4	19835.	13.75
15.75	0.3429	0.5000	9.50	4918.1	715.2	22328.	15.65
19.25	1.0857	0.6316	12.72	5046.5	694.6	25143.	15.28
22.75	1.1714	0.5610	10.26	5017.3	672.1	27582.	16.00
26.25	2.4571	0.6744	10.98	4964.6	647.4	28814.	16.90
29.75	4.2857	0.6933	13.91	4780.7	620.6	30317.	17.74
33.25	4.9143	0.5988	15.82	4683.8	591.8	31484.	18.52
36.75	6.2000	0.6498	13.75	4468.7	562.0	32193.	18.66
40.25	8.0000	0.6429	15.96	4445.2	531.3	32798.	18.46
43.75	8.8571	0.6710	15.26	4323.4	497.6	34012.	18.71
47.25	10.3714	0.6171	17.34	4088.6	465.9	33099.	19.26
50.75	11.0571	0.6331	15.26	3879.2	430.7	33802.	18.87
54.25	11.2000	0.6735	17.74	3601.4	397.0	33472.	19.80
57.75	13.7143	0.5937	17.86	3344.2	362.9	33085.	21.44
61.25	15.0857	0.6667	18.17	3097.2	328.6	30437.	21.46
64.75	14.4571	0.6166	19.92	2812.8	296.3	29158.	22.78
68.25	13.5429	0.6646	19.20	2567.0	265.8	28839.	21.99
71.75	14.2000	0.6157	19.01	2244.3	235.2	27897.	23.02
75.25	14.7143	0.6330	19.85	2122.8	206.8	26567.	23.39
78.75	14.2571	0.6433	21.18	1891.1	180.0	24663.	23.99
82.25	12.4000	0.6705	20.49	1639.3	156.0	23209.	24.70
85.75	12.2286	0.6565	21.27	1405.7	133.7	21790.	26.63
89.25	11.7714	0.6165	24.01	1214.4	114.3	19309.	27.99
92.75	10.5714	0.6757	22.45	1006.9	96.4	17051.	27.65
96.25	9.2571	0.6235	21.19	864.4	81.0	14849.	29.23
99.75	9.3714	0.6341	24.42	797.2	67.5	13078.	28.19
103.25	8.5143	0.6208	23.35	621.9	54.7	11610.	27.25
106.75	7.3714	0.6395	23.51	522.8	44.1	11398.	27.67
110.25	6.2857	0.6500	23.54	412.5	35.1	10106.	29.59
113.75	5.6000	0.6275	22.77	333.9	28.3	8603.	34.87
117.25	4.4000	0.6818	23.09	256.3	22.0	7132.	34.12
120.75	3.2000	0.6607	26.72	204.5	17.1	6050.	35.58
124.25	3.2286	0.6637	23.71	148.5	13.7	5855.	37.71
127.75	2.3429	0.6341	25.30	138.4	10.4	5014.	34.69
131.25	1.7143	0.5667	25.05	102.2	7.8	4326.	34.76
134.75	1.8000	0.6508	25.76	72.8	6.2	3768.	37.57
138.25	1.3714	0.6042	20.11	60.8	4.7	2950.	39.47
141.75	0.9429	0.8182	32.32	43.9	3.3	2044.	39.69
145.25	0.8000	0.6785	28.27	30.8	2.4	1948.	41.55
148.75	0.5429	0.5263	22.45	22.0	1.7	1740.	46.67
152.25	0.6000	0.7143	22.57	19.5	1.2	1642.	42.75
155.75	0.3714	0.6923	32.46	12.0	0.8	987.	52.13
159.25	0.2571	0.5555	35.34	7.5	0.5	801.	59.62
162.75	0.2857	0.7999	29.24	5.1	0.3	700.	55.80
166.25	0.1143	0.2499	23.29	1.9	0.2	411.	53.92
169.75	0.0571	0.9995	24.14	2.1	0.1	297.	47.26
173.25	0.1143	0.7498	13.44	0.8	0.0	270.	39.26
IONS:10000,	500	TIME: 752.	TOTAL=	355.7	44.3	IONZ/TOTAL=	0.1107

§2. Implantation through Si_3N_4 and SiO_2 Caps into GaAs

In many GaAs IC fabrication processes, an annealing cap is deposited first, and ions are implanted through the anneal cap into the GaAs. This has the beneficial effect of reducing the dependence of the ion profiles on the wafer orientation angles,[1] and protects the GaAs surface against contamination throughout much of the process. Since a fraction of the ion energy is lost in the cap, it also gives narrower profiles in the GaAs, and consequently MESFET's implanted with equal-energy ions have higher transconductances when implantation through caps is done. However, implantation through Si_3N_4 and SiO_2 caps also knocks additional Si, N, and O ions into the GaAs. The knocked-in Si ions are additional donors that add to the implant distribution, resulting in higher carrier concentrations and more negative threshold voltages.

Our SIMS studies have shown that for 200-keV Se ions through SiO_2 caps, TRIM predicts the knocked-on Si and O-atom distributions in the GaAs well,[1] therefore it is useful to have a table of TRIM calculations of recoil ion distributions. We made a series of calculations of these distributions for Si and Se ion implantation through Si_3N_4 and SiO_2 caps for various cap thicknesses, and for various ion energies between 50 keV Si (100-keV Se) and 400 keV. The calculated ion and recoil atom distributions are given in Tables IV and V.

Table IV gives the Si or Se ion and damage distributions for various Si_3N_4 and SiO_2 cap thicknesses. Usually, the cap thicknesses t were chosen so that t/Rp, where Rp is the TRIM value in GaAs, were kept below about 1.6. MESFET device characteristics depend so sensitively on cap thickness, that it is not feasible to design a reliable, uniform fabrication process using thicker caps. The depths in Table IV are the depths from the cap surface.

Figure 1 shows Si ion distributions for 100-keV Si on Si_3N_4 caps and 200-keV Se on SiO_2 caps. Si and Se ions have about the same Rp value in GaAs and Si_3N_4, but ΔRp is smaller in the caps than in GaAs. For Si ions on Si_3N_4 caps, the distributions consequently become narrower with higher cap thicknesses, but have about the same peak position. Note that there is some pileup of ions at the cap/GaAs interface. The ions have a larger Rp value in the lower-density SiO_2 caps than in the GaAs. Consequently for Se ions on SiO_2 caps, the peak of the distribution moves to larger depths for higher cap thicknesses.

Range scaling has often been used to calculate ion distributions in the semiconductor for implantation through caps. In essence, the distribution in the GaAs is shifted by the cap thickness times the ratio of Rp values in the GaAs to the cap. Since for Si_3N_4 caps, this ratio is near unity, the shift is just the cap thickness. Figure 2 shows that this theory neglects one important factor, the decreased ΔRp values in the cap. Range scaling predicts that the width in the GaAs is independent of the cap thickness, but since ΔRp is so much lower in the cap that in the GaAs, the average width decreases with increasing cap thickness. While range scaling predicts the distributions for low cap thickness adequately, the distributions for thicker caps are narrower than range scaling predicts. This narrowing effect has been observed in our SIMS measurements of Si and Se ion implantation through Si_3N_4 caps. Probably, it has not been observed for SiO_2 caps on Si, due to the similiar widths of the cap and semiconductor distributions in those cases.

Table V gives Si, O or N recoil atom distributions as a function of the depth in the GaAs. For these calculations, TRIM was modified to deposit counts in exponentially-spaced bin intervals. Since the recoil atom distributions fall off nearly exponentially with depth, narrower bins near the surface preserves nearly uniform counting statistics in all bins.

The recoil distributions are shown in Fig.3. Over most of the range, the recoil-ion distribution falls off approximately as a power law. For depths smaller than about 0.5nm, the distributions flatten out, and sometimes fall off at smaller depths. TRIM's depth resolution is approximately one lattice spacing, ~0.3nm, therefore the distributions are not meaningful below this depth. For large depths, the distributions fall off as a Gaussian. The point where they fall off is a function of the maximum energy the ion can transfer to the recoil, and the corresponding maximum straight-line distance the recoil can travel before it comes to rest. The maximum energy is larger in Si-Si collisions than in Si-N or Si-O collisions, but since the lighter N or O ions can travel further in the GaAs than the Si ions, the point at which the N,O distributions vanish is deeper than that for Si ions. The maximum energy that can be transferred also depends on the ion energy nearest to the cap/GaAs interface, therefore for thicker caps, the point at which the distributions vanish moves to lower depths in the GaAs, as can be clearly seen in Fig.3.

We have fit the calculated distributions to the following equation

$$R(x) = \frac{A}{x^n + 0.1} \exp\left(-(x/a)^2\right) \qquad (2\text{-}1)$$

where the depth x and a are in nm. Figures 3 and 4 show that this equation fits the calculated recoil-ion distributions well. The value of the low-depth cutoff factor 0.1 is not critical, but prevents the distribution from diverging at the origin. Fits to Eq.(2-1) were made in the following way: First, by inspection, we estimated where the curve was best represented by a power law, and did a linear least-squares log-log fit to extract A and n. Then, using the numerical distribution, we calculated the third moment of the distribution

$$\langle x^3 \rangle \simeq A \int x^{3-n}\, dx\, \exp(-(x/a)^2), \qquad (2\text{-}2)$$

The cutoff factor, 0.1, has no influence over this integral. The value of this integral is proportional to a Γ function, therefore knowing A and n, the value of a can be extracted. Once a is known, one can better calculate where the curves best obey the power law ($\exp(-x/a)^2 > 0.9$), therefore the two steps are repeated to obtain the final values of A, a, and n.

Figure 4 compares fits with the TRIM calculations on a linear depth scale with an origin at the cap surface. Near the origin, the Si recoil concentration is much larger than the ion concentration. These distributions have often been fit using an exponential to describe the deep part of the distribution, neglecting the steep increase of the recoil ion distributions near the GaAs surface. However, such fits neglect the part of the distribution than contributes the most to MESFET threshold voltages. Our modified power-law fits give good agreement over the entire range of the recoil ion distributions.

In Table VI, we have tabulated A, a, and n parameters for Si and Se ions on Si_3N_4 and SiO_2 caps. (Though it is desirable to also make calculations for commonly-implanted Be and Mg ions, given the enormous amount of computer time needed, we have not. In general, Be ions, having such a small mass, do not knock in Si ions efficiently, therefore recoil ion production can be neglected for Be-ion implantation. Mg ions are sufficiently close in mass to Si ions that the Si ion results can be used to estimate Mg-induced knock-on distributions.)

In creating Table VI, we normalized the cap thickness to the Rp value of the ion in GaAs. The minimum calculated Si ion energy was chosen to be 50 keV, and Se energy, 100 keV. TRIM calculations were made at up to seven energies and 5 cap thicknesses per ion and cap. The TRIM distributions are given in Tables IV and V. The three recoil distribution parameters for each recoil atom were fitted for every calculation, then Table IV was made by making spline interpolations in both ion energy and normalized thickness t/Rp. Due to the statistical limitations

of TRIM calculations, the fits to A, a, and n have statistical fluctuations, which the spline interpolation smoothes over. In the resulting plots of the distribution parameters (Figure 5), unphysical oscillations are seen. The parameters are only as accurate as the envelope of these oscillations.

In Figures 6-7, note that despite the fluctuations, the n values are confined to between 1.2 and 1.8. The n values for Se ions are lower than for Si ions. The magnitudes A of the distributions fall off with increasing energy (due to lower nuclear scattering cross sections), and peak at t/Rp slightly less than 1. The fall-offs a increase with higher ion energy (reflecting higher energy transfer to the recoils), and decrease with thicker caps (reflecting a lower effective maximum transfer energy for ions near the cap/GaAs interface).

Finally, Fig.8 shows effects of the Si recoil distributions on MESFET threshold voltages. In this figure, for every cap thickness, the implant dose was adjusted to achieve a target threshold voltage of -0.5V, then the recoil ion distribution associated with that dose was added, and the new threshold voltage was calculated. The Si ion recoils shift the threshold voltage by about 20-70 mV for Si ions, and by up to 500 mV for Se ions, for cap thicknesses with t/Rp<1.1.

REFERENCES

1. R. Anholt, P. Balsingam, S.Y.Chou, T.W.Sigm on, M.Deal, "Ion implantation into GaAs" J. Appl. Physics, 64, 3429 (1989).

§ 2. List of Figures

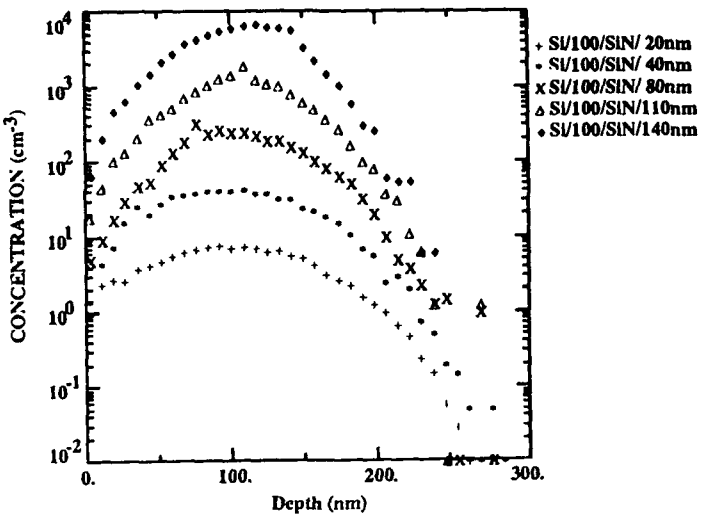


Fig.1a. Si ion distributions for implants thru Si3N4 caps

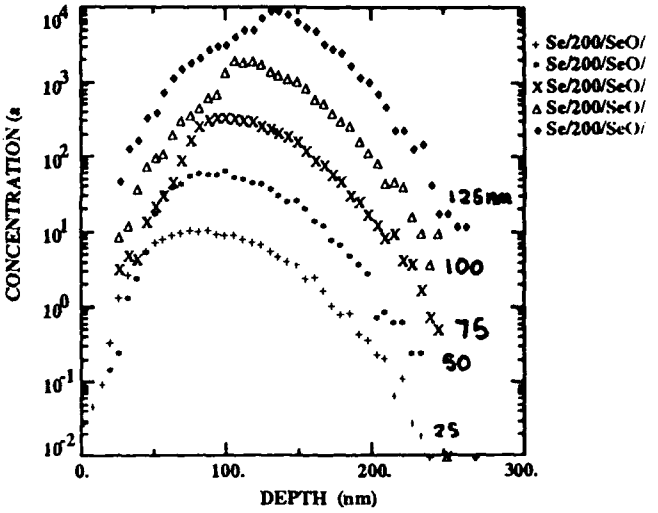


Fig.1b. Se ion distributions for implants thru SiO2 caps

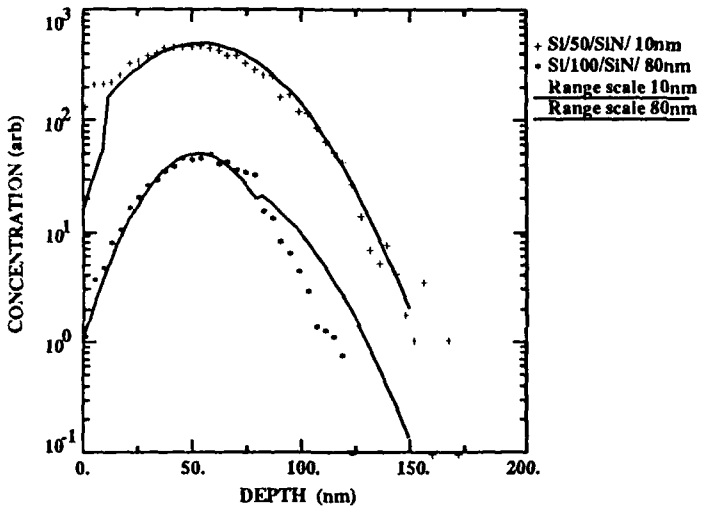


Fig.2. Comparison with the range scaling theory

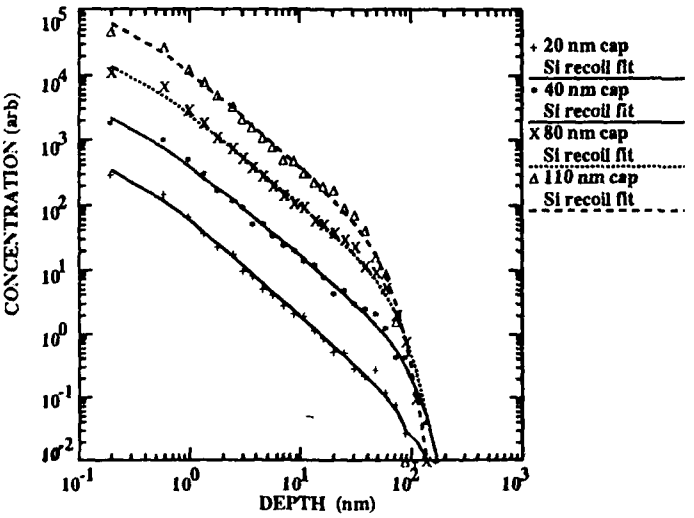


Fig.3a. Si recoils. 100 keV Si ions. Si3N4 caps

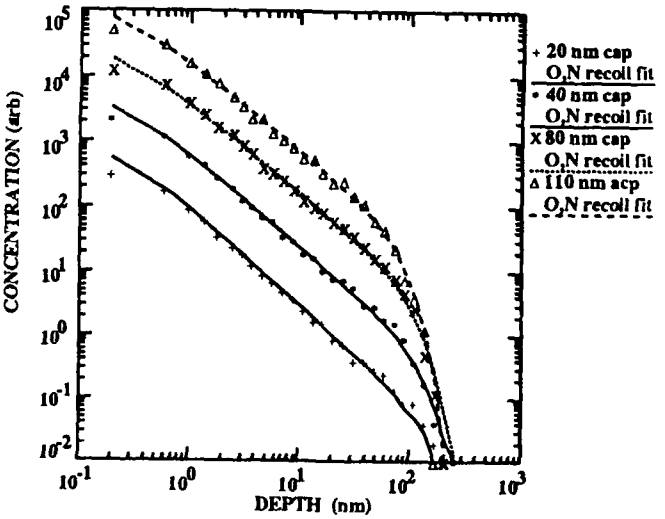


Fig.3b. N recoils. 100 keV Si. Si3N4 caps

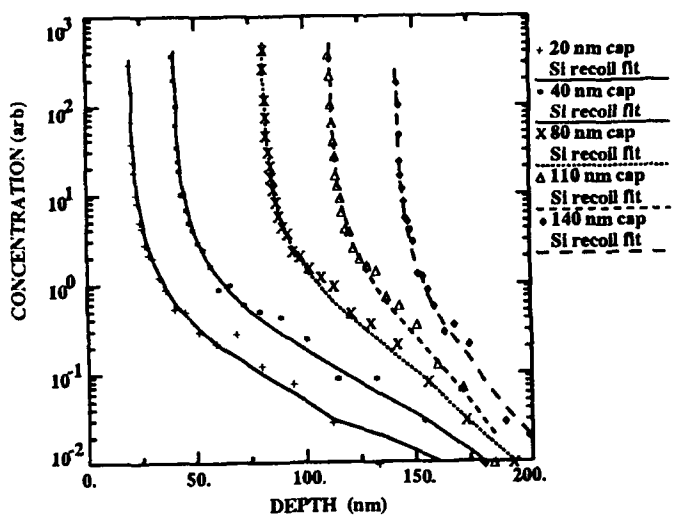


Fig. 4a. Si recoil distributions. 100 keV Si ions. Si3N4 cap

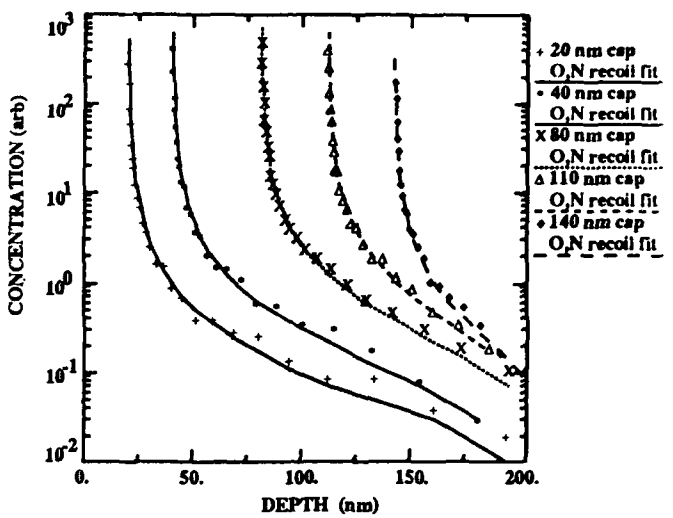


Fig.4b. N recoil distributions. 100 keV Si ions. Si3N4 cap

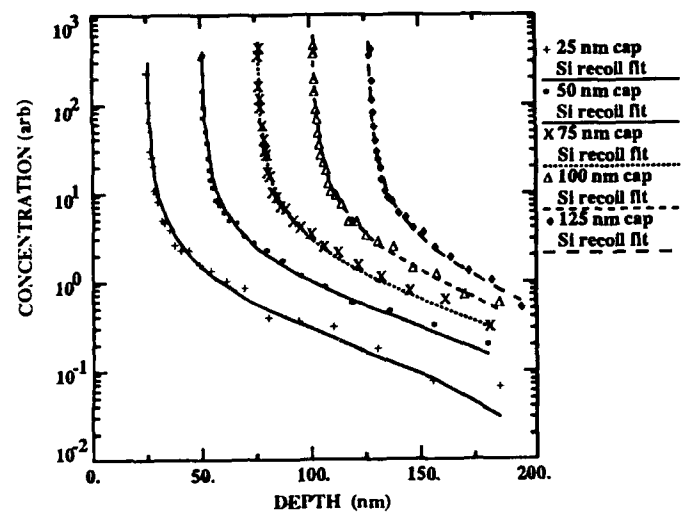


Fig.4c. Si recoils. 200 keV Se ions. SiO2 caps

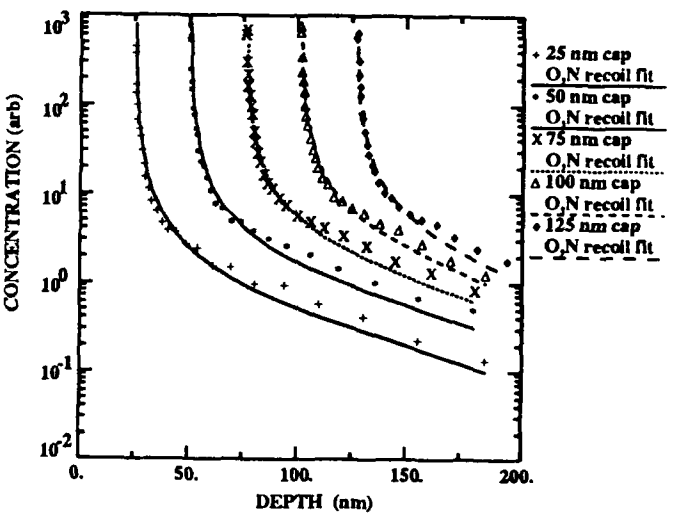


Fig.4d. O recoils. 200 keV Se ions. SiO2 caps

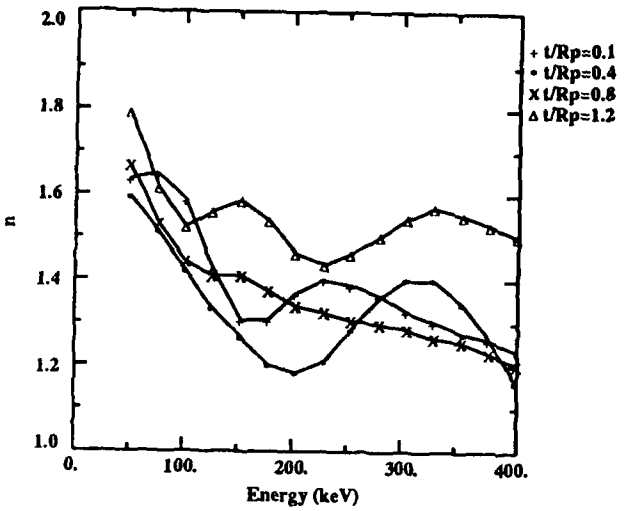


Fig.5a.n values. Si ions. SI recoils, Si3N4 caps

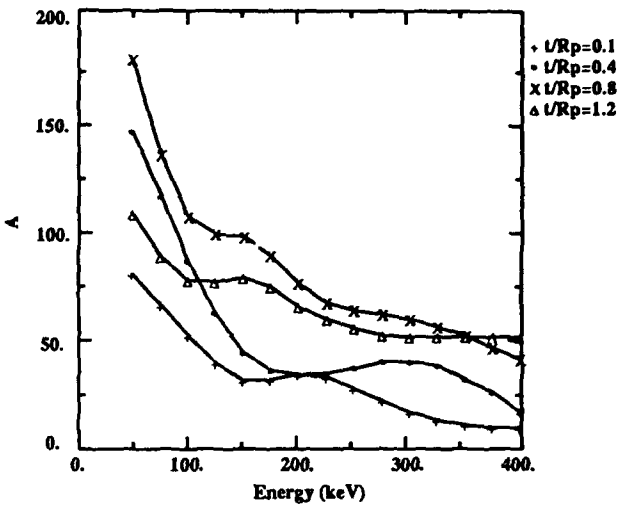


Fig.5b. A values. Si ions. Si recoils. Si3N4 caps

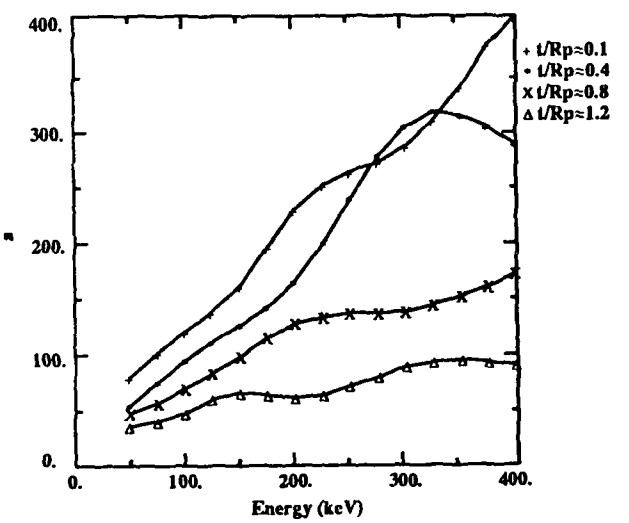


Fig.5c. a values. Si ions. Si recoils. Si3N4 caps

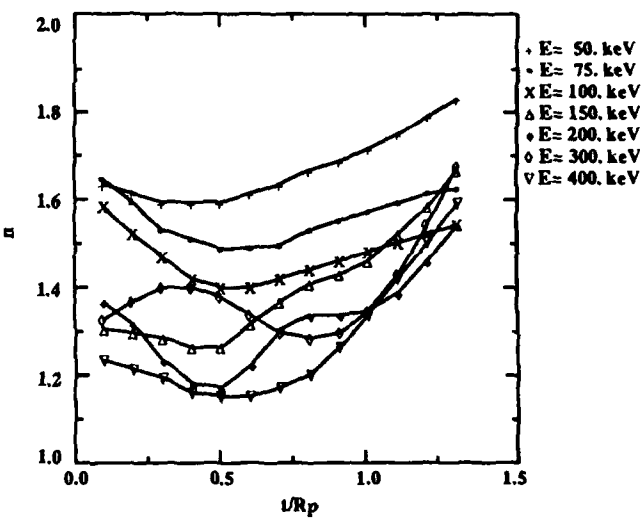


Fig.6a. n values. Si ions. Si recoils. Si3N4 caps

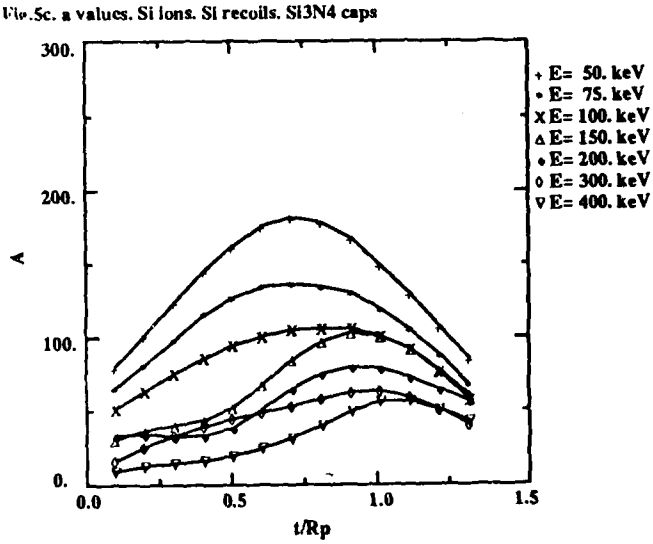


Fig.6b. A values. Si ions. Si recoils. Si3N4 caps

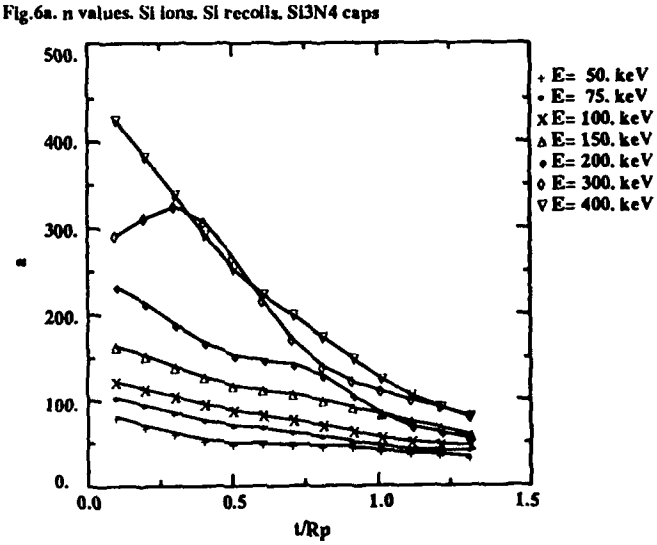


Fig.6c. a values. Si ions. Si recoils. Si3N4 caps

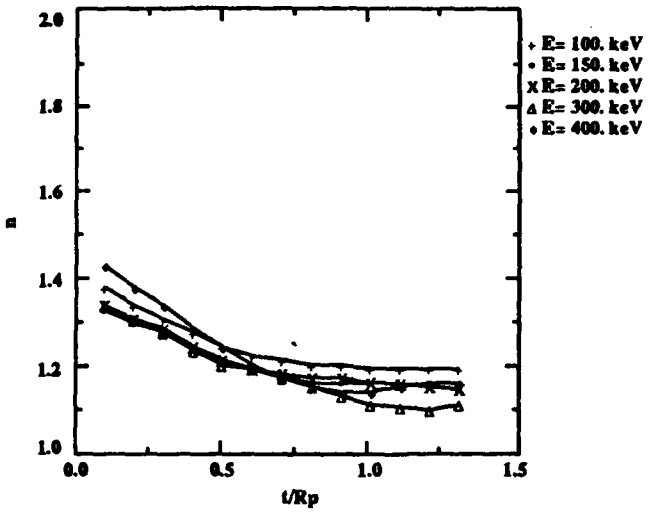


Fig.7a. n values. Se ions. O recoils. SiO2 caps

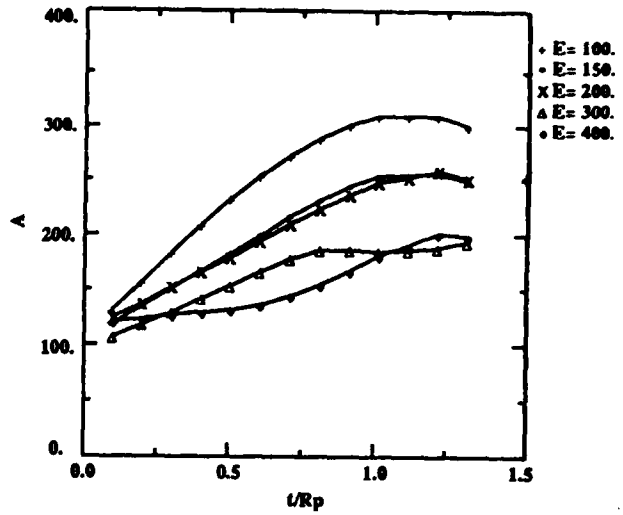


Fig.7b. A values. Se ions. O recoils. SiO2 caps

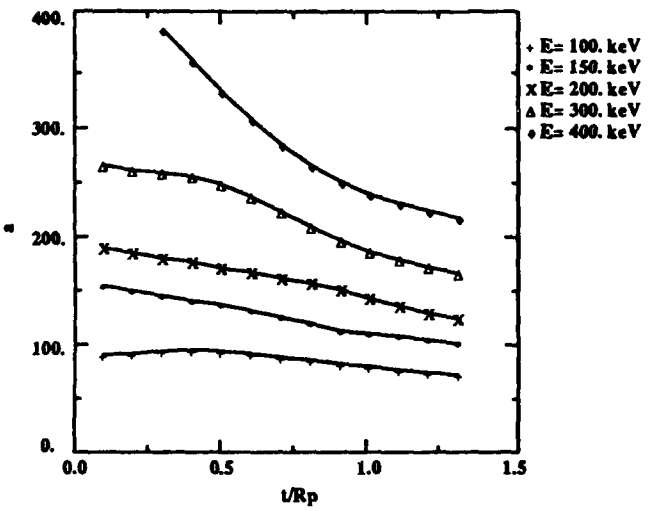
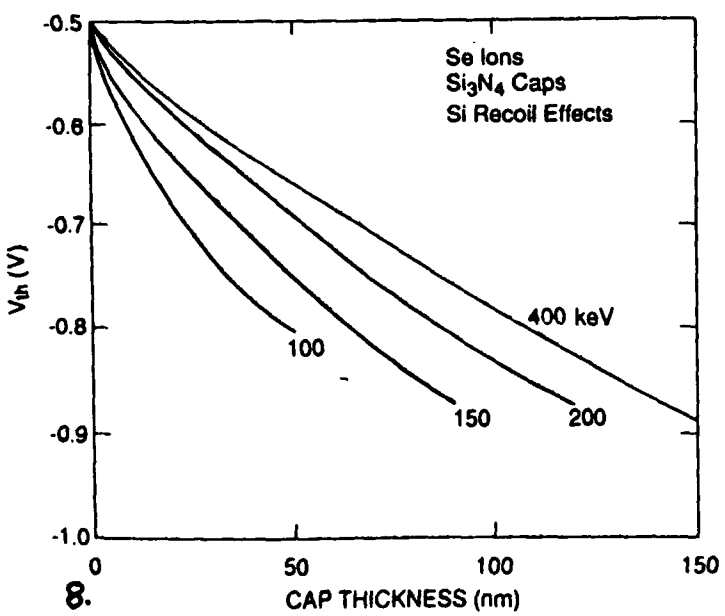


Fig.7c. a values. Se ions. O recoils. SiO2 caps



8.

Table IV. Ion and Damage Distributions for Si and Se Ion Implantation Through Si_3N_4 and SiO_2 Caps into GaAs.

Table IV is on following pages: pages 337 through 359.

Table IV. Ion and Damage Distributions for Si and Se Ion Implantation Through Si_3N_4 and SiO_2 Caps into GaAs

The ion distributions are in ions/μm/incident ion as a function of the depth x, measured from the cap surface, for five cap thicknesses in nm. The corresponding damage distributions are in keV/μm/incident ion.

Tables IV and V are ordered according to the ion and cap material as

Ion	Cap
Si	Si_3N_4
Si	SiO_2
Se	Si_3N_4
Se	SiO_2

The energies and cap thicknesses for which distributions are given are

Energy (Ion) (keV)		Cap thickness (nm)+			
50 Si	10	20	40	60	80
75 Si	40	60	80	100	125
100 Si	20	40	80	110	140
150 Si	40	80	100	150	200
200 Si	40	100	150	200	250
300 Si	40	100	200	300	400
400 Si	100	200	300	400	500
100 Se	10	20	30	50	70
150 Se	20	40	60	80	100
200 Se	25	50	75	100	125
300 Se	30	60	100	125	175
400 Se	50	100	150	200	250

Contents of Table IV.

Si and Se atom distributions resulting from implantation into Si_3N_4/GaAs and SiO_2/GaAs multilayer structures. Ion energies range from 50 to 400keV for Si and 100 to 400 for Se. The encapsulant layer thicknesses vary from 10 to 500nm.

Table IV: 50keV Si 28 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	10.	20.	40.	60.	80.	10.	20.	40.	60.	80.
2.0	3.75	1.02	0.28	0.32	0.45	514	515	484	496	507
6.0	6.10	2.25	1.08	0.85	1.48	586	542	543	527	561
10.0	6.00	4.65	2.20	2.10	1.85	546	552	565	568	540
14.0	6.43	8.95	2.90	3.25	3.22	515	627	578	580	579
18.0	7.57	12.10	5.18	4.22	4.18	552	658	594	592	603
22.0	9.55	8.68	6.40	6.60	6.62	553	533	591	615	624
26.0	10.10	10.98	8.15	8.65	8.35	541	537	607	592	596
30.0	11.00	11.40	12.35	11.10	10.50	574	549	613	615	597
34.0	11.57	13.70	17.35	12.87	11.73	529	520	608	582	566
38.0	13.15	14.90	25.83	13.95	13.98	519	522	633	576	573
42.0	13.23	14.82	17.23	15.48	15.70	486	518	459	523	538
46.0	13.37	14.50	17.25	16.85	18.35	452	460	429	485	478
50.0	13.45	13.87	15.70	20.20	18.10	419	419	413	449	431
54.0	13.75	14.48	16.33	22.42	18.40	396	370	355	401	381
58.0	12.95	12.65	15.52	28.08	19.73	334	324	309	362	343
62.0	12.27	13.12	14.05	15.10	16.75	290	282	267	222	280
66.0	11.20	12.40	11.55	12.50	16.95	249	235	210	191	219
70.0	11.02	10.60	12.00	10.98	14.50	219	205	180	147	172
74.0	9.57	9.48	9.15	9.82	13.68	183	174	150	120	136
78.0	8.40	8.18	8.02	7.65	13.05	156	140	119	99	103
82.0	7.47	7.62	7.40	6.25	6.30	127	117	86	73	49
86.0	7.32	6.03	5.40	4.95	5.32	102	86	69	53	36
90.0	4.70	4.70	4.35	4.47	3.33	81	68	48	43	22
94.0	4.95	3.92	3.40	3.72	2.53	60	47	39	31	17
98.0	3.42	3.80	2.83	2.10	1.77	44	36	30	20	13
102.0	3.30	2.53	2.00	1.62	1.17	38	27	21	12	7
106.0	2.47	2.15	1.83	1.33	0.55	26	23	14	8	4
110.0	1.85	1.77	1.33	0.87	0.52	17	15	10	5	3
114.0	1.52	1.33	1.05	0.65	0.45	13	11	7	3	1
118.0	1.23	0.80	0.57	0.32	0.30	9	6	4	1	0
122.0	0.77	0.52	0.52	0.25	0.03	6	4	3	1	0
126.0	0.40	0.55	0.30	0.15	0.03	3	3	2	0	0
130.0	0.20	0.45	0.20	0.08	0.03	2	3	0	0	0
134.0	0.15	0.08	0.05	0.05	0.03	1	1	0	0	0
138.0	0.22	0.10	0.10	0.03	0.00	1	0	0	0	0
142.0	0.12	0.10	0.00	0.03	0.00	0	0	0	0	0
146.0	0.05	0.03	0.05	0.00	0.00	0	0	0	0	0
150.0	0.03	0.00	0.00	0.00	0.00	0	0	0	0	0
154.0	0.10	0.00	0.03	0.00	0.00	0	0	0	0	0
158.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
162.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
166.0	0.03	0.00	0.00	0.00	0.00	0	0	0	0	0
170.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
174.0	0.00	0.03	0.00	0.00	0.00	0	0	0	0	0
178.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
182.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
186.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
190.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
194.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
198.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 75keV Si 28 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	40.	60.	80.	100.	125.	40.	60.	80.	100.	125.
3.0	0.33	0.30	0.22	0.22	0.13	458	440	478	450	435
9.0	0.83	0.47	0.73	0.70	0.48	521	486	479	497	479
15.0	1.37	1.17	1.22	1.23	1.23	514	500	488	488	490
21.0	2.55	1.78	1.95	1.85	1.65	516	544	534	529	523
27.0	5.05	2.97	2.68	2.72	2.37	557	527	539	534	546
33.0	8.00	3.72	3.63	3.45	3.73	587	562	566	539	578
39.0	9.70	5.33	4.57	5.25	5.10	585	563	549	596	570
45.0	8.62	7.42	6.35	6.23	6.72	516	575	572	578	578
51.0	10.00	11.78	8.17	8.08	7.38	537	579	577	572	562
57.0	9.78	16.78	9.72	9.90	9.30	504	599	569	555	556
63.0	10.58	10.80	12.25	11.08	11.80	500	458	526	535	542
69.0	10.83	12.60	12.97	12.50	12.30	456	448	483	490	487
75.0	10.62	11.88	17.52	13.08	13.17	385	403	472	451	447
81.0	10.17	11.45	17.05	13.80	14.50	362	363	363	385	379
87.0	10.13	11.05	12.03	14.48	13.37	336	319	275	334	326
93.0	9.97	10.02	10.73	14.82	14.10	278	259	246	269	263
99.0	8.72	9.52	9.45	14.43	10.95	225	218	193	202	199
105.0	8.02	8.73	8.92	8.50	10.55	178	175	157	123	153
111.0	6.27	7.00	6.88	6.60	8.30	145	130	116	97	109
117.0	6.13	5.33	5.50	5.57	6.65	114	98	83	72	74
123.0	4.70	4.42	4.35	3.72	6.10	85	68	60	47	48
129.0	4.13	3.38	2.75	2.98	2.28	66	52	42	33	22
135.0	2.87	2.73	2.15	2.02	1.67	46	39	26	21	13
141.0	1.95	1.92	1.67	1.37	1.15	33	24	20	12	10
147.0	1.72	1.37	1.08	0.78	0.78	23	16	11	7	5
153.0	1.25	1.00	0.83	0.58	0.40	11	11	7	4	2
159.0	0.95	0.57	0.55	0.33	0.25	9	7	4	2	1
165.0	0.43	0.45	0.37	0.17	0.10	5	4	2	0	0
171.0	0.48	0.45	0.15	0.05	0.07	3	3	1	0	0
177.0	0.08	0.03	0.05	0.03	0.05	1	1	0	0	0
183.0	0.17	0.10	0.05	0.02	0.00	0	0	0	0	0
189.0	0.07	0.08	0.03	0.02	0.00	0	0	0	0	0
195.0	0.05	0.00	0.00	0.00	0.00	0	0	0	0	0
201.0	0.07	0.02	0.03	0.02	0.00	0	0	0	0	0
207.0	0.02	0.00	0.00	0.00	0.00	0	0	0	0	0
213.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
219.0	0.02	0.00	0.00	0.00	0.00	0	0	0	0	0
225.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
231.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
237.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
243.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
249.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
255.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
261.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
267.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
273.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
279.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
285.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
291.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
297.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 100keV Si 28 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	20.	40.	80.	110.	140.	20.	40.	80.	110.	140.
4.0	0.99	0.28	0.20	0.15	0.11	405	407	423	397	401
12.0	2.51	0.90	0.36	0.37	0.34	457	443	434	436	451
20.0	2.86	1.48	0.68	0.84	0.79	481	456	451	478	464
28.0	2.72	3.09	1.19	1.10	1.08	453	513	462	473	493
36.0	3.94	4.97	1.89	1.69	1.81	490	544	491	510	493
44.0	4.41	4.00	2.12	2.91	2.49	510	486	527	531	527
52.0	5.03	5.55	3.65	3.46	3.65	546	519	539	536	531
60.0	5.89	6.85	5.41	4.29	4.69	532	546	556	556	555
68.0	6.51	7.10	7.39	5.86	6.22	512	525	572	530	555
76.0	7.14	7.43	12.69	7.01	7.19	522	523	564	536	534
84.0	7.62	8.20	9.26	8.50	8.41	498	509	466	516	504
92.0	8.02	8.21	10.37	10.29	9.36	465	454	455	478	482
100.0	7.50	8.10	9.54	11.80	10.23	416	410	405	440	437
108.0	7.81	8.59	9.65	15.34	10.94	364	366	367	407	383
116.0	7.39	7.56	8.79	10.02	11.37	312	312	308	283	337
124.0	6.51	7.51	7.59	8.90	10.49	272	260	245	240	257
132.0	6.84	6.46	7.55	8.15	10.18	235	228	211	186	203
140.0	5.97	6.50	6.29	6.60	9.81	197	177	159	144	135
148.0	5.51	4.71	5.30	4.99	5.55	149	137	123	106	82
156.0	4.51	4.30	4.10	4.01	3.84	112	101	87	68	56
164.0	3.20	3.64	3.34	3.00	2.46	80	77	63	45	32
172.0	2.78	3.05	2.53	2.14	1.73	61	54	41	32	21
180.0	2.41	2.15	2.05	1.37	1.00	46	34	29	17	11
188.0	1.67	1.35	1.29	0.82	0.51	31	22	17	10	6
196.0	1.29	1.11	0.80	0.65	0.44	22	16	9	7	3
204.0	1.02	0.50	0.39	0.30	0.10	12	11	4	3	1
212.0	0.71	0.59	0.20	0.25	0.09	9	7	2	2	0
220.0	0.49	0.40	0.15	0.09	0.09	6	4	1	0	0
228.0	0.25	0.15	0.09	0.05	0.01	3	1	0	0	0
236.0	0.16	0.10	0.05	0.01	0.01	1	0	0	0	0
244.0	0.06	0.04	0.06	0.00	0.00	0	0	0	0	0
252.0	0.03	0.03	0.00	0.00	0.00	0	0	0	0	0
260.0	0.01	0.01	0.00	0.00	0.00	0	0	0	0	0
268.0	0.01	0.00	0.04	0.01	0.00	0	0	0	0	0
276.0	0.00	0.01	0.00	0.00	0.00	0	0	0	0	0
284.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
292.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
300.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
308.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
316.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
324.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
332.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
340.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
348.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
356.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
364.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
372.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
380.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
388.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
396.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 150keV Si 28 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	40.	80.	100.	150.	200.	40.	80.	100.	150.	200.
6.0	0.34	0.08	0.12	0.08	0.05	350	348	351	351	362
18.0	0.81	0.13	0.20	0.22	0.22	375	379	375	381	396
30.0	1.83	0.49	0.35	0.42	0.39	418	378	385	396	389
42.0	1.58	0.88	0.74	0.60	0.74	416	412	421	411	432
54.0	2.30	1.42	0.88	0.98	0.93	437	452	416	426	429
66.0	2.73	3.26	1.77	1.40	1.44	469	480	463	467	464
78.0	3.59	4.12	2.77	2.13	2.12	500	496	483	496	493
90.0	3.92	3.81	4.82	2.85	2.53	524	474	520	496	478
102.0	4.36	5.08	5.53	3.31	3.44	528	507	494	493	514
114.0	5.46	5.61	5.61	4.63	4.61	506	521	498	509	505
126.0	5.71	5.75	6.18	6.29	5.54	482	499	493	503	478
138.0	5.53	6.50	6.40	8.49	6.77	448	463	448	474	480
150.0	5.82	6.57	7.15	9.49	7.57	403	417	412	428	432
162.0	5.99	5.68	6.74	7.66	8.36	355	341	370	347	378
174.0	5.74	6.21	6.31	7.50	8.22	304	301	293	293	302
186.0	4.85	5.88	5.76	6.91	8.46	248	256	241	238	240
198.0	4.53	5.13	5.37	5.47	8.41	197	191	196	182	180
210.0	4.22	4.36	4.50	4.75	4.99	154	152	149	124	106
222.0	3.70	3.42	3.58	3.40	3.35	123	106	108	86	65
234.0	2.98	2.97	2.87	2.61	2.37	91	79	72	57	38
246.0	2.20	2.09	1.98	1.74	1.12	61	47	47	34	20
258.0	1.77	1.48	1.47	1.00	0.88	40	32	27	18	13
270.0	1.29	0.95	0.89	0.71	0.49	25	18	17	10	5
282.0	0.74	0.65	0.65	0.32	0.16	15	11	11	5	2
294.0	0.44	0.40	0.39	0.23	0.08	8	6	6	2	0
306.0	0.31	0.22	0.18	0.07	0.05	4	2	2	0	0
318.0	0.17	0.08	0.06	0.06	0.00	2	0	0	0	0
330.0	0.09	0.07	0.04	0.00	0.02	0	0	0	0	0
342.0	0.03	0.01	0.01	0.00	0.00	0	0	0	0	0
354.0	0.02	0.00	0.00	0.01	0.00	0	0	0	0	0
366.0	0.01	0.01	0.00	0.00	0.00	0	0	0	0	0
378.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
390.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
402.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
414.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
426.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
438.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
450.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
462.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
474.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
486.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
498.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
510.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
522.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
534.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
546.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
558.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
570.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
582.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
594.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 200keV Si 28 in Si3N4 on GaAs

Depth nm	Ion distributions (Ions/um/ion) Cap thickness (nm) 40.	100.	150.	200.	250.	Damage distributions (keV/um/ion) 40.	100.	150.	200.	250.
8.0	0.44	0.04	0.04	0.04	0.04	339	306	307	309	309
24.0	0.89	0.14	0.11	0.09	0.09	348	341	338	315	335
40.0	0.94	0.29	0.28	0.28	0.33	375	358	355	347	356
56.0	1.19	0.80	0.48	0.35	0.44	378	382	380	368	362
72.0	1.59	1.17	0.52	0.57	0.56	405	405	375	391	391
88.0	1.88	2.40	0.82	0.82	0.90	447	418	405	407	414
104.0	2.37	2.24	1.41	1.12	1.13	459	436	437	422	433
120.0	2.89	3.16	2.52	1.79	1.84	470	477	472	457	449
136.0	3.50	3.78	4.14	2.40	2.42	479	495	486	470	476
152.0	3.81	4.04	4.49	3.59	3.39	489	473	475	481	467
168.0	3.94	4.43	4.79	4.19	3.93	463	459	443	474	473
184.0	4.38	4.63	5.59	6.00	5.12	421	436	453	469	457
200.0	4.68	4.91	5.84	8.32	6.16	408	397	406	442	421
216.0	4.81	5.07	5.89	6.82	6.58	349	345	361	363	379
232.0	4.57	4.89	5.45	6.55	7.63	281	294	295	290	302
248.0	4.31	4.71	5.01	5.31	8.01	236	235	234	209	239
264.0	3.52	4.08	4.29	4.66	5.24	190	190	171	166	143
280.0	3.55	3.47	3.55	3.51	3.57	147	133	120	109	90
296.0	2.67	2.59	2.60	2.56	2.29	101	92	82	66	53
312.0	2.04	2.12	1.94	1.61	1.43	70	63	52	36	27
328.0	1.47	1.53	1.23	0.98	0.71	46	35	27	18	13
344.0	1.12	0.94	0.71	0.50	0.37	27	20	15	9	5
360.0	0.77	0.44	0.47	0.26	0.23	18	11	7	4	2
376.0	0.36	0.29	0.17	0.11	0.06	8	5	3	1	0
392.0	0.21	0.15	0.13	0.04	0.02	4	2	1	0	0
408.0	0.12	0.12	0.03	0.01	0.00	1	1	0	0	0
424.0	0.04	0.01	0.00	0.01	0.01	0	0	0	0	0
440.0	0.04	0.03	0.01	0.00	0.00	0	0	0	0	0
456.0	0.01	0.01	0.00	0.00	0.00	0	0	0	0	0
472.0	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0
488.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
504.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
520.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
536.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
552.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
568.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
584.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
600.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
616.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
632.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
648.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
664.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
680.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
696.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
712.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
728.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
744.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
760.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
776.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
792.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 400keV Si 28 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	100.	200.	300.	400.	500.	100.	200.	300.	400.	500.
12.5	0.07	0.02	0.01	0.01	0.01	224	219	206	213	200
37.5	0.08	0.03	0.03	0.06	0.02	220	213	205	222	217
62.5	0.28	0.06	0.02	0.02	0.02	225	231	213	232	230
87.5	0.37	0.10	0.02	0.10	0.07	263	222	234	252	237
112.5	0.38	0.16	0.06	0.11	0.09	269	263	262	266	259
137.5	0.47	0.27	0.20	0.17	0.12	300	244	274	278	253
162.5	0.71	0.58	0.19	0.22	0.19	317	300	305	283	280
187.5	0.89	0.91	0.40	0.37	0.33	342	341	299	313	313
212.5	1.14	0.90	0.49	0.44	0.46	384	354	340	339	319
237.5	1.35	1.14	0.79	0.63	0.57	420	394	356	356	345
262.5	1.56	1.40	1.29	0.95	0.89	423	405	397	378	377
287.5	2.08	1.89	2.46	1.28	1.34	418	420	425	395	405
312.5	2.09	2.36	2.26	1.70	1.58	433	434	398	417	404
337.5	2.61	2.90	3.00	2.19	2.26	437	442	446	418	424
362.5	2.65	3.22	3.34	3.31	2.89	396	427	425	421	428
387.5	3.05	3.30	3.58	4.99	3.45	387	396	397	412	411
412.5	3.05	3.43	3.99	4.38	4.44	325	357	369	357	371
437.5	2.95	3.35	3.77	4.70	4.76	288	301	302	307	321
462.5	2.94	3.03	3.40	4.14	4.70	245	244	240	231	247
487.5	2.59	2.86	3.03	3.48	5.44	194	191	176	172	182
512.5	2.08	2.36	2.60	2.94	2.86	145	135	131	118	93
537.5	1.99	1.96	2.00	1.77	1.90	108	93	84	60	51
562.5	1.62	1.40	1.43	0.97	1.07	83	59	49	31	22
587.5	1.22	1.10	0.81	0.63	0.37	48	39	25	14	7
612.5	0.85	0.65	0.46	0.28	0.15	27	20	11	6	2
637.5	0.46	0.33	0.22	0.10	0.04	14	7	4	2	0
662.5	0.25	0.17	0.12	0.06	0.00	5	4	1	0	0
687.5	0.10	0.07	0.02	0.02	0.00	2	1	0	0	0
712.5	0.06	0.04	0.02	0.00	0.00	1	0	0	0	0
737.5	0.02	0.01	0.00	0.00	0.00	0	0	0	0	0
762.5	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0
787.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
812.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
837.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
862.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
887.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
912.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
937.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
962.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
987.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1012.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1037.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1062.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1087.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1112.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1137.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1162.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1187.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1212.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1237.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 50keV Si 28 in SiO2 on GaAs

Depth nm	Ion distributions (Ions/um/ion) Cap thickness (nm) 10.	20.	40.	60.	80.	Damage distributions (keV/um/ion) 10.	20.	40.	60.	80.
2.0	2.85	1.62	0.28	0.37	0.28	356	361	348	335	331
6.0	4.10	2.37	0.57	0.30	0.47	380	351	370	331	347
10.0	3.95	3.40	1.15	0.65	0.60	444	374	369	373	369
14.0	5.43	4.82	1.55	1.08	1.23	502	382	380	376	365
18.0	6.70	6.45	2.70	1.92	1.30	522	432	388	387	394
22.0	7.75	6.03	3.80	2.15	2.87	558	517	397	382	401
26.0	8.62	8.52	5.40	3.53	2.87	587	568	405	392	392
30.0	10.65	10.60	7.65	3.42	3.65	582	559	425	409	419
34.0	11.37	11.10	9.45	4.72	5.07	546	551	439	404	407
38.0	12.15	11.90	11.35	5.43	4.97	527	536	442	415	410
42.0	12.43	12.62	10.18	7.28	6.12	517	528	533	414	403
46.0	13.43	13.18	14.45	8.45	6.57	469	522	547	405	415
50.0	12.93	13.70	13.50	10.75	8.65	450	493	517	404	386
54.0	13.00	12.57	15.10	15.15	7.72	406	446	495	418	398
58.0	12.23	13.73	15.30	16.10	9.55	385	406	468	438	386
62.0	14.23	14.15	15.07	14.20	10.48	348	380	431	440	373
66.0	11.68	13.60	13.65	16.23	12.32	298	327	388	421	358
70.0	11.62	12.70	13.62	15.68	12.82	247	288	336	409	326
74.0	10.20	11.98	13.07	17.62	16.58	198	241	293	363	335
78.0	8.57	10.18	12.93	14.70	20.52	173	194	244	326	304
82.0	8.87	8.45	10.68	14.00	16.45	147	164	209	274	314
86.0	7.75	7.87	10.30	11.57	15.45	128	129	177	232	283
90.0	5.87	6.95	9.77	12.07	14.02	97	114	149	194	232
94.0	5.05	6.18	7.00	10.35	12.77	73	90	114	161	202
98.0	4.93	4.78	6.78	8.00	11.48	63	69	94	130	163
102.0	3.60	4.43	5.28	7.47	9.35	47	50	71	97	133
106.0	3.03	3.40	4.37	6.32	7.97	39	41	58	78	100
110.0	2.87	2.37	3.78	5.18	6.20	28	29	45	62	81
114.0	2.03	1.87	2.65	4.35	5.22	20	23	31	42	59
118.0	1.48	1.98	2.20	2.80	4.28	13	17	19	30	45
122.0	1.15	1.17	1.58	2.00	3.58	11	11	15	21	32
126.0	0.82	1.08	1.50	1.52	2.58	7	7	12	15	25
130.0	0.62	0.65	1.17	1.40	2.05	3	4	8	11	16
134.0	0.45	0.62	0.75	1.20	1.42	2	2	6	9	10
138.0	0.22	0.15	0.43	0.65	0.82	1	2	3	4	6
142.0	0.17	0.12	0.35	0.50	0.47	1	1	1	2	4
146.0	0.05	0.17	0.22	0.30	0.43	0	0	1	1	2
150.0	0.00	0.05	0.10	0.10	0.22	0	0	0	0	1
154.0	0.03	0.05	0.05	0.15	0.20	0	0	0	1	1
158.0	0.05	0.03	0.08	0.10	0.12	0	0	0	0	0
162.0	0.00	0.00	0.00	0.08	0.08	0	0	0	0	0
166.0	0.00	0.03	0.00	0.00	0.00	0	0	0	0	0
170.0	0.00	0.00	0.00	0.00	0.03	0	0	0	0	0
174.0	0.00	0.00	0.03	0.00	0.00	0	0	0	0	0
178.0	0.00	0.00	0.00	0.00	0.03	0	0	0	0	0
182.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
186.0	0.00	0.00	0.00	0.03	0.00	0	0	0	0	0
190.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
194.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
198.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 75keV Si 28 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	40.	60.	80.	100.	125.	40.	60.	80.	100.	125.
3.0	0.38	0.13	0.07	0.13	0.18	314	305	291	301	291
9.0	1.03	0.22	0.33	0.17	0.23	325	311	314	331	326
15.0	1.45	0.47	0.38	0.47	0.38	335	329	343	326	326
21.0	2.22	1.00	0.58	0.78	0.80	339	355	327	338	338
27.0	2.78	1.48	0.90	0.93	1.02	365	339	333	350	355
33.0	3.55	1.87	1.32	1.13	1.13	391	353	362	342	358
39.0	4.60	3.15	1.70	1.63	1.68	427	360	350	386	360
45.0	5.87	4.25	2.20	2.25	2.15	505	370	383	371	384
51.0	6.95	5.33	2.67	2.83	2.67	550	401	388	373	361
57.0	8.00	7.50	4.07	2.85	2.93	541	432	390	389	386
63.0	8.18	6.82	5.25	3.95	3.55	545	511	389	380	399
69.0	9.72	8.45	7.30	4.93	4.40	527	519	393	380	376
75.0	9.48	9.42	9.68	5.77	5.00	508	519	414	396	383
81.0	10.52	10.27	9.82	6.72	6.20	452	495	460	387	385
87.0	10.70	10.87	10.47	7.98	5.95	418	462	487	379	368
93.0	10.35	10.85	11.65	11.00	7.25	376	430	470	382	357
99.0	9.50	10.85	12.30	13.28	7.67	334	394	451	405	354
105.0	8.87	10.07	11.88	12.10	8.43	294	342	395	420	327
111.0	8.38	9.88	10.15	11.50	9.47	257	309	343	383	309
117.0	8.12	8.98	10.07	11.90	11.58	207	258	301	345	300
123.0	6.77	8.98	9.62	11.05	14.00	166	212	249	299	303
129.0	6.02	7.05	8.10	9.97	12.50	129	168	201	251	295
135.0	5.37	5.78	7.70	8.50	11.47	109	124	166	190	257
141.0	3.82	5.52	6.50	7.85	10.07	77	109	128	160	200
147.0	3.60	4.32	5.57	6.37	7.65	62	78	97	122	166
153.0	2.77	4.02	3.97	5.67	6.95	42	57	76	94	120
159.0	2.10	2.57	3.85	3.95	5.52	30	39	55	65	89
165.0	1.42	2.12	2.38	2.93	4.78	18	27	35	43	64
171.0	1.27	1.55	2.08	2.47	3.58	14	19	26	29	49
177.0	0.98	0.87	1.38	1.78	2.42	10	10	17	24	31
183.0	0.48	0.57	0.92	1.35	1.50	5	7	9	17	21
189.0	0.38	0.58	0.72	0.92	1.48	3	5	6	8	15
195.0	0.27	0.32	0.38	0.60	0.77	2	2	4	5	7
201.0	0.20	0.17	0.32	0.35	0.52	1	2	2	3	4
207.0	0.12	0.18	0.12	0.25	0.43	0	1	1	1	3
213.0	0.03	0.10	0.12	0.12	0.13	0	0	1	1	1
219.0	0.03	0.07	0.12	0.13	0.10	0	0	0	0	0
225.0	0.02	0.03	0.02	0.02	0.03	0	0	0	0	0
231.0	0.00	0.00	0.00	0.03	0.02	0	0	0	0	0
237.0	0.00	0.00	0.00	0.02	0.03	0	0	0	0	0
243.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
249.0	0.00	0.00	0.00	0.00	0.02	0	0	0	0	0
255.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
261.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
267.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
273.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
279.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
285.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
291.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
297.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 100keV Si 28 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	20.	40.	80.	110.	140.	20.	40.	80.	110.	140.
4.0	0.91	0.46	0.08	0.05	0.11	286	291	271	275	275
12.0	1.29	0.91	0.21	0.21	0.10	310	296	293	296	282
20.0	1.49	1.23	0.36	0.34	0.26	362	298	301	293	300
28.0	2.54	1.37	0.55	0.34	0.46	455	307	316	307	298
36.0	2.99	2.50	0.90	0.74	0.62	489	341	311	325	321
44.0	4.29	2.91	1.31	0.68	0.84	518	447	324	338	332
52.0	5.16	3.96	1.61	1.29	1.10	516	491	342	332	336
60.0	5.16	4.74	2.47	1.58	1.29	533	533	357	347	339
68.0	5.84	5.74	3.56	2.21	1.70	532	547	369	362	352
76.0	6.39	6.89	4.94	2.58	2.03	525	547	406	365	358
84.0	6.56	6.55	5.24	3.51	2.70	509	523	497	362	366
92.0	7.78	6.85	6.47	4.56	3.20	474	507	525	380	368
100.0	7.50	8.06	7.76	5.68	3.35	442	486	517	381	369
108.0	7.56	7.60	8.41	7.41	4.65	405	448	517	431	357
116.0	6.95	7.99	9.19	8.21	5.32	355	405	480	486	377
124.0	7.11	7.66	8.59	9.14	6.89	311	351	441	481	372
132.0	6.93	7.22	8.11	9.55	9.11	267	306	371	443	371
140.0	6.18	7.43	8.65	9.35	10.30	224	259	342	397	387
148.0	5.54	6.11	8.35	9.36	9.68	183	215	297	346	387
156.0	5.14	5.87	7.12	8.31	9.76	144	173	240	289	355
164.0	4.57	4.94	6.34	7.95	9.36	122	133	190	256	286
172.0	4.00	4.39	5.46	6.81	7.79	92	104	150	203	258
180.0	2.94	3.15	4.96	5.45	7.55	65	78	119	148	206
188.0	2.15	2.75	3.85	4.85	6.47	44	55	86	116	164
196.0	1.70	2.28	2.91	4.21	5.51	29	41	57	85	123
204.0	1.52	1.69	2.36	2.84	4.26	24	25	45	60	90
212.0	0.86	0.98	1.85	2.46	3.06	11	17	29	40	61
220.0	0.60	0.71	1.20	1.81	2.71	9	11	17	26	43
228.0	0.47	0.60	0.94	1.26	1.66	5	8	11	19	26
236.0	0.29	0.35	0.45	0.74	1.26	3	4	6	12	17
244.0	0.09	0.22	0.31	0.68	0.74	1	2	3	7	10
252.0	0.08	0.24	0.24	0.37	0.47	0	2	2	4	5
260.0	0.06	0.09	0.08	0.17	0.37	0	0	0	1	4
268.0	0.04	0.04	0.03	0.08	0.15	0	0	0	1	1
276.0	0.01	0.00	0.06	0.10	0.08	0	0	0	1	0
284.0	0.00	0.00	0.00	0.06	0.04	0	0	0	0	0
292.0	0.00	0.01	0.01	0.01	0.03	0	0	0	0	0
300.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
308.0	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0
316.0	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0
324.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
332.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
340.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
348.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
356.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
364.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
372.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
380.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
388.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
396.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 150keV Si 28 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	40.	80.	100.	150.	200.	40.	80.	100.	150.	200.
6.0	0.47	0.08	0.04	0.03	0.05	246	243	229	225	240
18.0	0.70	0.17	0.07	0.07	0.07	253	245	244	230	238
30.0	1.01	0.52	0.27	0.11	0.14	274	264	260	248	257
42.0	1.17	0.67	0.62	0.17	0.22	346	269	276	262	258
54.0	1.69	1.23	0.59	0.32	0.30	422	284	262	273	271
66.0	2.29	1.37	0.78	0.52	0.44	449	303	276	289	280
78.0	2.66	1.91	1.49	0.59	0.52	461	361	292	288	276
90.0	3.28	2.40	2.31	0.81	0.70	488	445	325	299	314
102.0	3.68	3.16	2.72	1.17	0.96	516	479	415	312	295
114.0	4.22	3.80	3.25	1.68	1.05	518	505	486	319	307
126.0	4.65	4.67	4.14	2.55	1.60	498	507	519	341	326
138.0	5.28	5.25	4.82	3.27	1.60	471	501	506	371	325
150.0	5.14	5.39	5.12	4.37	2.16	448	507	490	417	338
162.0	5.87	5.53	5.45	5.03	2.72	407	452	469	483	355
174.0	5.62	5.82	5.72	6.08	3.67	365	408	441	493	348
186.0	5.66	5.67	6.28	6.53	5.06	306	369	404	470	344
198.0	5.04	5.53	6.44	6.66	6.59	266	323	359	432	383
210.0	4.57	5.67	5.55	6.65	7.03	215	267	303	383	445
222.0	4.44	5.01	5.74	6.93	7.57	177	220	249	332	409
234.0	3.90	4.80	4.54	6.20	7.44	131	174	191	275	356
246.0	3.12	3.86	4.35	5.48	6.57	99	133	159	227	293
258.0	2.46	2.93	3.45	4.83	6.36	73	97	115	162	237
270.0	1.86	2.47	2.81	3.79	5.62	49	68	82	115	184
282.0	1.53	1.91	2.23	2.86	4.48	31	44	57	83	131
294.0	0.82	1.34	1.80	2.30	3.45	18	28	36	52	88
306.0	0.54	0.81	1.22	1.78	2.30	10	18	23	35	58
318.0	0.48	0.52	0.54	1.08	1.89	7	10	12	20	38
330.0	0.25	0.36	0.42	0.60	1.37	3	4	6	11	23
342.0	0.13	0.23	0.25	0.38	0.64	1	2	3	7	10
354.0	0.07	0.11	0.17	0.17	0.33	0	1	2	2	6
366.0	0.02	0.06	0.12	0.18	0.24	0	0	0	1	2
378.0	0.01	0.01	0.01	0.06	0.09	0	0	0	0	0
390.0	0.00	0.00	0.01	0.02	0.02	0	0	0	0	0
402.0	0.00	0.01	0.00	0.01	0.03	0	0	0	0	0
414.0	0.00	0.00	0.00	0.02	0.00	0	0	0	0	0
426.0	0.00	0.00	0.00	0.00	0.01	0	0	0	0	0
438.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
450.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
462.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
474.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
486.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
498.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
510.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
522.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
534.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
546.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
558.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
570.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
582.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
594.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 200keV Si 28 in SiO2 on GaAs

Depth nm	Ion distributions (Ions/um/ion) Cap thickness (nm) 40.	100.	150.	200.	250.	Damage distributions (keV/um/ion) 40.	100.	150.	200.	250.
8.0	0.27	0.05	0.04	0.03	0.03	199	207	203	200	216
24.0	0.51	0.14	0.04	0.03	0.04	225	219	225	221	206
40.0	0.63	0.31	0.09	0.09	0.05	283	218	216	219	219
56.0	0.95	0.46	0.20	0.14	0.17	374	231	233	238	231
72.0	1.40	0.73	0.36	0.12	0.19	408	256	239	248	243
88.0	1.69	1.04	0.47	0.24	0.30	442	261	245	250	247
104.0	2.15	1.35	0.78	0.39	0.33	459	348	266	249	259
120.0	2.53	1.89	1.09	0.59	0.52	470	438	272	257	253
136.0	2.97	2.44	1.47	0.77	0.57	492	468	307	284	289
152.0	3.50	2.73	1.91	1.08	0.73	485	486	403	287	288
168.0	3.39	3.53	2.89	1.64	0.95	457	513	435	308	282
184.0	3.65	3.95	3.59	2.15	1.24	445	487	486	324	306
200.0	4.52	4.18	3.79	3.16	1.86	432	464	489	414	320
216.0	4.94	4.46	4.19	4.14	2.12	392	437	466	470	320
232.0	4.79	4.55	4.53	4.64	3.29	350	410	453	475	342
248.0	4.44	4.73	5.13	4.91	4.58	291	346	412	466	390
264.0	4.07	4.52	5.22	5.25	5.12	231	298	372	423	443
280.0	3.75	4.65	4.91	5.56	5.74	181	253	295	371	432
296.0	3.11	4.14	4.30	5.69	6.40	137	206	252	324	390
312.0	2.48	3.49	4.34	4.89	5.36	97	147	209	259	328
328.0	2.15	2.75	3.69	4.36	5.18	72	106	152	198	257
344.0	1.42	2.09	2.99	3.59	4.66	45	71	112	145	201
360.0	1.04	1.66	2.34	2.97	3.79	28	47	72	100	147
376.0	0.66	1.08	1.61	2.29	3.53	14	26	42	68	108
392.0	0.45	0.64	0.99	1.64	2.28	7	14	25	44	65
408.0	0.16	0.39	0.68	0.96	1.39	3	7	15	22	36
424.0	0.12	0.24	0.46	0.54	1.04	1	4	8	10	20
440.0	0.06	0.12	0.22	0.29	0.47	0	2	4	4	9
456.0	0.01	0.07	0.09	0.21	0.31	0	1	1	3	4
472.0	0.01	0.03	0.06	0.09	0.14	0	0	0	1	1
488.0	0.01	0.01	0.01	0.03	0.08	0	0	0	0	1
504.0	0.00	0.01	0.01	0.00	0.03	0	0	0	0	0
520.0	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0
536.0	0.00	0.00	0.00	0.00	0.01	0	0	0	0	0
552.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
568.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
584.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
600.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
616.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
632.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
648.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
664.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
680.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
696.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
712.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
728.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
744.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
760.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
776.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
792.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 300keV Si 28 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	40.	100.	200.	300.	400.	40.	100.	200.	300.	400.
10.0	0.15	0.06	0.00	0.01	0.01	172	161	164	164	160
30.0	0.24	0.18	0.04	0.03	0.02	175	168	162	176	174
50.0	0.34	0.24	0.02	0.05	0.05	284	196	163	184	173
70.0	0.45	0.39	0.05	0.02	0.04	304	199	183	166	189
90.0	0.64	0.41	0.09	0.07	0.08	318	188	181	194	178
110.0	1.04	0.49	0.17	0.05	0.07	355	306	202	188	205
130.0	1.13	0.76	0.25	0.12	0.15	378	342	196	200	200
150.0	1.18	0.84	0.46	0.22	0.16	401	362	223	216	216
170.0	1.38	1.30	0.79	0.21	0.26	420	389	236	212	207
190.0	1.70	1.39	0.81	0.28	0.28	432	405	254	219	230
210.0	2.09	1.66	1.16	0.34	0.25	442	432	364	227	219
230.0	2.25	2.26	1.43	0.62	0.34	441	437	403	251	233
250.0	2.92	2.46	2.04	0.81	0.50	442	445	421	270	249
270.0	2.96	2.61	2.13	1.23	0.60	430	448	455	270	252
290.0	3.24	3.08	2.56	1.78	0.78	401	425	463	299	263
310.0	3.28	3.19	2.81	2.31	1.05	373	416	465	431	277
330.0	3.31	3.47	3.29	2.84	1.01	340	386	435	451	295
350.0	3.55	3.35	3.79	3.41	1.58	296	349	417	487	299
370.0	3.26	3.32	3.65	3.64	1.99	247	296	384	437	292
390.0	2.82	3.68	4.14	3.81	3.44	205	266	357	428	323
410.0	2.64	3.28	3.72	4.16	3.89	161	214	292	386	440
430.0	2.66	3.19	3.46	4.05	4.52	130	165	231	334	411
450.0	1.94	2.26	3.01	4.28	4.89	95	118	191	289	391
470.0	1.61	1.81	2.71	3.64	4.65	61	88	140	224	328
490.0	1.07	1.57	2.26	3.19	4.18	39	59	104	169	273
510.0	0.76	1.11	1.88	2.90	3.69	23	38	66	124	215
530.0	0.46	0.74	1.30	2.08	3.54	12	20	46	78	152
550.0	0.27	0.39	0.80	1.46	2.66	5	10	28	52	107
570.0	0.18	0.19	0.55	1.08	2.16	3	5	12	33	68
590.0	0.04	0.15	0.35	0.64	1.41	0	2	7	17	42
610.0	0.02	0.05	0.15	0.38	0.85	0	1	2	8	24
630.0	0.01	0.02	0.04	0.14	0.50	0	0	1	3	9
650.0	0.00	0.01	0.05	0.11	0.22	0	0	0	1	4
670.0	0.01	0.00	0.02	0.04	0.11	0	0	0	0	2
690.0	0.00	0.00	0.01	0.01	0.05	0	0	0	0	0
710.0	0.00	0.00	0.00	0.00	0.02	0	0	0	0	0
730.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
750.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
770.0	0.00	0.00	0.00	0.00	0.01	0	0	0	0	0
790.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
810.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
830.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
850.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
870.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
890.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
910.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
930.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
950.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
970.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
990.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 400keV Si 28 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	100.	200.	300.	400.	500.	100.	200.	300.	400.	500.
12.5	0.04	0.01	0.00	0.01	0.01	136	141	135	142	149
37.5	0.07	0.05	0.02	0.00	0.02	154	141	139	138	157
62.5	0.14	0.07	0.01	0.02	0.02	149	152	162	148	147
87.5	0.21	0.08	0.02	0.05	0.02	164	157	159	156	148
112.5	0.33	0.09	0.04	0.02	0.06	260	164	153	166	150
137.5	0.41	0.19	0.08	0.04	0.04	266	173	165	168	158
162.5	0.64	0.28	0.10	0.09	0.04	307	168	198	166	171
187.5	0.67	0.36	0.12	0.11	0.07	340	192	171	170	175
212.5	0.78	0.51	0.25	0.10	0.14	343	285	196	172	179
237.5	1.11	0.74	0.38	0.18	0.10	376	347	195	191	184
262.5	1.27	0.85	0.39	0.12	0.19	387	342	207	194	188
287.5	1.48	1.13	0.66	0.25	0.22	404	360	218	210	189
312.5	1.63	1.31	0.89	0.37	0.26	423	400	352	220	215
337.5	1.74	1.61	1.27	0.51	0.24	400	409	391	230	215
362.5	2.31	2.01	1.66	0.84	0.39	406	431	418	238	221
387.5	2.74	2.25	2.03	1.17	0.48	412	433	422	260	254
412.5	2.71	2.49	2.18	1.32	0.68	381	419	430	391	266
437.5	2.64	3.05	2.60	2.22	0.89	346	415	437	435	272
462.5	2.94	2.95	2.70	2.69	1.52	305	373	426	452	272
487.5	2.84	3.01	2.90	2.94	2.06	263	320	381	432	311
512.5	2.68	3.00	3.03	3.00	2.98	219	286	351	419	421
537.5	2.49	2.87	3.29	3.63	3.37	182	236	304	396	430
562.5	2.23	2.59	3.16	3.69	3.74	142	191	258	338	413
587.5	1.85	2.38	3.04	3.38	4.01	97	147	206	283	368
612.5	1.29	2.22	2.57	3.26	3.69	61	106	162	223	304
637.5	0.95	1.36	2.18	2.76	3.61	41	69	109	169	253
662.5	0.73	1.06	1.69	2.44	3.13	23	41	73	127	187
687.5	0.55	0.66	1.18	1.83	2.60	13	20	44	81	135
712.5	0.23	0.44	0.63	1.38	2.03	5	12	21	47	89
737.5	0.09	0.22	0.50	0.75	1.57	1	6	12	23	58
762.5	0.02	0.09	0.27	0.46	0.92	0	1	6	13	27
787.5	0.01	0.04	0.11	0.17	0.47	0	0	2	4	14
812.5	0.00	0.01	0.02	0.12	0.30	0	0	0	2	5
837.5	0.00	0.01	0.01	0.03	0.10	0	0	0	0	1
862.5	0.00	0.00	0.00	0.01	0.04	0	0	0	0	0
887.5	0.00	0.00	0.00	0.00	0.01	0	0	0	0	0
912.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
937.5	0.00	0.00	0.00	0.01	0.01	0	0	0	0	0
962.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
987.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1012.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1037.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1062.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1087.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1112.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1137.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1162.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1187.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1212.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
1237.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 100keV Se 79 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	10.	20.	30.	50.	70.	10.	20.	30.	50.	70.
1.5	0.30	0.00	0.00	0.00	0.00	1750	1681	1683	1702	1714
4.5	0.30	0.03	0.00	0.00	0.00	1781	1823	1802	1787	1788
7.5	1.47	0.17	0.03	0.00	0.10	1799	1810	1770	1811	1792
10.5	2.73	0.47	0.20	0.17	0.20	1753	1841	1772	1838	1835
13.5	5.90	1.17	0.57	0.57	1.13	1750	1828	1822	1846	1879
16.5	8.53	2.97	1.47	2.20	2.17	1734	1785	1836	1850	1840
19.5	11.73	7.67	3.63	3.60	3.17	1755	1853	1839	1794	1811
22.5	13.43	13.43	5.77	4.90	5.50	1713	1716	1819	1779	1771
25.5	15.17	16.93	9.07	8.80	8.27	1675	1682	1766	1751	1759
28.5	15.97	20.53	15.73	11.00	11.20	1642	1701	1687	1681	1667
31.5	18.30	21.83	23.37	13.87	13.77	1540	1527	1502	1599	1582
34.5	19.87	21.53	25.53	17.47	17.57	1422	1433	1431	1524	1507
37.5	19.20	20.60	27.30	19.93	21.73	1251	1280	1334	1362	1397
40.5	19.20	22.63	26.70	22.57	21.83	1169	1185	1231	1278	1252
43.5	18.90	23.27	26.40	24.07	23.83	1098	1039	1068	1099	1098
46.5	18.57	19.93	23.63	26.50	26.03	957	919	915	965	959
49.5	19.80	18.70	20.47	33.77	24.30	879	800	788	809	833
52.5	16.60	17.90	20.07	30.33	23.17	743	693	668	592	683
55.5	15.67	15.77	15.83	22.57	22.90	605	559	578	516	564
58.5	14.07	13.30	15.60	19.20	21.13	528	481	482	431	433
61.5	12.40	13.23	13.00	15.47	17.93	438	404	380	355	345
64.5	10.17	10.80	11.47	13.87	15.13	339	339	322	260	270
67.5	9.27	9.60	10.50	9.70	14.13	294	282	257	201	184
70.5	8.63	7.50	7.73	7.30	13.10	252	217	190	161	139
73.5	6.83	6.80	6.80	6.20	7.93	207	188	158	124	95
76.5	6.57	5.50	5.77	4.60	5.30	161	148	126	95	66
79.5	4.97	4.57	4.23	4.03	3.90	116	107	79	68	48
82.5	4.27	4.03	3.07	3.13	2.70	101	82	60	46	33
85.5	3.13	3.30	2.30	2.47	1.63	70	66	44	37	21
88.5	2.30	2.43	1.77	1.70	0.93	56	53	34	24	14
91.5	2.53	1.70	1.43	1.00	0.90	39	29	22	14	15
94.5	1.23	1.23	1.00	0.47	0.63	27	23	21	9	7
97.5	1.07	1.07	0.90	0.57	0.50	22	18	14	6	5
100.5	1.47	0.67	0.70	0.33	0.30	21	16	8	4	2
103.5	0.73	0.73	0.40	0.30	0.17	15	10	7	5	0
106.5	0.53	0.60	0.33	0.20	0.03	8	5	4	1	0
109.5	0.43	0.27	0.20	0.27	0.07	7	2	3	2	0
112.5	0.37	0.20	0.10	0.17	0.00	6	2	1	1	0
115.5	0.23	0.03	0.17	0.03	0.00	3	1	1	0	0
118.5	0.13	0.07	0.07	0.00	0.00	1	1	0	0	0
121.5	0.10	0.13	0.00	0.03	0.00	1	0	0	0	0
124.5	0.03	0.00	0.00	0.00	0.03	0	0	0	0	0
127.5	0.07	0.03	0.00	0.00	0.00	0	0	0	0	0
130.5	0.03	0.00	0.00	0.00	0.00	0	0	0	0	0
133.5	0.03	0.00	0.00	0.00	0.00	0	0	0	0	0
136.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
139.5	0.03	0.00	0.00	0.00	0.00	0	0	0	0	0
142.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
145.5	0.00	0.00	0.03	0.00	0.00	0	0	0	0	0
148.5	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 150keV Se 79 in Si3N4 on GaAs

Depth nm	Ion distributions (Ions/um/ion) Cap thickness (nm) 20.	40.	60.	80.	100.	Damage distributions (keV/um/ion) 20.	40.	60.	80.	100.
2.0	0.00	0.00	0.00	0.00	0.00	1643	1649	1631	1648	1649
6.0	0.00	0.00	0.00	0.00	0.00	1720	1712	1751	1726	1672
10.0	0.08	0.00	0.03	0.00	0.00	1780	1789	1739	1775	1759
14.0	0.52	0.17	0.17	0.15	0.12	1804	1724	1713	1831	1741
18.0	1.50	0.50	0.52	0.40	0.40	1770	1831	1853	1755	1847
22.0	3.45	1.12	1.05	1.25	0.75	1758	1829	1831	1822	1797
26.0	6.10	1.75	1.65	1.80	1.48	1832	1784	1793	1782	1852
30.0	9.15	2.97	2.72	2.83	2.70	1859	1791	1849	1816	1812
34.0	10.93	5.22	3.95	4.43	4.37	1808	1790	1742	1812	1814
38.0	11.73	7.87	5.62	5.85	6.53	1762	1763	1759	1761	1798
42.0	13.00	14.52	8.50	7.43	8.99	1743	1697	1719	1731	1664
46.0	13.70	15.87	10.07	10.25	9.10	1572	1623	1643	1659	1605
50.0	15.43	17.55	11.90	12.30	12.05	1504	1572	1586	1560	1528
54.0	15.07	17.60	14.23	14.60	13.20	1378	1451	1450	1474	1468
58.0	14.15	19.25	18.50	14.70	15.23	1272	1365	1361	1338	1339
62.0	14.43	18.27	24.75	17.27	16.80	1144	1153	1152	1213	1231
66.0	12.77	17.55	20.75	18.15	17.73	1024	995	1015	1079	1089
70.0	13.52	14.93	20.23	18.30	18.70	871	891	902	909	948
74.0	12.12	13.35	16.55	18.58	16.75	792	754	787	765	787
78.0	11.55	13.10	16.00	18.35	17.42	686	657	639	656	670
82.0	10.50	10.77	13.45	19.50	16.27	612	562	530	468	547
86.0	10.18	10.20	11.20	14.02	14.25	486	437	442	402	439
90.0	9.12	8.82	10.37	11.05	11.70	398	361	361	334	340
94.0	6.95	7.20	8.23	10.57	11.15	320	302	252	273	256
98.0	6.18	6.18	6.28	7.10	9.62	259	239	207	198	186
102.0	5.03	5.10	4.93	5.10	8.15	209	197	161	144	130
106.0	4.68	4.43	4.10	4.30	5.72	186	147	126	111	92
110.0	3.75	4.10	3.60	2.87	3.65	125	118	106	69	68
114.0	3.22	2.62	2.80	2.55	2.12	106	91	74	63	47
118.0	2.60	2.05	1.83	1.77	1.65	82	54	49	41	32
122.0	2.03	1.62	1.85	1.37	1.17	63	50	39	33	20
126.0	1.85	1.35	1.15	0.95	0.65	43	33	27	20	12
130.0	1.17	0.95	0.77	0.77	0.45	37	29	20	12	10
134.0	0.95	0.70	0.70	0.55	0.45	27	16	16	7	5
138.0	0.73	0.77	0.45	0.28	0.17	17	15	5	6	2
142.0	0.45	0.43	0.37	0.28	0.10	14	9	6	3	2
146.0	0.43	0.30	0.10	0.15	0.22	9	8	3	2	2
150.0	0.25	0.25	0.17	0.00	0.05	6	4	3	0	1
154.0	0.15	0.17	0.12	0.05	0.03	5	3	2	0	0
158.0	0.12	0.15	0.05	0.03	0.05	4	2	2	1	0
162.0	0.20	0.05	0.10	0.05	0.00	3	0	0	0	0
166.0	0.17	0.05	0.10	0.03	0.05	0	1	1	0	0
170.0	0.08	0.03	0.03	0.00	0.00	1	0	0	0	0
174.0	0.03	0.05	0.03	0.00	0.00	0	0	0	0	0
178.0	0.00	0.00	0.03	0.00	0.00	0	0	0	0	0
182.0	0.00	0.00	0.00	0.03	0.00	0	0	0	0	0
186.0	0.00	0.03	0.00	0.00	0.00	0	0	0	0	0
190.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
194.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
198.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 200keV Se 79 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion) Cap thickness (nm)				
nm	25.	50.	75.	100.	125.	25.	50.	75.	100.	125.
3.0	0.00	0.00	0.00	0.00	0.00	1611	1614	1524	1600	1595
9.0	0.03	0.00	0.00	0.00	0.00	1645	1618	1648	1676	1634
15.0	0.23	0.02	0.02	0.05	0.02	1705	1704	1724	1709	1683
21.0	0.67	0.07	0.15	0.18	0.10	1719	1728	1755	1772	1657
27.0	2.13	0.48	0.60	0.47	0.52	1750	1758	1785	1770	1738
33.0	4.80	1.30	1.18	1.13	1.23	1782	1799	1751	1771	1775
39.0	5.83	2.13	2.05	2.28	2.07	1837	1801	1773	1783	1828
45.0	7.78	3.57	3.25	3.55	3.08	1843	1792	1785	1817	1787
51.0	9.18	9.17	5.30	4.87	4.78	1744	1689	1768	1771	1762
57.0	9.88	11.65	5.92	6.53	6.78	1732	1662	1726	1694	1718
63.0	10.62	12.85	8.92	8.73	8.08	1618	1658	1594	1572	1614
69.0	11.52	13.58	10.62	10.20	9.95	1451	1528	1524	1539	1540
75.0	11.43	13.07	16.57	11.78	12.12	1352	1369	1403	1370	1428
81.0	11.08	12.97	17.53	12.62	12.90	1178	1215	1238	1265	1231
87.0	10.83	12.55	15.97	13.57	14.27	1027	1067	1061	1068	1102
93.0	9.72	11.78	13.95	14.55	13.42	896	919	918	941	945
99.0	9.73	11.17	12.72	17.15	13.85	762	768	768	742	774
105.0	9.25	10.00	10.62	14.93	12.28	668	636	598	598	616
111.0	8.20	7.60	9.60	11.72	11.97	519	480	473	467	475
117.0	6.55	6.93	7.25	8.63	9.52	408	405	357	331	366
123.0	5.50	5.98	5.98	6.75	9.38	336	312	283	267	269
129.0	4.82	5.07	5.13	4.55	7.53	254	212	217	174	185
135.0	3.87	3.70	3.55	3.78	4.57	200	173	148	125	118
141.0	3.20	2.88	2.57	2.67	3.03	154	121	107	95	75
147.0	2.68	2.32	2.18	1.87	2.02	116	90	71	63	47
153.0	2.20	1.58	1.82	1.28	1.17	81	66	52	41	32
159.0	1.12	1.30	0.93	1.00	0.87	55	41	36	24	20
165.0	1.17	0.68	0.75	0.67	0.43	41	31	22	18	9
171.0	0.72	0.72	0.47	0.42	0.27	24	22	16	11	6
177.0	0.63	0.72	0.32	0.28	0.25	19	17	11	6	5
183.0	0.45	0.37	0.35	0.20	0.07	15	7	6	4	1
189.0	0.30	0.20	0.13	0.13	0.08	7	4	3	2	1
195.0	0.22	0.05	0.08	0.03	0.02	5	3	2	1	0
201.0	0.15	0.10	0.08	0.02	0.02	2	1	1	0	0
207.0	0.08	0.05	0.05	0.07	0.02	1	0	0	0	0
213.0	0.02	0.05	0.02	0.00	0.00	0	0	0	0	0
219.0	0.05	0.02	0.03	0.00	0.02	0	0	0	0	0
225.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
231.0	0.02	0.00	0.00	0.00	0.00	0	0	0	0	0
237.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
243.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
249.0	0.00	0.00	0.02	0.00	0.00	0	0	0	0	0
255.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
261.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
267.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
273.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
279.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
285.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
291.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
297.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 300keV Se 79 in Si3N4 on GaAs

Depth nm	Ion distributions (Ions/um/ion) Cap thickness (nm) 30.	60.	100.	125.	175.	Damage distributions (keV/um/ion) 30.	60.	100.	125.	175.
4.0	0.01	0.00	0.00	0.00	0.00	1472	1474	1540	1507	1524
12.0	0.05	0.00	0.00	0.00	0.01	1541	1560	1508	1602	1528
20.0	0.09	0.04	0.05	0.00	0.01	1577	1568	1572	1564	1572
28.0	0.46	0.10	0.14	0.11	0.04	1649	1601	1595	1622	1605
36.0	1.59	0.21	0.17	0.35	0.31	1648	1634	1629	1718	1651
44.0	2.56	0.61	0.60	0.60	0.35	1794	1704	1665	1663	1650
52.0	3.22	1.31	1.10	0.91	0.96	1754	1654	1716	1655	1724
60.0	3.67	2.71	1.64	1.55	1.52	1790	1761	1680	1671	1715
68.0	5.51	4.66	2.45	2.45	2.35	1786	1829	1754	1716	1699
76.0	6.06	6.24	3.00	3.45	3.01	1794	1789	1721	1701	1691
84.0	6.64	7.00	4.47	4.09	4.41	1685	1754	1655	1656	1694
92.0	7.34	8.15	5.54	5.03	5.35	1663	1658	1623	1648	1636
100.0	7.56	9.02	9.57	5.75	6.12	1555	1598	1513	1552	1563
108.0	7.14	9.12	10.44	7.91	8.05	1369	1450	1458	1489	1481
116.0	8.00	8.62	10.19	9.51	8.54	1281	1319	1353	1379	1311
124.0	7.62	8.86	10.96	12.77	9.06	1183	1202	1230	1206	1239
132.0	7.59	7.95	9.87	12.05	10.23	1056	984	1073	1064	1065
140.0	7.47	7.54	9.14	10.59	9.79	879	841	888	905	909
148.0	6.31	6.65	7.91	10.10	9.39	738	708	757	759	751
156.0	5.59	6.57	7.41	7.99	8.56	643	617	618	601	626
164.0	5.41	5.56	6.70	6.91	7.94	514	526	510	484	484
172.0	4.30	5.14	5.40	5.35	8.09	398	387	398	337	363
180.0	4.22	3.81	4.35	4.53	6.95	346	325	298	277	280
188.0	3.65	3.50	3.66	3.44	4.59	281	250	226	195	181
196.0	3.17	2.66	2.49	2.59	3.09	209	196	162	141	125
204.0	2.81	2.44	2.28	2.05	2.04	161	146	119	98	83
212.0	1.85	1.80	1.90	1.59	1.41	116	104	87	72	62
220.0	1.41	1.41	1.06	1.05	1.12	82	64	53	51	38
228.0	0.93	1.04	0.79	0.81	0.61	57	46	38	32	24
236.0	0.99	0.69	0.60	0.41	0.41	46	29	28	20	17
244.0	0.59	0.50	0.40	0.35	0.34	26	21	17	13	8
252.0	0.32	0.35	0.34	0.20	0.14	14	15	10	9	3
260.0	0.30	0.24	0.10	0.16	0.06	12	10	3	7	3
268.0	0.21	0.19	0.10	0.17	0.06	9	5	3	4	1
276.0	0.17	0.17	0.04	0.08	0.01	5	4	2	1	1
284.0	0.05	0.04	0.04	0.01	0.05	1	1	0	1	0
292.0	0.03	0.06	0.05	0.01	0.00	0	0	2	0	0
300.0	0.03	0.00	0.04	0.04	0.01	0	0	0	0	0
308.0	0.03	0.00	0.00	0.01	0.00	0	0	0	0	0
316.0	0.01	0.00	0.01	0.01	0.00	0	0	0	0	0
324.0	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0
332.0	0.01	0.01	0.00	0.00	0.00	0	0	0	0	0
340.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
348.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
356.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
364.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
372.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
380.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
388.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
396.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 400keV Se 79 in Si3N4 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	50.	100.	150.	200.	250.	50.	100.	150.	200.	250.
5.0	0.00	0.00	0.00	0.00	0.00	1404	1336	1403	1363	1324
15.0	0.01	0.00	0.00	0.01	0.00	1435	1426	1412	1403	1437
25.0	0.05	0.01	0.00	0.01	0.01	1450	1428	1475	1393	1410
35.0	0.11	0.06	0.03	0.03	0.05	1490	1464	1523	1491	1473
45.0	0.27	0.14	0.17	0.11	0.17	1565	1478	1505	1507	1555
55.0	1.23	0.33	0.33	0.24	0.23	1625	1561	1585	1522	1540
65.0	2.02	0.50	0.61	0.67	0.46	1690	1519	1564	1544	1536
75.0	2.57	0.74	0.93	0.68	0.89	1690	1637	1607	1632	1585
85.0	3.15	1.41	1.19	1.26	1.20	1809	1637	1620	1637	1623
95.0	4.31	2.30	1.80	1.58	1.69	1778	1648	1672	1660	1647
105.0	4.39	4.40	2.43	2.35	2.32	1759	1701	1648	1650	1648
115.0	5.21	5.79	3.39	3.15	3.10	1642	1789	1661	1672	1665
125.0	5.46	6.20	4.47	4.06	4.17	1627	1656	1576	1612	1601
135.0	6.16	7.12	4.50	4.74	4.84	1558	1569	1528	1530	1535
145.0	5.93	7.10	6.73	5.84	5.75	1418	1502	1455	1444	1467
155.0	6.18	7.26	9.65	6.02	6.42	1299	1363	1373	1403	1369
165.0	6.18	6.65	8.87	7.74	7.38	1111	1201	1238	1252	1233
175.0	5.82	6.59	8.31	7.87	7.34	987	1080	1098	1105	1123
185.0	5.59	6.75	8.06	7.56	8.17	922	921	968	961	967
195.0	5.41	5.93	7.26	8.51	7.40	765	779	814	825	824
205.0	4.80	5.40	6.45	9.00	6.70	643	643	657	651	669
215.0	4.39	4.95	5.51	7.33	6.63	557	559	514	531	542
225.0	4.25	4.25	4.85	5.65	5.81	435	448	393	381	415
235.0	3.38	3.67	3.57	4.46	5.21	372	353	310	301	309
245.0	2.67	2.88	2.59	3.32	4.57	291	260	224	230	215
255.0	2.25	2.56	2.33	2.20	3.90	213	211	165	139	141
265.0	2.05	1.85	1.82	1.66	2.11	175	150	111	103	91
275.0	1.47	1.75	1.16	1.37	1.36	128	98	75	77	58
285.0	1.38	0.95	0.96	0.93	0.90	93	75	59	45	44
295.0	1.03	0.79	0.58	0.59	0.51	70	46	33	30	19
305.0	0.69	0.60	0.45	0.35	0.30	44	32	28	17	9
315.0	0.56	0.48	0.38	0.30	0.13	30	23	19	11	6
325.0	0.41	0.24	0.22	0.16	0.10	17	9	8	7	5
335.0	0.20	0.14	0.14	0.11	0.10	12	5	7	3	2
345.0	0.15	0.07	0.07	0.06	0.03	7	2	4	2	1
355.0	0.12	0.04	0.09	0.06	0.04	4	1	2	1	0
365.0	0.06	0.00	0.03	0.00	0.01	2	1	1	0	0
375.0	0.03	0.06	0.03	0.01	0.00	1	1	1	0	0
385.0	0.03	0.02	0.02	0.00	0.00	0	0	0	0	0
395.0	0.01	0.01	0.01	0.00	0.00	0	0	0	0	0
405.0	0.00	0.01	0.01	0.00	0.00	0	0	0	0	0
415.0	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0
425.0	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0
435.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
445.0	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0
455.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
465.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
475.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
485.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
495.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 100keV Se 79 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	10.	20.	30.	50.	70.	10.	20.	30.	50.	70.
1.5	0.17	0.00	0.00	0.00	0.00	1117	1176	1167	1094	1142
4.5	0.27	0.03	0.03	0.00	0.00	1223	1191	1169	1200	1178
7.5	0.53	0.10	0.00	0.00	0.00	1216	1241	1221	1191	1207
10.5	1.77	0.33	0.03	0.00	0.07	1583	1195	1191	1269	1206
13.5	4.67	0.47	0.03	0.03	0.07	1819	1250	1259	1235	1257
16.5	7.33	0.87	0.33	0.30	0.13	1810	1204	1184	1193	1245
19.5	9.77	2.10	0.47	0.33	0.53	1769	1368	1251	1225	1214
22.5	11.40	7.17	1.03	0.83	0.87	1840	1693	1232	1278	1262
25.5	14.57	10.03	1.97	1.40	1.13	1762	1741	1252	1254	1228
28.5	15.07	12.77	4.53	2.33	1.60	1681	1744	1247	1226	1217
31.5	16.73	16.03	12.13	2.57	2.97	1576	1709	1704	1219	1196
34.5	17.47	15.83	15.37	4.33	4.40	1498	1572	1636	1218	1194
37.5	18.83	20.10	19.07	5.23	4.70	1403	1579	1708	1155	1153
40.5	19.50	21.70	22.13	6.20	7.20	1353	1450	1606	1158	1163
43.5	18.70	20.63	23.13	9.00	8.40	1193	1350	1476	1100	1153
46.5	17.50	19.47	22.83	11.10	8.80	1051	1237	1324	1074	1067
49.5	17.93	20.13	21.53	19.90	10.67	972	1098	1194	1159	1005
52.5	17.50	19.70	20.57	28.40	12.20	873	1004	1086	1359	996
55.5	16.30	18.50	20.83	27.23	13.97	737	810	961	1311	941
58.5	15.63	17.30	19.50	30.33	13.90	633	777	878	1115	873
61.5	14.00	16.30	18.87	26.23	16.07	551	622	712	1021	805
64.5	12.47	14.17	16.00	23.60	15.67	438	559	602	858	758
67.5	10.53	13.30	14.40	20.10	18.17	380	448	528	724	718
70.5	9.53	12.10	13.63	17.53	31.40	287	374	442	600	783
73.5	8.80	8.63	11.50	16.13	29.07	253	279	359	536	750
76.5	7.10	8.37	8.87	15.00	24.37	209	243	293	424	623
79.5	5.77	7.40	8.20	13.23	21.80	145	207	241	353	519
82.5	4.73	5.33	7.33	10.03	17.57	110	157	203	273	404
85.5	4.00	5.00	5.97	9.37	13.47	88	117	161	215	341
88.5	3.00	4.60	4.80	7.67	12.07	73	94	112	151	288
91.5	2.83	3.73	4.10	5.03	9.43	69	83	105	132	197
94.5	2.10	2.73	3.60	4.23	8.30	49	52	67	94	142
97.5	1.80	2.13	2.90	3.30	5.83	38	48	51	73	118
100.5	1.37	1.47	1.70	2.50	4.53	23	33	36	62	94
103.5	1.27	1.40	1.60	2.70	3.80	14	26	29	52	73
106.5	0.60	0.93	1.10	2.13	3.07	11	16	17	37	49
109.5	0.33	0.63	0.87	1.57	1.83	6	11	14	23	32
112.5	0.33	0.63	0.53	1.00	1.47	7	10	12	16	24
115.5	0.30	0.23	0.43	0.77	1.30	2	5	6	9	22
118.5	0.27	0.30	0.43	0.60	0.83	2	5	6	7	11
121.5	0.03	0.27	0.23	0.33	0.53	1	3	4	2	7
124.5	0.00	0.07	0.17	0.20	0.57	0	1	2	3	4
127.5	0.07	0.07	0.20	0.13	0.20	1	1	2	3	2
130.5	0.13	0.03	0.10	0.30	0.17	1	1	2	1	2
133.5	0.03	0.10	0.27	0.03	0.03	1	0	1	0	0
136.5	0.03	0.10	0.00	0.00	0.07	0	0	0	0	0
139.5	0.03	0.00	0.00	0.00	0.10	0	0	0	0	0
142.5	0.00	0.00	0.00	0.03	0.00	0	0	0	0	0
145.5	0.00	0.00	0.00	0.00	0.03	0	0	0	0	0
148.5	0.00	0.03	0.00	0.03	0.00	0	0	0	0	0

Table IV: 150keV Se 79 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	20.	40.	60.	80.	100.	20.	40.	60.	80.	100.
2.0	0.05	0.00	0.00	0.00	0.00	1125	1087	1056	1116	1163
6.0	0.05	0.00	0.00	0.00	0.00	1130	1112	1119	1211	1157
10.0	0.15	0.00	0.00	0.00	0.00	1190	1191	1169	1196	1195
14.0	0.25	0.05	0.00	0.03	0.00	1158	1185	1156	1174	1151
18.0	0.32	0.05	0.03	0.03	0.03	1200	1162	1147	1167	1178
22.0	2.45	0.15	0.08	0.12	0.22	1730	1148	1187	1176	1204
26.0	4.43	0.17	0.28	0.28	0.22	1782	1186	1199	1149	1180
30.0	5.90	0.68	0.35	0.55	0.50	1780	1225	1237	1266	1221
34.0	7.25	1.08	0.73	0.65	0.68	1805	1217	1207	1235	1215
38.0	9.65	2.08	1.05	1.12	1.20	1812	1267	1226	1258	1264
42.0	10.25	6.28	1.58	1.37	1.40	1781	1700	1207	1200	1243
46.0	10.98	8.50	1.83	2.28	2.53	1697	1779	1207	1213	1223
50.0	12.45	11.40	2.92	2.53	3.05	1669	1732	1235	1245	1224
54.0	12.73	13.73	4.25	3.22	3.33	1580	1780	1210	1183	1192
58.0	14.55	14.35	6.20	4.37	4.20	1539	1683	1234	1190	1179
62.0	14.02	15.90	14.62	5.70	5.03	1357	1548	1663	1129	1153
66.0	13.87	15.62	15.82	6.32	6.62	1208	1461	1591	1144	1121
70.0	13.95	15.35	17.67	7.22	6.82	1090	1364	1503	1114	1102
74.0	13.98	15.37	16.60	8.48	7.30	988	1152	1413	1076	1032
78.0	12.35	14.43	16.23	11.48	9.40	884	1075	1311	1026	998
82.0	11.85	13.75	17.85	23.17	9.85	761	925	1244	1314	964
86.0	11.55	13.70	16.98	21.40	10.73	644	851	1024	1257	867
90.0	9.68	12.50	15.62	19.35	10.85	543	711	924	1121	883
94.0	9.45	11.35	14.80	17.42	10.93	494	597	826	974	792
98.0	7.60	9.45	13.07	18.05	14.18	416	510	669	837	746
102.0	6.90	9.32	12.00	15.02	25.08	315	429	531	724	921
106.0	6.15	7.85	10.02	13.20	19.73	257	355	455	599	791
110.0	4.75	6.43	8.68	11.90	18.08	222	289	380	513	689
114.0	4.80	5.15	7.93	10.52	14.45	167	233	319	419	558
118.0	3.37	5.30	6.07	8.68	11.93	143	177	244	330	469
122.0	2.87	3.85	6.12	7.05	11.27	110	146	196	268	386
126.0	2.62	3.22	4.30	6.45	9.18	83	133	150	210	303
130.0	2.03	3.12	3.97	4.50	6.68	72	86	124	164	212
134.0	1.87	2.28	2.85	3.75	5.90	52	68	82	118	187
138.0	1.25	1.67	2.33	3.15	4.43	36	60	58	93	134
142.0	0.80	1.25	1.75	2.62	3.53	26	44	49	69	97
146.0	1.02	1.33	1.33	2.00	3.10	21	28	38	60	76
150.0	0.75	0.85	1.00	1.35	1.98	11	25	31	37	55
154.0	0.35	0.82	0.75	1.17	1.52	4	16	22	30	42
158.0	0.25	0.52	0.50	0.87	1.33	3	11	12	24	25
162.0	0.15	0.32	0.55	0.93	0.73	2	6	12	17	21
166.0	0.05	0.15	0.32	0.55	0.57	2	3	8	9	12
170.0	0.17	0.12	0.25	0.22	0.37	1	3	3	6	7
174.0	0.00	0.17	0.15	0.25	0.35	0	2	6	6	5
178.0	0.03	0.10	0.15	0.32	0.25	0	1	2	3	5
182.0	0.03	0.00	0.22	0.20	0.12	0	2	3	2	3
186.0	0.00	0.10	0.03	0.08	0.05	0	0	1	1	2
190.0	0.00	0.05	0.05	0.03	0.17	0	0	1	0	2
194.0	0.00	0.05	0.12	0.03	0.08	0	0	0	0	0
198.0	0.00	0.00	0.00	0.00	0.08	0	0	0	0	1

Table IV: 200keV Se 79 in SiO2 on GaAs

Depth nm	Ion distributions (Ions/um/ion) Cap thickness (nm) 25.	50.	75.	100.	125.	Damage distributions (keV/um/ion) 25.	50.	75.	100.	125.
3.0	0.03	0.00	0.00	0.00	0.00	1071	1093	1116	1135	1054
9.0	0.05	0.00	0.00	0.00	0.00	1100	1099	1117	1085	1145
15.0	0.10	0.00	0.00	0.00	0.00	1166	1111	1154	1114	1126
21.0	0.35	0.03	0.00	0.00	0.00	1134	1115	1127	1143	1145
27.0	1.43	0.05	0.13	0.07	0.08	1700	1176	1135	1153	1168
33.0	2.83	0.27	0.20	0.10	0.22	1770	1164	1152	1193	1207
39.0	4.43	0.50	0.18	0.30	0.28	1853	1173	1157	1202	1163
45.0	5.77	1.10	0.53	0.60	0.58	1815	1217	1181	1177	1201
51.0	7.68	3.48	0.85	0.80	0.68	1846	1608	1187	1212	1218
57.0	8.40	6.58	1.25	0.92	1.27	1765	1803	1234	1232	1163
63.0	9.37	7.78	1.85	1.65	1.90	1739	1797	1245	1192	1183
69.0	10.35	8.92	3.52	2.50	2.57	1571	1782	1226	1190	1151
75.0	11.10	11.03	6.75	2.93	3.13	1517	1680	1400	1182	1185
81.0	10.72	12.17	10.52	3.77	3.65	1380	1639	1661	1153	1150
87.0	11.12	11.72	12.63	5.13	4.62	1233	1486	1646	1139	1102
93.0	9.97	11.37	13.45	5.82	5.22	1052	1314	1519	1135	1074
99.0	9.53	12.80	13.43	11.25	5.40	930	1150	1388	1200	1076
105.0	9.37	10.87	13.13	15.92	6.83	813	995	1265	1448	1052
111.0	8.52	10.42	12.73	15.62	8.72	705	843	1094	1296	959
117.0	7.63	9.30	12.38	16.10	8.67	575	731	1000	1196	888
123.0	7.18	8.88	10.58	14.43	12.50	461	581	775	1000	906
129.0	5.90	7.58	9.68	11.75	17.77	376	503	643	807	1039
135.0	5.00	6.17	8.45	10.38	15.53	299	374	512	691	903
141.0	4.33	5.03	7.63	9.22	13.78	253	334	411	535	739
147.0	4.00	5.18	6.35	8.67	10.98	179	255	323	438	594
153.0	2.57	4.17	4.90	7.00	9.25	127	177	237	330	466
159.0	2.70	2.75	3.58	5.00	8.33	104	131	177	248	369
165.0	1.82	2.50	3.13	4.45	5.65	69	94	134	195	272
171.0	1.13	1.60	2.33	3.18	4.80	47	70	101	141	216
177.0	0.85	1.37	1.93	2.55	4.27	35	50	65	100	163
183.0	0.88	1.00	1.23	2.13	2.85	24	30	47	76	100
189.0	0.47	0.77	1.00	1.37	1.98	16	21	36	43	79
195.0	0.38	0.58	0.67	0.95	1.73	11	15	22	32	54
201.0	0.25	0.15	0.50	0.70	1.22	6	7	18	24	39
207.0	0.22	0.18	0.33	0.37	0.80	4	5	10	13	22
213.0	0.07	0.13	0.37	0.38	0.38	2	4	7	8	13
219.0	0.12	0.13	0.17	0.33	0.38	1	2	5	7	8
225.0	0.03	0.05	0.15	0.13	0.22	0	0	2	3	4
231.0	0.02	0.05	0.07	0.08	0.25	0	0	1	2	3
237.0	0.00	0.00	0.03	0.03	0.07	0	0	0	1	2
243.0	0.00	0.00	0.02	0.08	0.03	0	0	0	0	0
249.0	0.00	0.00	0.00	0.00	0.03	0	0	0	0	1
255.0	0.00	0.00	0.00	0.00	0.02	0	0	0	0	0
261.0	0.00	0.00	0.00	0.00	0.02	0	0	0	0	0
267.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
273.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
279.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
285.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
291.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
297.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 300keV Se 79 in SiO2 on GaAs

Depth	Ion distributions (Ions/um/ion) Cap thickness (nm)					Damage distributions (keV/um/ion)				
nm	30.	60.	100.	125.	175.	30.	60.	100.	125.	175.
4.0	0.01	0.00	0.00	0.00	0.00	1001	1006	992	930	931
12.0	0.05	0.01	0.00	0.00	0.01	1045	997	1060	1029	1018
20.0	0.06	0.01	0.00	0.00	0.01	1096	1041	1038	1064	1050
28.0	0.12	0.00	0.03	0.00	0.00	1206	1070	1012	1061	1077
36.0	0.99	0.05	0.04	0.04	0.01	1648	1048	1095	1016	1056
44.0	1.98	0.06	0.04	0.00	0.14	1719	1131	1085	1071	1094
52.0	2.83	0.31	0.15	0.09	0.09	1734	1108	1028	1146	1147
60.0	3.19	0.87	0.21	0.17	0.14	1768	1392	1111	1097	1117
68.0	4.31	2.28	0.28	0.32	0.43	1836	1652	1138	1087	1114
76.0	4.61	3.58	0.57	0.50	0.52	1783	1779	1126	1140	1116
84.0	5.54	4.72	1.01	0.84	0.65	1803	1788	1173	1095	1142
92.0	6.35	5.61	1.23	0.96	1.20	1693	1754	1156	1161	1146
100.0	6.96	6.51	3.16	1.48	1.39	1675	1829	1456	1202	1186
108.0	7.22	7.16	5.51	1.85	1.84	1525	1730	1743	1137	1167
116.0	7.39	7.62	7.72	2.54	2.26	1439	1647	1766	1147	1162
124.0	7.45	7.62	7.85	5.04	2.34	1296	1478	1696	1330	1142
132.0	7.49	8.20	8.93	8.50	3.21	1183	1332	1612	1714	1104
140.0	7.45	7.96	9.18	9.06	3.62	1047	1259	1485	1612	1080
148.0	6.71	8.32	8.85	10.12	4.19	913	1091	1405	1558	1075
156.0	6.53	7.53	9.01	9.32	5.11	787	984	1184	1380	1029
164.0	5.78	7.01	8.31	9.44	5.31	655	846	1073	1275	995
172.0	5.34	6.76	8.37	9.39	7.96	546	677	961	1079	962
180.0	5.18	5.96	7.12	8.81	12.32	476	574	753	950	1211
188.0	4.37	5.14	6.54	8.18	11.39	371	461	650	776	1166
196.0	3.71	4.35	5.46	7.01	10.71	291	363	536	637	956
204.0	3.06	3.42	5.46	6.31	9.05	225	296	427	551	802
212.0	2.51	3.08	4.60	4.90	7.94	176	222	347	409	670
220.0	1.92	2.72	3.74	4.53	7.34	123	179	265	344	542
228.0	1.55	1.94	2.74	3.62	5.90	88	129	186	249	398
236.0	1.15	1.55	2.44	2.91	4.76	67	102	139	177	327
244.0	1.04	1.49	1.84	2.28	3.53	50	74	104	145	217
252.0	0.73	0.95	1.40	1.92	3.14	32	51	72	106	184
260.0	0.41	0.60	0.91	1.44	2.30	24	32	50	70	125
268.0	0.34	0.54	0.79	1.01	1.51	16	20	31	52	90
276.0	0.16	0.37	0.45	0.79	1.51	10	14	23	35	71
284.0	0.17	0.17	0.29	0.51	1.05	6	8	15	26	46
292.0	0.16	0.20	0.30	0.36	0.66	4	8	10	18	30
300.0	0.04	0.14	0.14	0.25	0.50	1	4	6	10	18
308.0	0.05	0.05	0.20	0.24	0.36	0	2	4	6	12
316.0	0.04	0.03	0.03	0.10	0.21	0	1	1	4	10
324.0	0.00	0.04	0.03	0.11	0.17	0	0	1	1	5
332.0	0.03	0.03	0.01	0.01	0.09	0	0	0	0	3
340.0	0.00	0.00	0.03	0.03	0.09	0	0	1	0	1
348.0	0.00	0.01	0.00	0.00	0.01	0	0	0	0	0
356.0	0.00	0.00	0.03	0.00	0.01	0	0	0	0	0
364.0	0.00	0.00	0.03	0.01	0.00	0	0	0	0	0
372.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
380.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
388.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
396.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table IV: 400keV Se 79 in SiO2 on GaAs

Depth nm	Ion distributions (Ions/um/ion) Cap thickness (nm) 50.	100.	150.	200.	250.	Damage distributions (keV/um/ion) 50.	100.	150.	200.	250.
5.0	0.01	0.00	0.00	0.00	0.00	954	954	904	920	913
15.0	0.00	0.00	0.00	0.00	0.00	948	944	932	947	928
25.0	0.02	0.00	0.00	0.00	0.00	970	951	964	982	970
35.0	0.04	0.01	0.00	0.00	0.00	989	972	970	956	993
45.0	0.15	0.02	0.01	0.00	0.00	954	999	1022	976	944
55.0	0.47	0.04	0.05	0.03	0.05	1547	1048	953	1015	1025
65.0	1.19	0.07	0.04	0.10	0.03	1625	1011	1007	1020	1032
75.0	1.80	0.19	0.09	0.08	0.05	1763	1020	1048	1037	990
85.0	2.48	0.39	0.15	0.22	0.20	1767	1054	1058	1044	1087
95.0	2.78	0.68	0.25	0.32	0.25	1727	1075	1102	1044	1071
105.0	3.85	1.92	0.46	0.39	0.50	1766	1565	1049	1088	1071
115.0	4.29	2.79	0.51	0.53	0.59	1816	1685	1106	1130	1076
125.0	4.85	3.56	0.91	0.87	0.80	1674	1738	1115	1156	1121
135.0	5.24	4.44	1.39	0.92	1.00	1706	1759	1129	1094	1135
145.0	5.47	4.76	1.55	1.44	1.42	1597	1753	1126	1147	1134
155.0	5.74	5.76	4.34	1.41	1.59	1505	1687	1655	1083	1087
165.0	5.80	6.00	5.53	1.97	1.96	1360	1601	1712	1139	1139
175.0	6.22	6.13	6.30	2.35	2.21	1216	1480	1645	1101	1105
185.0	5.90	7.03	6.92	2.57	2.64	1090	1427	1643	1070	1076
195.0	5.47	6.13	6.98	3.80	2.83	957	1184	1503	1086	1086
205.0	5.35	6.11	7.15	7.95	3.34	876	1088	1391	1525	1026
215.0	5.04	5.77	7.23	8.67	3.76	739	1015	1212	1500	990
225.0	4.52	5.91	7.46	8.44	3.98	619	805	1096	1346	937
235.0	4.03	5.05	6.28	8.32	4.46	493	735	940	1183	931
245.0	3.69	5.20	6.18	7.09	5.45	418	584	784	1053	847
255.0	2.82	4.19	5.50	6.88	10.95	327	467	673	868	1127
265.0	2.76	3.50	4.89	6.36	9.04	286	375	561	757	1035
275.0	2.26	3.11	4.21	5.64	7.81	204	319	407	603	862
285.0	1.97	2.68	3.50	4.73	6.70	154	259	343	495	722
295.0	1.56	2.20	3.04	4.35	5.99	112	181	257	405	586
305.0	1.11	1.77	2.07	3.67	5.29	75	125	185	317	463
315.0	0.84	1.13	1.71	2.83	4.11	60	95	144	223	340
325.0	0.68	1.02	1.45	2.17	3.29	48	68	106	58	263
335.0	0.57	0.79	1.06	1.68	2.77	33	48	71	106	193
345.0	0.33	0.47	0.90	1.36	2.00	18	31	44	80	143
355.0	0.26	0.42	0.49	0.89	1.41	10	22	32	57	93
365.0	0.16	0.26	0.50	0.62	1.09	8	12	28	40	67
375.0	0.05	0.21	0.31	0.42	0.83	4	11	15	24	48
385.0	0.07	0.17	0.18	0.35	0.65	4	5	9	18	29
395.0	0.05	0.03	0.12	0.23	0.36	2	2	7	12	15
405.0	0.06	0.03	0.09	0.14	0.16	1	0	4	5	9
415.0	0.03	0.01	0.07	0.08	0.16	0	0	2	3	6
425.0	0.01	0.02	0.05	0.05	0.13	0	1	3	2	3
435.0	0.00	0.01	0.02	0.04	0.05	0	0	0	2	2
445.0	0.00	0.00	0.04	0.03	0.04	0	0	0	0	1
455.0	0.00	0.01	0.02	0.00	0.01	0	0	0	0	0
465.0	0.01	0.01	0.00	0.01	0.03	0	0	0	0	1
475.0	0.00	0.00	0.00	0.00	0.01	0	0	0	0	0
485.0	0.00	0.00	0.00	0.00	0.01	0	0	0	0	0
495.0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0

Table V. Si, O, and N Recoil Atom Distributions for Si and Se Ion Implantation Through Si_3N_4 and SiO_2 Caps into GaAs.

Table V is on following pages: pages 363 through 386.

Table V. Si, O, and N Recoil Atom Distributions for Si and Se Ion Implantation Through Si_3N_4 and SiO_2 Caps into GaAs

The recoil-ion distributions are in ions/μm/incident ion as a function of the depth in the GaAs x (nm), for five cap thicknesses in nm.

The order of Table V is identical to that of Table IV.

Contents of Table V.

Recoil Distributions of Si, O, and N in GaAs Resulting from Si and Se Ion Implantation Through Si_3N_4 and SiO_2 Overlayers.

Table V: 50keV Si 28 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 10.	20.	40.	60.	80.	O or N recoil atoms (atoms/um/ion) 10.	20.	40.	60.	80.
0.10	239.50	288.00	287.50	180.50	92.50	239.50	236.50	311.00	211.50	70.00
0.30	473.00	618.50	734.50	466.50	159.50	483.00	653.00	773.00	485.50	156.00
0.50	289.00	409.50	506.00	323.00	101.50	352.00	482.50	583.00	349.50	126.50
0.70	181.50	247.50	332.00	185.00	60.50	258.50	331.00	406.50	259.50	83.50
0.90	128.34	160.43	191.40	124.99	51.86	175.73	225.72	280.56	185.05	55.22
1.24	72.95	102.89	129.97	82.50	28.67	103.85	147.49	184.12	113.08	45.87
1.53	51.19	67.13	83.38	55.48	17.17	85.83	116.79	132.42	86.14	31.27
1.89	34.97	56.79	58.77	35.71	12.90	60.01	70.43	96.47	63.49	19.59
2.33	20.46	31.30	41.33	30.90	7.42	40.13	50.76	76.04	41.33	13.04
2.89	16.56	21.26	28.73	23.70	7.14	28.08	37.66	49.34	31.33	10.06
3.57	9.45	17.86	23.24	14.31	3.94	19.96	29.68	36.11	19.96	6.57
4.41	10.09	12.32	16.25	9.45	3.08	15.94	19.12	26.13	16.15	5.31
5.45	6.27	9.71	12.38	6.96	1.80	8.42	14.44	21.06	12.12	5.07
6.74	3.89	7.65	8.83	5.49	1.53	8.07	10.92	16.83	9.73	3.20
8.33	3.83	5.74	6.58	3.21	1.29	5.62	7.65	10.46	6.64	2.42
10.29	3.14	3.69	4.64	2.91	0.55	3.78	5.60	8.87	5.69	2.32
12.72	2.17	3.42	3.64	1.80	0.44	3.06	4.34	6.55	4.23	1.36
15.72	1.61	2.35	2.23	1.70	0.30	1.79	3.37	4.20	3.22	1.16
19.43	0.99	1.45	1.57	0.80	0.07	1.37	2.51	3.33	2.29	0.75
24.02	0.55	0.90	1.44	0.53	0.08	1.05	1.75	2.20	1.85	0.47
29.69	0.36	0.52	0.44	0.28	0.05	0.60	1.23	1.42	0.88	0.35
36.70	0.22	0.33	0.32	0.09	0.01	0.52	0.64	0.83	0.62	0.13
45.37	0.23	0.25	0.25	0.03	0.00	0.33	0.68	0.75	0.32	0.03
56.08	0.07	0.12	0.03	0.00	0.00	0.26	0.42	0.35	0.09	0.03
69.31	0.03	0.03	0.01	0.00	0.00	0.10	0.18	0.18	0.05	0.00
85.68	0.02	0.00	0.00	0.00	0.00	0.04	0.09	0.04	0.01	0.00
105.90	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.01	0.00	0.00
130.90	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
161.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 75keV Si 28 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	60.	80.	100.	125.	C or N recoil atoms (atoms/um/ion) 40.	60.	80.	100.	125.
0.15	375.00	417.67	356.33	208.33	50.00	441.00	486.67	402.00	235.67	58.67
0.45	453.33	511.00	436.67	236.67	59.33	482.00	570.33	497.67	286.33	60.67
0.75	192.67	235.00	176.00	120.67	33.00	231.67	287.67	223.00	139.33	38.00
1.05	123.00	135.00	111.67	60.33	20.33	145.67	172.33	137.33	81.67	23.00
1.35	72.13	87.30	68.15	37.81	10.94	108.69	120.14	98.25	54.97	17.41
1.85	44.81	52.88	47.57	29.31	7.43	76.87	83.88	68.81	35.04	7.22
2.29	29.63	41.89	32.29	16.96	4.90	46.39	54.15	45.16	29.63	8.58
2.83	21.66	25.13	21.99	10.75	2.98	34.39	35.88	34.55	19.01	5.12
3.50	19.13	19.53	17.52	10.30	1.74	23.67	31.57	23.41	15.78	5.48
4.33	13.31	14.82	13.53	6.82	1.51	17.85	21.10	21.42	11.47	2.81
5.35	9.54	12.52	8.58	4.29	1.05	12.34	15.58	15.15	8.05	1.40
6.61	5.17	7.44	6.59	3.97	1.13	10.91	11.69	9.84	7.30	2.12
8.17	5.73	5.90	5.61	2.18	0.34	7.85	8.19	7.85	4.81	1.37
10.10	4.13	5.10	4.03	1.72	0.14	6.35	6.58	5.56	3.38	1.58
12.49	3.41	3.41	2.59	1.27	0.22	4.76	5.59	4.84	2.44	0.94
15.44	2.58	2.40	1.88	0.67	0.12	3.67	3.70	4.22	2.31	0.76
19.08	1.50	1.79	1.45	0.64	0.07	3.02	3.04	2.38	1.74	0.34
23.58	1.13	0.91	0.74	0.30	0.08	1.99	2.28	1.91	1.35	0.30
29.15	0.68	0.79	0.55	0.21	0.00	1.43	1.59	1.43	0.74	0.26
36.03	0.55	0.56	0.30	0.08	0.01	1.25	1.37	0.85	0.55	0.13
44.54	0.27	0.39	0.15	0.01	0.00	0.88	0.76	0.74	0.23	0.05
55.05	0.28	0.20	0.06	0.01	0.00	0.50	0.51	0.42	0.13	0.01
68.05	0.14	0.05	0.01	0.01	0.00	0.34	0.30	0.14	0.08	0.00
84.12	0.05	0.03	0.01	0.00	0.00	0.15	0.10	0.08	0.03	0.00
103.97	0.02	0.00	0.00	0.00	0.00	0.11	0.05	0.03	0.00	0.00
128.52	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00	0.00
158.85	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
196.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 100keV Si 28 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 20.	40.	80.	110.	140.	O or N recoil atoms (atoms/um/ion) 20.	40.	80.	110.	140.
0.20	313.25	378.00	453.50	394.75	187.50	303.50	426.50	502.75	420.50	185.50
0.60	155.25	205.00	275.75	226.00	105.00	176.00	235.25	301.00	261.00	120.50
1.00	70.00	101.75	119.00	104.00	47.50	91.75	116.75	159.00	136.75	63.50
1.40	39.00	62.00	74.75	64.00	24.25	63.00	86.25	103.75	89.00	42.50
1.80	24.62	34.32	45.89	40.85	16.79	35.44	54.10	66.04	65.10	30.03
2.47	18.95	23.73	30.10	27.08	11.94	25.01	36.95	49.85	39.34	18.32
3.06	10.42	18.85	21.15	16.86	8.58	19.77	24.22	33.41	28.81	12.72
3.78	8.56	10.17	15.37	12.77	5.58	12.90	19.84	26.04	18.23	9.67
4.67	5.32	10.43	11.54	9.13	5.12	9.03	13.44	15.75	17.86	6.72
5.77	4.46	6.82	8.28	6.41	4.06	7.06	12.01	12.66	11.04	6.09
7.13	2.89	4.92	5.78	4.14	3.02	4.79	6.83	9.78	8.47	4.01
8.82	2.23	4.09	4.30	3.98	1.33	3.82	5.84	7.22	6.59	3.61
10.90	2.02	2.88	3.70	2.58	1.25	2.62	3.65	5.03	4.60	2.66
13.47	1.25	2.50	2.33	1.91	0.90	1.70	3.30	4.00	4.24	1.95
16.65	0.93	1.63	2.05	1.63	0.59	1.63	2.05	3.21	2.76	1.10
20.58	0.57	0.89	1.52	1.43	0.30	0.91	1.52	2.37	1.91	1.00
25.44	0.53	0.99	1.18	0.74	0.37	0.74	1.47	1.91	1.93	0.74
31.45	0.31	0.61	0.94	0.58	0.22	0.40	1.12	1.45	1.19	0.57
38.87	0.23	0.51	0.47	0.35	0.01	0.40	0.60	0.98	0.88	0.35
48.04	0.29	0.43	0.37	0.13	0.03	0.29	0.57	0.66	0.50	0.17
59.39	0.13	0.25	0.21	0.07	0.02	0.26	0.36	0.48	0.36	0.11
73.41	0.08	0.09	0.08	0.01	0.01	0.14	0.31	0.31	0.19	0.04
90.73	0.03	0.09	0.03	0.00	0.00	0.09	0.18	0.19	0.06	0.00
112.15	0.01	0.03	0.00	0.00	0.00	0.09	0.08	0.11	0.03	0.01
138.63	0.00	0.01	0.00	0.00	0.00	0.04	0.03	0.02	0.01	0.00
171.35	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00
211.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
323.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 150keV Si 28 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	80.	100.	150.	200.	O or N recoil atoms (atoms/um/ion) 40.	80.	100.	150.	200.
0.30	220.33	273.67	302.00	322.00	155.50	243.33	309.00	329.00	369.67	175.50
0.90	69.17	90.83	94.17	97.67	52.00	72.17	103.33	123.00	122.83	70.67
1.50	31.17	42.17	49.50	49.50	28.50	42.50	57.67	61.17	72.17	38.17
2.10	18.17	26.83	31.00	32.00	16.83	27.67	38.33	44.17	44.83	21.67
2.70	11.44	18.28	22.01	20.77	7.84	18.28	25.62	34.32	27.73	18.03
3.71	7.01	10.62	11.68	15.93	6.05	14.55	18.16	19.75	20.81	9.13
4.58	4.90	7.66	9.20	11.34	4.29	9.09	13.39	13.39	14.51	9.40
5.67	4.05	5.29	7.77	9.26	4.22	7.19	9.26	10.17	11.57	5.62
7.00	3.08	4.28	5.75	6.49	3.28	4.41	7.16	8.16	8.89	4.48
8.66	2.92	3.03	4.55	4.44	2.06	4.17	6.01	5.68	5.95	3.68
10.70	2.06	2.23	2.93	3.59	1.23	2.67	3.68	5.03	5.08	3.15
13.23	1.31	1.95	2.44	2.41	1.17	2.30	3.82	3.51	3.89	1.59
16.35	1.17	1.32	2.32	1.72	0.75	1.17	2.18	2.78	2.26	1.52
20.21	0.83	1.46	1.18	1.55	0.35	1.25	1.46	1.92	2.11	1.25
24.98	0.81	1.24	0.98	1.05	0.39	0.77	1.41	1.61	1.84	0.90
30.87	0.41	0.82	0.80	0.73	0.17	0.67	1.12	1.27	1.12	0.67
38.16	0.37	0.50	0.58	0.38	0.09	0.44	0.74	1.02	1.07	0.45
47.17	0.27	0.50	0.42	0.27	0.05	0.37	0.64	0.73	0.76	0.32
58.30	0.21	0.32	0.31	0.20	0.06	0.28	0.44	0.57	0.61	0.21
72.07	0.15	0.24	0.16	0.12	0.01	0.17	0.25	0.40	0.32	0.07
89.08	0.10	0.12	0.12	0.06	0.00	0.15	0.23	0.21	0.16	0.04
110.11	0.08	0.07	0.05	0.01	0.00	0.10	0.12	0.14	0.10	0.00
136.10	0.02	0.03	0.02	0.01	0.00	0.06	0.07	0.07	0.06	0.00
168.23	0.02	0.00	0.01	0.00	0.00	0.05	0.05	0.07	0.00	0.00
207.94	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.00	0.00
257.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
392.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
485.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 200keV Si 28 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	100.	150.	200.	250.	O or N recoil atoms (atoms/um/ion) 40.	100.	150.	200.	250.
0.40	124.00	161.75	227.00	244.62	160.62	135.87	192.12	247.12	253.12	169.00
1.20	29.25	45.37	59.25	69.25	44.50	36.00	53.87	77.37	77.87	54.00
2.00	13.12	22.87	28.50	33.87	23.00	24.37	38.00	42.87	45.62	33.87
2.80	10.12	12.25	21.62	22.25	10.37	14.00	20.62	30.50	31.25	20.37
3.60	5.50	10.17	12.31	12.50	7.65	8.86	15.30	17.35	20.15	13.71
4.94	4.38	6.77	8.68	10.67	7.09	6.37	10.59	11.87	14.33	8.92
6.11	3.22	3.68	6.21	6.13	5.06	5.36	7.36	12.49	9.27	7.51
7.55	2.79	3.04	4.34	4.84	2.91	3.41	5.02	5.95	7.87	4.84
9.34	1.86	2.96	3.91	3.96	2.21	2.16	4.06	5.12	6.27	4.36
11.54	1.58	2.23	2.80	3.12	1.95	2.03	3.16	3.65	4.30	2.52
14.27	0.99	1.90	2.00	2.46	0.85	1.48	2.23	3.12	3.51	1.94
17.63	0.82	1.46	1.57	1.59	0.98	0.98	2.12	1.73	2.58	1.81
21.80	0.56	1.14	1.05	1.44	0.54	0.75	1.50	1.70	1.53	1.44
26.94	0.56	0.80	1.06	1.11	0.56	0.63	0.89	1.32	1.36	0.94
33.30	0.32	0.65	0.73	0.59	0.24	0.44	1.00	1.07	1.03	0.82
41.16	0.22	0.42	0.58	0.41	0.09	0.31	0.67	1.00	0.85	0.39
50.88	0.10	0.35	0.46	0.28	0.14	0.13	0.50	0.59	0.55	0.41
62.89	0.16	0.15	0.26	0.14	0.06	0.18	0.40	0.44	0.32	0.21
77.74	0.12	0.22	0.14	0.12	0.01	0.10	0.25	0.25	0.26	0.08
96.09	0.05	0.10	0.13	0.06	0.00	0.09	0.21	0.18	0.18	0.06
118.77	0.07	0.11	0.08	0.01	0.00	0.08	0.14	0.13	0.11	0.02
146.81	0.04	0.04	0.04	0.00	0.00	0.04	0.06	0.08	0.04	0.01
181.47	0.02	0.03	0.01	0.00	0.00	0.04	0.03	0.05	0.01	0.00
224.31	0.01	0.01	0.00	0.00	0.00	0.03	0.03	0.01	0.00	0.00
277.26	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
342.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
423.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
647.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 300keV Si 28 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	100.	200.	300.	400.	O or N recoil atoms (atoms/um/ion) 40.	100.	200.	300.	400.
0.50	62.12	84.12	126.94	177.41	63.06	72.12	86.59	138.12	174.12	67.06
1.50	12.82	16.59	28.94	43.29	15.06	15.53	22.35	37.88	50.82	21.53
2.50	7.29	10.94	16.71	22.35	7.41	9.88	13.06	19.65	26.71	11.29
3.50	3.65	6.47	10.35	12.23	2.94	6.71	9.06	14.23	16.94	6.94
4.50	2.81	4.57	8.34	8.34	3.34	4.30	5.71	11.06	12.11	3.78
6.18	1.20	2.85	5.25	5.02	2.10	2.77	3.15	6.97	8.40	3.60
7.64	1.59	2.81	3.25	4.26	1.23	1.95	3.39	4.83	7.72	2.74
9.44	1.40	1.46	2.33	3.50	0.76	1.81	2.51	3.38	4.67	1.28
11.67	0.94	1.09	2.36	2.12	0.57	1.04	1.46	3.49	4.30	1.84
14.43	0.38	0.73	1.60	1.99	0.42	0.69	1.22	1.87	3.02	1.15
17.83	0.34	0.49	0.96	1.17	0.31	0.59	1.08	1.24	2.47	0.77
22.04	0.47	0.40	1.02	1.10	0.10	0.47	0.77	1.00	1.67	0.40
27.25	0.16	0.44	0.71	0.63	0.14	0.22	0.75	1.19	1.34	0.47
33.68	0.21	0.33	0.59	0.62	0.10	0.18	0.57	0.69	1.01	0.31
41.63	0.19	0.32	0.41	0.62	0.04	0.24	0.34	0.69	0.74	0.17
51.45	0.11	0.19	0.36	0.33	0.01	0.14	0.25	0.50	0.65	0.08
63.60	0.09	0.13	0.29	0.25	0.05	0.15	0.19	0.40	0.33	0.13
78.62	0.08	0.09	0.22	0.11	0.01	0.12	0.17	0.22	0.24	0.05
97.17	0.10	0.10	0.12	0.06	0.00	0.06	0.12	0.14	0.16	0.03
120.11	0.05	0.08	0.07	0.02	0.00	0.05	0.12	0.12	0.11	0.01
148.47	0.02	0.05	0.04	0.01	0.00	0.02	0.06	0.12	0.05	0.00
183.51	0.01	0.03	0.03	0.00	0.00	0.01	0.05	0.06	0.01	0.00
226.84	0.01	0.02	0.00	0.00	0.00	0.01	0.02	0.04	0.01	0.00
280.38	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00
346.57	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
428.39	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
529.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
654.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
809.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 400keV Si 28 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 100.	200.	300.	400.	500.	O or N recoil atoms (atoms/um/ion) 100.	200.	300.	400.	500.
0.62	41.48	64.12	98.09	109.42	58.09	41.97	67.82	105.35	123.32	71.26
1.87	8.86	12.80	23.26	26.71	9.97	10.95	18.46	24.49	34.95	15.63
3.12	4.68	6.89	10.46	14.89	7.39	4.55	11.20	15.75	19.32	8.12
4.37	3.57	3.82	6.77	8.00	4.06	4.43	7.14	11.94	10.95	6.52
5.62	1.93	3.21	5.05	5.79	2.85	2.85	4.68	6.98	7.26	3.49
7.73	1.25	1.80	3.29	3.76	1.49	2.35	2.90	5.25	6.51	2.74
9.55	0.83	2.04	2.57	1.96	1.59	1.51	3.55	3.39	4.00	1.89
11.80	0.61	1.04	1.65	2.01	0.79	1.16	1.47	2.81	3.17	1.77
14.59	0.44	1.14	1.83	1.88	0.54	0.54	1.73	1.78	2.27	1.28
18.03	0.32	0.72	1.36	1.12	0.48	1.00	1.12	1.64	1.44	0.56
22.29	0.36	0.58	1.07	0.87	0.55	0.42	0.71	1.23	1.65	0.65
27.55	0.42	0.63	0.81	0.71	0.26	0.44	0.89	0.99	1.25	0.42
34.06	0.25	0.32	0.47	0.42	0.11	0.28	0.51	0.68	0.85	0.38
42.10	0.20	0.46	0.46	0.41	0.17	0.20	0.31	0.56	0.82	0.24
52.03	0.19	0.19	0.46	0.35	0.03	0.19	0.25	0.50	0.43	0.21
64.32	0.10	0.19	0.23	0.22	0.01	0.19	0.19	0.39	0.43	0.11
79.50	0.14	0.10	0.18	0.10	0.01	0.14	0.22	0.29	0.31	0.09
98.27	0.09	0.14	0.14	0.05	0.01	0.04	0.12	0.19	0.20	0.07
121.47	0.05	0.09	0.11	0.02	0.01	0.07	0.05	0.16	0.18	0.02
150.14	0.02	0.06	0.06	0.01	0.00	0.03	0.04	0.12	0.07	0.00
185.58	0.03	0.04	0.03	0.00	0.00	0.05	0.05	0.06	0.04	0.00
229.39	0.02	0.03	0.01	0.00	0.00	0.00	0.03	0.03	0.00	0.00
283.54	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	0.00	0.00
350.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00
433.22	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
535.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
661.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
818.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1011.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 50keV Si 28 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 10.	20.	40.	60.	80.	O or N recoil atoms (atoms/um/ion) 10.	20.	40.	60.	80.
0.10	143.50	133.00	192.50	178.00	145.00	232.50	261.50	239.50	287.00	271.00
0.30	228.50	298.50	372.50	413.50	354.50	410.00	470.00	665.00	695.00	592.50
0.50	175.50	227.50	298.50	291.50	270.00	330.50	403.50	515.50	572.50	494.00
0.70	105.00	146.50	177.00	187.00	147.50	212.00	277.50	373.00	367.00	326.00
0.90	75.36	98.12	110.43	120.88	116.78	149.98	182.07	226.09	250.34	214.90
1.24	43.96	52.24	75.50	89.83	65.30	95.88	114.68	160.87	166.60	137.29
1.53	26.06	33.72	55.79	51.50	51.80	64.68	76.94	109.43	119.85	103.30
1.89	19.59	27.03	33.97	35.46	36.21	45.88	56.04	85.31	87.54	71.67
2.33	15.45	21.47	23.67	25.48	23.87	30.50	41.53	52.16	63.20	49.56
2.89	9.74	13.63	15.42	19.48	18.34	20.94	26.78	36.52	44.64	40.58
3.57	6.96	10.64	12.87	14.44	11.95	14.71	19.43	27.58	33.62	26.79
4.41	5.31	7.22	11.37	11.47	11.79	11.05	14.77	20.29	24.86	20.29
5.45	3.35	4.81	6.88	8.51	8.08	7.65	11.17	14.44	15.99	17.27
6.74	1.67	3.27	6.05	7.09	5.28	3.96	8.34	12.86	14.19	11.82
8.33	2.08	3.09	5.01	5.23	3.54	3.77	6.69	8.32	11.36	8.04
10.29	1.41	2.59	3.60	2.87	2.18	2.96	4.28	7.10	8.24	7.96
12.72	1.18	2.17	2.65	2.47	2.28	1.95	2.94	5.49	6.15	5.34
15.72	0.89	1.22	1.91	2.00	1.22	1.40	2.29	4.47	5.21	4.47
19.43	0.77	0.82	1.13	1.40	0.77	1.04	1.62	2.99	3.69	2.89
24.02	0.27	0.66	1.17	0.74	0.55	0.86	1.48	2.34	2.52	2.16
29.69	0.22	0.36	0.68	0.55	0.14	0.55	0.90	1.45	1.89	1.55
36.70	0.14	0.28	0.37	0.33	0.24	0.45	0.79	1.21	1.06	0.96
45.37	0.08	0.14	0.19	0.11	0.05	0.35	0.44	0.83	0.66	0.47
56.08	0.05	0.13	0.05	0.05	0.02	0.14	0.34	0.34	0.38	0.17
69.31	0.01	0.02	0.02	0.00	0.01	0.09	0.20	0.24	0.22	0.06
85.68	0.02	0.00	0.00	0.01	0.00	0.06	0.07	0.09	0.08	0.02
105.90	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.02	0.00	0.00
130.90	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
161.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 75keV Si 28 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	60.	80.	100.	125.	O or N recoil atoms (atoms/um/ion) 40.	60.	80.	100.	125.
0.15	198.00	243.67	241.33	248.00	194.67	360.00	392.00	450.67	433.33	385.00
0.45	258.00	297.33	321.67	309.00	282.67	439.00	537.33	586.33	562.00	467.00
0.75	122.33	144.00	162.67	147.33	151.33	222.00	268.00	317.00	278.00	266.00
1.05	73.67	84.67	92.33	88.33	82.00	139.00	174.00	186.67	196.33	170.67
1.35	46.01	54.22	59.69	54.97	53.48	98.00	114.41	121.63	121.13	107.45
1.85	26.33	34.83	36.53	38.65	31.43	56.28	73.90	79.85	78.36	73.05
2.29	19.62	28.00	27.18	24.93	20.43	43.94	52.52	55.38	52.93	49.86
2.83	14.55	16.53	16.70	20.50	15.05	32.07	36.37	44.47	35.38	31.91
3.50	10.16	10.57	16.99	14.44	9.76	20.86	24.34	31.83	32.50	23.94
4.33	7.57	8.22	12.44	8.87	9.41	16.88	19.91	19.26	20.13	19.05
5.35	5.60	6.74	7.79	7.79	7.27	12.34	15.76	15.58	16.37	13.39
6.61	4.60	5.81	6.37	6.52	5.45	8.57	11.40	11.76	10.91	11.61
8.17	2.81	4.07	4.12	4.70	3.67	5.10	8.54	10.14	9.34	7.62
10.10	2.60	2.60	3.71	3.11	2.64	4.82	5.33	6.81	7.83	6.30
12.49	2.44	1.99	2.92	2.36	2.10	3.86	4.05	4.95	6.07	4.01
15.44	1.76	1.94	1.76	1.49	0.97	2.82	3.52	4.13	4.19	4.67
19.08	1.15	1.15	1.05	1.23	0.96	2.53	3.04	3.63	3.73	3.24
23.58	0.81	1.01	1.01	0.97	0.63	2.40	2.40	2.54	2.40	2.54
29.15	0.51	0.79	0.66	0.55	0.29	1.22	1.40	1.94	1.59	1.72
36.03	0.32	0.47	0.48	0.39	0.22	1.04	1.61	1.21	1.20	1.01
44.54	0.35	0.23	0.22	0.25	0.04	0.68	0.81	0.88	0.64	0.67
55.05	0.14	0.22	0.16	0.11	0.09	0.55	0.46	0.60	0.67	0.36
68.05	0.07	0.12	0.09	0.04	0.01	0.27	0.35	0.38	0.30	0.12
84.12	0.06	0.03	0.04	0.03	0.00	0.16	0.24	0.18	0.11	0.07
103.97	0.02	0.01	0.01	0.00	0.00	0.11	0.08	0.06	0.08	0.01
128.52	0.00	0.01	0.00	0.00	0.00	0.08	0.05	0.03	0.01	0.00
158.85	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
196.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 100keV Si 28 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 20.	40.	80.	110.	140.	O or N recoil atoms (atoms/um/ion) 20.	40.	80.	110.	140.
0.20	160.75	185.50	246.50	276.25	273.50	292.00	321.00	417.25	455.25	506.00
0.60	108.25	125.00	179.00	193.50	190.25	182.50	207.75	288.00	343.00	332.75
1.00	44.75	54.00	72.75	83.00	92.00	97.00	106.25	165.25	163.50	171.75
1.40	21.25	25.50	42.75	46.00	57.75	64.00	66.75	100.50	115.00	98.25
1.80	18.84	17.91	31.90	33.21	31.34	38.80	42.16	70.89	72.57	74.62
2.47	9.87	14.33	19.59	22.62	21.18	23.41	26.92	44.12	44.28	52.88
3.06	7.20	8.58	13.18	16.86	18.39	15.94	22.84	32.03	35.86	35.56
3.78	2.98	6.57	9.67	13.52	8.80	13.14	16.49	19.84	25.17	26.29
4.67	4.11	4.72	6.82	8.53	8.33	6.42	11.54	19.26	16.75	19.56
5.77	3.00	3.65	5.60	5.60	6.90	7.06	9.66	11.77	13.80	12.90
7.13	2.10	3.02	4.53	4.20	4.66	4.60	5.91	8.73	8.53	9.52
8.82	1.06	2.02	3.13	3.77	3.45	3.29	4.25	6.22	8.66	7.28
10.90	1.20	2.02	2.84	2.71	3.01	2.41	3.09	4.86	5.50	5.63
13.47	0.90	1.25	2.15	2.02	2.54	1.81	2.30	4.10	4.52	4.62
16.65	0.68	0.96	0.98	1.88	1.55	1.66	1.97	3.40	3.40	4.05
20.58	0.43	0.80	1.14	1.02	1.50	0.91	1.55	2.55	3.16	2.71
25.44	0.28	0.74	0.92	0.85	0.75	0.87	1.09	1.95	2.25	2.23
31.45	0.16	0.37	0.58	0.71	0.60	0.45	0.75	1.24	1.83	1.58
38.87	0.17	0.30	0.52	0.22	0.37	0.35	0.55	1.34	1.14	1.17
48.04	0.12	0.19	0.48	0.29	0.17	0.28	0.54	0.66	0.89	0.81
59.39	0.10	0.16	0.15	0.19	0.11	0.17	0.34	0.54	0.65	0.65
73.41	0.05	0.12	0.09	0.10	0.06	0.09	0.25	0.36	0.40	0.29
90.73	0.04	0.10	0.08	0.04	0.01	0.07	0.13	0.20	0.23	0.13
112.15	0.00	0.01	0.02	0.03	0.00	0.04	0.05	0.11	0.11	0.04
138.63	0.01	0.01	0.01	0.00	0.00	0.03	0.06	0.05	0.03	0.02
171.35	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.01	0.01	0.01
211.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
323.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 150keV Si 28 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	80.	100.	150.	200.	O or N recoil atoms (atoms/um/ion) 40.	80.	100.	150.	200.
0.30	113.33	141.17	157.33	196.83	216.67	196.50	263.67	284.50	346.83	358.83
0.90	41.83	50.50	58.83	77.50	82.83	77.00	108.17	113.00	138.83	147.00
1.50	18.33	31.50	30.17	36.33	37.83	41.83	53.00	58.33	78.00	78.33
2.10	9.17	15.17	21.33	23.17	25.00	24.33	36.33	36.00	47.50	52.67
2.70	8.08	10.20	9.20	13.43	14.92	18.16	22.63	27.24	30.72	36.44
3.71	5.31	6.37	7.11	9.45	11.89	11.15	15.29	16.78	21.66	23.57
4.58	2.35	5.01	5.31	6.95	7.76	7.66	11.65	13.90	15.02	16.66
5.67	2.98	3.64	2.64	4.96	4.63	6.61	6.86	9.84	12.48	14.30
7.00	1.94	3.48	3.48	4.21	4.75	4.35	8.02	6.42	8.23	10.23
8.66	0.92	2.00	2.65	3.62	3.03	2.87	4.06	4.76	6.71	7.63
10.70	1.88	1.62	2.01	2.32	2.54	2.10	3.76	3.28	4.20	5.38
13.23	1.03	1.63	1.63	1.98	2.09	1.84	2.27	3.05	4.21	4.21
16.35	0.72	1.12	1.15	1.32	1.66	1.46	2.01	2.06	2.98	3.24
20.21	0.35	0.51	0.83	0.95	1.21	1.14	1.37	1.81	2.22	2.97
24.98	0.28	0.68	0.62	0.82	0.84	0.82	1.73	1.52	1.78	2.16
30.87	0.21	0.58	0.49	0.67	0.65	0.47	0.76	1.18	1.62	1.73
38.16	0.14	0.28	0.55	0.38	0.45	0.48	0.90	0.68	1.14	1.28
47.17	0.11	0.26	0.21	0.29	0.27	0.38	0.37	0.63	0.74	0.77
58.30	0.04	0.22	0.26	0.21	0.18	0.21	0.51	0.48	0.57	0.59
72.07	0.08	0.16	0.12	0.16	0.09	0.14	0.41	0.35	0.38	0.38
89.08	0.06	0.08	0.07	0.09	0.05	0.13	0.22	0.22	0.31	0.26
110.11	0.02	0.06	0.05	0.04	0.02	0.09	0.12	0.12	0.18	0.11
136.10	0.01	0.05	0.03	0.02	0.00	0.01	0.08	0.09	0.12	0.05
168.23	0.02	0.01	0.01	0.00	0.00	0.05	0.05	0.05	0.07	0.04
207.94	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.02	0.01	0.00
257.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
317.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
392.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
485.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 200keV Si 28 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	100.	150.	200.	250.	O or N recoil atoms (atoms/um/ion) 40.	100.	150.	200.	250.
0.40	70.12	90.50	123.50	148.25	149.62	129.25	175.12	209.50	238.62	258.50
1.20	17.00	30.25	35.62	43.50	48.12	39.00	53.87	64.87	83.50	89.62
2.00	12.75	15.00	17.62	17.75	25.75	21.75	27.37	37.25	44.37	52.12
2.80	5.62	7.62	9.00	12.25	15.00	11.37	17.87	20.12	29.75	33.50
3.60	4.29	5.32	7.18	9.89	10.73	10.45	12.12	14.83	17.53	20.61
4.94	2.47	2.87	4.14	5.97	7.09	6.37	9.08	10.51	14.10	14.41
6.11	1.99	1.53	3.98	5.21	5.06	4.68	6.44	8.12	8.05	11.11
7.55	0.74	2.05	2.42	3.53	3.29	3.78	4.03	5.89	7.13	7.63
9.34	1.05	1.46	1.55	2.66	2.51	2.61	3.16	3.51	5.32	5.97
11.54	1.01	1.22	1.83	2.03	2.11	0.97	2.76	3.16	3.37	4.87
14.27	0.43	0.99	1.28	1.81	1.71	1.12	1.81	2.63	3.09	3.41
17.63	0.43	0.77	0.93	1.12	1.17	0.72	1.59	1.81	2.26	2.50
21.80	0.37	0.71	0.73	0.88	0.73	0.84	1.14	1.35	1.70	2.04
26.94	0.19	0.54	0.69	0.64	0.82	0.49	1.16	1.01	1.27	1.55
33.30	0.08	0.31	0.42	0.63	0.48	0.42	0.76	1.07	1.07	1.63
41.16	0.11	0.25	0.35	0.41	0.40	0.30	0.57	0.80	0.90	0.88
50.88	0.12	0.15	0.31	0.33	0.28	0.25	0.48	0.56	0.84	1.01
62.89	0.07	0.13	0.23	0.18	0.18	0.19	0.25	0.49	0.59	0.54
77.74	0.10	0.11	0.18	0.16	0.16	0.08	0.22	0.38	0.42	0.43
96.09	0.02	0.11	0.10	0.08	0.05	0.05	0.21	0.21	0.20	0.26
118.77	0.03	0.03	0.06	0.08	0.04	0.07	0.15	0.17	0.10	0.13
146.81	0.01	0.04	0.06	0.02	0.00	0.03	0.09	0.09	0.13	0.10
181.47	0.01	0.01	0.01	0.00	0.00	0.02	0.04	0.06	0.07	0.03
224.31	0.01	0.01	0.01	0.00	0.00	0.02	0.03	0.03	0.01	0.01
277.26	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00
342.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
423.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
647.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 300keV Si 28 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 40.	100.	200.	300.	400.	O or N recoil atoms (atoms/um/ion) 40.	100.	200.	300.	400.
0.50	34.94	50.71	61.41	85.88	102.82	59.65	74.71	110.00	144.12	179.53
1.50	8.71	9.88	17.18	22.47	28.35	18.35	22.12	30.82	49.53	59.29
2.50	4.00	5.06	10.59	12.23	13.77	9.29	11.53	17.88	25.88	31.88
3.50	2.23	3.65	4.94	6.59	10.59	6.82	9.06	11.77	18.24	20.47
4.50	2.02	2.11	3.51	5.71	5.88	3.78	5.27	7.72	10.27	14.66
6.18	0.82	1.80	2.85	3.75	5.32	2.32	3.90	5.17	8.40	8.77
7.64	1.44	1.30	2.38	2.67	2.52	2.09	2.81	3.17	5.91	7.21
9.44	0.47	0.99	1.46	2.22	2.92	1.58	1.81	2.98	3.85	5.60
11.67	0.57	0.80	1.37	1.27	2.12	0.43	1.84	1.84	3.02	3.96
14.43	0.19	0.34	0.80	1.41	1.34	0.57	0.76	1.22	2.25	2.67
17.83	0.46	0.43	0.83	1.27	1.08	0.52	0.74	0.90	1.54	2.07
22.04	0.10	0.28	0.73	0.70	0.80	0.50	0.45	0.95	1.15	1.55
27.25	0.20	0.26	0.28	0.73	0.51	0.43	0.49	0.83	0.79	1.15
33.68	0.20	0.33	0.26	0.41	0.62	0.33	0.41	0.56	1.03	1.06
41.63	0.08	0.09	0.22	0.34	0.50	0.16	0.37	0.48	0.77	0.77
51.45	0.04	0.10	0.21	0.29	0.20	0.09	0.19	0.34	0.54	0.83
63.60	0.01	0.10	0.13	0.10	0.24	0.09	0.16	0.31	0.42	0.52
78.62	0.04	0.08	0.11	0.17	0.13	0.07	0.10	0.27	0.31	0.39
97.17	0.02	0.05	0.09	0.10	0.09	0.09	0.15	0.19	0.24	0.25
120.11	0.04	0.04	0.08	0.06	0.04	0.03	0.05	0.11	0.20	0.17
148.47	0.01	0.03	0.05	0.07	0.01	0.02	0.07	0.08	0.11	0.09
183.51	0.01	0.02	0.02	0.02	0.00	0.02	0.04	0.06	0.06	0.06
226.84	0.00	0.01	0.03	0.00	0.00	0.01	0.02	0.03	0.05	0.01
280.38	0.00	0.01	0.01	0.00	0.00	0.01	0.02	0.02	0.01	0.01
346.57	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00
428.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
529.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
654.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
809.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 400keV Si 28 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 100.	200.	300.	400.	500.	O or N recoil atoms (atoms/um/ion) 100.	200.	300.	400.	500.
0.62	27.32	31.88	42.58	56.00	64.74	43.69	54.28	74.58	91.69	127.51
1.87	6.28	6.77	13.05	15.26	14.77	12.19	14.89	21.91	23.01	36.19
3.12	2.34	4.68	6.03	6.89	8.49	7.14	8.98	11.81	15.02	21.17
4.37	1.48	3.32	4.31	5.29	7.39	5.78	6.28	7.01	9.35	15.75
5.62	1.29	1.10	2.94	3.12	3.12	3.21	4.59	4.59	6.61	7.90
7.73	0.86	1.65	1.18	2.27	2.90	2.20	2.12	3.76	4.94	7.21
9.55	0.60	0.98	1.59	1.36	2.41	1.21	2.49	3.02	2.41	4.15
11.80	0.37	0.79	1.04	1.22	1.71	0.79	2.38	1.77	1.95	3.91
14.59	0.44	0.59	1.09	1.04	1.43	0.79	1.33	1.78	1.43	2.96
18.03	0.28	0.44	0.80	0.60	0.84	0.72	0.88	1.08	1.28	2.20
22.29	0.32	0.36	0.55	0.58	0.55	0.52	0.36	1.00	1.33	1.39
27.55	0.18	0.18	0.42	0.81	0.71	0.44	0.44	0.55	1.15	0.89
34.06	0.21	0.17	0.21	0.53	0.44	0.19	0.53	0.57	0.95	0.91
42.10	0.03	0.15	0.24	0.22	0.31	0.20	0.29	0.44	0.55	1.08
52.03	0.15	0.12	0.23	0.31	0.40	0.19	0.32	0.43	0.57	0.57
64.32	0.10	0.08	0.11	0.22	0.21	0.12	0.27	0.25	0.26	0.36
79.50	0.06	0.10	0.08	0.14	0.12	0.09	0.25	0.20	0.21	0.44
98.27	0.04	0.05	0.07	0.06	0.08	0.09	0.09	0.07	0.18	0.32
121.47	0.02	0.02	0.07	0.05	0.06	0.05	0.10	0.15	0.14	0.18
150.14	0.02	0.04	0.06	0.04	0.04	0.05	0.04	0.09	0.12	0.13
185.58	0.01	0.01	0.04	0.02	0.03	0.02	0.05	0.08	0.09	0.07
229.39	0.01	0.01	0.04	0.02	0.02	0.02	0.02	0.05	0.08	0.04
283.54	0.01	0.02	0.01	0.01	0.00	0.01	0.03	0.03	0.03	0.01
350.48	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.01	0.01	0.00
433.22	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00
535.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
661.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
818.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1011.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 100keV Se 79 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 10.	20.	30.	50.	70.	O or N recoil atoms (atoms/um/ion) 10.	20.	30.	50.	70.
0.08	378.67	384.00	418.00	308.67	130.00	436.00	420.00	489.33	318.00	80.00
0.22	832.67	1146.67	1283.33	858.67	286.00	945.33	1273.33	1465.33	975.33	346.67
0.37	930.67	1078.67	1409.33	1060.00	325.33	963.33	1252.00	1418.67	1084.00	326.00
0.52	425.33	579.33	702.00	545.33	140.00	467.33	642.67	714.67	568.00	158.00
0.67	271.61	352.69	447.71	362.14	112.92	309.42	448.70	488.50	394.48	127.35
0.93	205.57	262.06	296.46	262.90	67.11	235.30	347.43	372.48	301.55	93.01
1.15	126.70	175.74	217.43	181.87	40.87	177.79	231.33	263.21	215.80	75.61
1.42	96.88	130.28	167.64	128.95	42.65	125.98	178.22	222.53	170.95	62.49
1.75	70.09	103.26	119.84	102.19	30.50	112.35	139.10	154.62	125.73	43.34
2.16	48.26	70.55	94.79	60.81	21.42	69.47	104.10	123.36	98.90	25.97
2.67	37.47	56.03	68.28	54.28	17.33	56.38	80.71	88.42	70.03	22.94
3.31	27.34	41.79	52.55	37.25	10.77	38.24	56.52	65.02	52.98	18.27
4.09	23.61	34.38	36.44	32.89	8.94	30.02	39.31	50.08	35.87	13.87
5.05	17.15	26.98	29.94	21.32	9.55	19.93	30.69	37.18	32.54	11.96
6.24	10.05	19.58	25.80	17.33	5.55	16.43	25.88	29.40	23.18	8.02
7.72	9.77	14.14	19.24	16.50	5.16	11.71	18.69	22.09	17.78	6.86
9.54	7.90	12.12	15.36	12.08	3.54	8.84	13.16	17.67	13.50	4.37
11.79	5.48	8.22	11.95	9.06	2.94	6.95	10.72	13.34	10.72	4.61
14.58	5.14	7.26	9.19	6.20	2.09	5.75	9.48	11.02	9.16	3.53
18.02	3.22	5.93	7.41	4.91	1.20	4.57	7.46	8.73	7.59	2.94
22.27	2.71	4.65	5.34	3.51	1.45	3.68	6.58	7.34	6.46	2.33
27.53	2.14	3.11	4.20	2.50	0.70	2.70	4.76	5.87	4.82	1.31
34.03	1.62	2.38	2.38	1.42	0.47	2.07	3.48	4.51	2.96	1.24
42.06	0.98	1.65	1.73	0.82	0.21	1.35	2.33	2.72	2.04	0.51
51.99	0.68	0.98	0.94	0.38	0.14	1.23	1.87	2.09	1.25	0.34
64.26	0.35	0.66	0.74	0.31	0.06	0.63	1.05	1.09	0.63	0.14
79.43	0.24	0.25	0.24	0.05	0.03	0.47	0.65	0.51	0.25	0.07
98.18	0.11	0.13	0.07	0.03	0.00	0.23	0.27	0.19	0.08	0.00
121.35	0.03	0.07	0.01	0.00	0.00	0.11	0.12	0.07	0.00	0.00
150.00	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00

Table V: 150keV Se 79 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 20.	40.	60.	80.	100.	O or N recoil atoms (atoms/um/ion) 20.	40.	60.	80.	100.
0.10	423.00	482.00	476.50	309.50	95.00	397.00	577.00	481.00	262.50	109.50
0.30	959.00	1263.50	1220.50	743.50	297.50	1116.00	1367.50	1339.00	862.50	349.00
0.50	446.50	571.50	636.00	391.50	145.00	451.00	620.50	622.50	395.00	156.50
0.70	248.00	322.00	335.50	215.00	77.00	256.00	369.00	372.50	238.00	93.50
0.90	171.99	241.39	241.02	156.32	64.17	206.69	266.39	273.47	168.64	68.65
1.24	124.87	160.55	177.75	117.86	43.64	151.95	223.30	210.24	135.70	56.70
1.53	86.14	114.03	137.63	74.18	35.86	122.92	161.54	153.26	101.15	38.93
1.89	63.24	89.52	89.52	55.80	24.55	92.50	121.51	125.73	78.61	32.49
2.33	46.95	61.99	68.41	50.16	16.45	72.43	89.68	100.71	66.21	27.69
2.89	35.55	50.97	48.86	31.81	13.47	54.05	71.42	68.82	49.83	18.34
3.57	26.00	40.18	39.92	26.26	9.98	35.46	53.97	56.86	35.06	17.07
4.41	20.18	27.51	31.66	19.44	8.18	27.51	43.03	41.75	27.83	11.26
5.45	17.36	24.24	24.84	14.95	7.48	19.17	31.97	27.67	20.37	8.25
6.74	13.63	18.84	20.09	15.16	5.08	14.25	21.90	23.50	14.60	6.33
8.33	9.34	14.63	13.22	8.16	4.16	10.91	17.66	17.83	11.98	6.02
10.29	8.28	10.38	10.74	8.37	2.91	9.33	14.38	14.15	10.42	5.46
12.72	6.78	8.73	9.57	5.52	2.69	7.77	11.23	11.23	7.59	3.57
15.72	4.89	7.86	8.16	4.89	2.14	5.54	9.35	9.86	5.90	3.25
19.43	4.22	6.10	5.98	3.09	1.90	4.39	6.77	7.95	5.69	2.39
24.02	3.26	5.03	4.50	2.85	1.27	3.49	5.77	6.34	3.86	2.05
29.69	2.18	3.67	3.61	2.16	0.65	2.84	4.87	4.04	2.95	1.80
36.70	1.89	2.55	2.28	1.71	0.61	2.07	3.65	3.78	2.40	1.05
45.37	1.34	1.88	1.62	0.82	0.35	1.96	2.86	2.68	1.56	0.66
56.08	0.88	1.19	0.98	0.54	0.12	1.37	1.96	1.86	1.11	0.43
69.31	0.53	0.93	0.62	0.30	0.05	0.98	1.40	1.19	0.60	0.20
85.68	0.37	0.41	0.36	0.09	0.04	0.72	0.86	0.56	0.27	0.14
105.90	0.26	0.25	0.13	0.07	0.01	0.45	0.44	0.30	0.11	0.05
130.90	0.10	0.10	0.04	0.01	0.00	0.20	0.20	0.12	0.07	0.00
161.80	0.03	0.02	0.00	0.00	0.00	0.08	0.07	0.00	0.00	0.00
200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 200keV Se 79 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 25.	50.	75.	100.	125.	O or N recoil atoms (atoms/um/ion) 25.	50.	75.	100.	125.
0.15	552.00	701.33	695.67	463.33	189.67	607.33	759.00	757.33	524.33	208.67
0.45	522.33	711.67	753.33	584.33	248.00	565.00	793.33	845.33	591.00	275.33
0.75	171.00	266.67	277.33	210.67	92.33	200.00	320.00	307.67	249.00	115.00
1.05	130.67	179.67	193.67	142.33	68.67	152.67	222.33	239.33	162.67	71.67
1.35	92.53	127.85	139.54	88.05	41.54	116.90	167.14	173.61	116.40	64.67
1.85	61.16	95.78	86.43	71.99	36.10	91.32	121.05	118.71	100.45	44.81
2.29	44.14	69.68	76.02	45.37	21.25	62.33	97.48	93.18	70.50	30.65
2.83	37.03	52.24	56.54	42.65	20.67	53.90	70.93	75.89	55.05	23.81
3.50	25.01	38.65	40.93	27.42	12.71	38.39	54.84	59.39	43.87	19.13
4.33	20.02	29.22	32.03	21.64	10.60	26.40	40.58	43.61	34.95	13.53
5.35	14.36	21.89	25.65	18.73	8.32	21.71	30.90	30.03	25.30	10.85
6.61	12.11	18.34	19.83	13.88	6.59	14.87	25.43	25.78	16.36	10.69
8.17	10.14	15.13	15.07	10.20	5.39	12.43	16.39	19.71	14.38	7.56
10.10	6.72	10.29	12.84	7.70	4.03	8.90	13.91	15.67	11.68	5.10
12.49	5.10	9.04	9.34	5.96	3.41	7.24	11.29	11.14	7.91	4.80
15.44	3.94	6.13	7.71	5.46	2.70	5.70	7.61	9.16	7.25	3.67
19.08	3.58	5.77	6.26	5.08	1.96	4.10	6.11	7.83	5.99	3.46
23.58	3.28	5.18	5.18	3.43	1.73	3.32	5.38	5.80	4.77	2.22
29.15	2.47	3.74	3.68	2.63	1.24	3.04	4.48	4.58	3.55	1.82
36.03	1.83	2.70	2.96	2.13	0.81	2.27	3.56	3.74	2.74	1.70
44.54	1.37	1.98	1.98	1.39	0.51	1.74	2.85	3.33	2.03	1.16
55.05	0.88	1.50	1.49	0.78	0.35	1.36	2.17	2.16	1.39	0.65
68.05	0.61	0.99	0.94	0.53	0.27	1.04	1.60	1.45	0.92	0.41
84.12	0.54	0.62	0.65	0.26	0.18	0.65	1.04	1.12	0.55	0.23
103.97	0.28	0.42	0.37	0.11	0.04	0.48	0.76	0.61	0.26	0.10
128.52	0.17	0.15	0.14	0.03	0.02	0.29	0.38	0.22	0.15	0.02
158.85	0.09	0.08	0.05	0.01	0.00	0.20	0.15	0.09	0.02	0.01
196.35	0.02	0.03	0.00	0.00	0.00	0.06	0.08	0.02	0.00	0.00
242.71	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 300keV Se 79 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 30.	60.	100.	125.	175.	O or N recoil atoms (atoms/um/ion) 30.	60.	100.	125.	175.
0.20	455.50	584.50	587.50	579.00	226.25	492.00	647.50	701.25	633.25	244.00
0.60	177.75	253.50	342.00	330.50	151.00	187.00	276.75	357.25	352.25	153.00
1.00	98.75	137.50	169.50	156.50	75.25	101.00	151.25	183.75	180.25	76.50
1.40	67.50	85.00	111.25	104.00	43.25	88.00	118.50	133.75	132.25	51.75
1.80	47.01	66.78	80.40	79.10	34.32	70.14	91.03	107.08	111.37	41.97
2.47	34.24	50.49	59.73	54.47	21.50	47.62	61.48	78.52	76.13	33.92
3.06	23.91	33.26	44.29	42.45	17.62	34.33	41.69	58.85	60.08	25.90
3.78	15.62	24.80	32.49	30.50	12.65	30.13	40.30	42.65	43.65	19.72
4.67	15.35	21.37	24.78	25.98	10.13	19.56	26.28	35.21	33.00	14.44
5.77	12.42	15.26	19.23	18.18	8.03	15.42	21.34	26.21	25.24	11.60
7.13	9.85	11.49	15.23	15.36	5.71	11.29	16.68	20.42	20.55	8.93
8.82	6.32	10.36	12.27	11.10	5.05	8.07	12.43	16.25	14.98	7.12
10.90	4.51	8.42	10.27	9.63	3.70	6.83	8.47	11.86	11.60	5.37
13.47	4.21	5.60	6.68	7.02	3.62	4.62	7.37	7.89	8.24	4.28
16.65	3.40	4.61	5.96	6.07	2.92	3.40	5.60	7.31	7.45	3.04
20.58	2.87	4.60	5.01	5.10	2.14	2.91	4.89	5.89	5.37	2.80
25.44	1.71	2.96	3.96	3.41	2.03	1.95	3.52	4.55	4.86	2.10
31.45	1.50	2.62	3.26	3.02	1.41	1.73	3.14	3.62	3.57	1.76
38.87	1.25	1.92	2.89	2.18	1.10	1.36	2.76	3.30	2.86	1.78
48.04	0.99	1.40	1.96	1.93	0.95	1.24	2.00	2.45	2.32	1.10
59.39	0.80	1.15	1.60	1.39	0.56	1.11	1.89	2.25	1.82	0.72
73.41	0.71	0.80	1.12	0.93	0.24	0.70	1.34	1.46	1.56	0.56
90.73	0.36	0.68	0.68	0.70	0.20	0.62	1.04	1.09	0.99	0.41
112.15	0.27	0.49	0.46	0.36	0.08	0.40	0.59	0.75	0.53	0.18
138.63	0.22	0.29	0.31	0.18	0.06	0.29	0.42	0.38	0.31	0.04
171.35	0.15	0.21	0.13	0.08	0.02	0.16	0.32	0.21	0.10	0.02
211.81	0.05	0.08	0.05	0.03	0.00	0.13	0.13	0.09	0.04	0.00
261.80	0.02	0.04	0.00	0.00	0.00	0.04	0.03	0.01	0.01	0.00
323.61	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 400keV Se 79 in Si3N4 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 50.	100.	150.	200.	250.	O or N recoil atoms (atoms/um/ion) 50.	100.	150.	200.	250.
0.25	344.20	459.80	483.00	355.80	142.00	375.40	500.00	521.20	378.80	150.40
0.75	120.60	171.80	202.00	150.60	58.00	107.60	176.00	211.80	157.20	67.40
1.25	64.80	98.40	107.00	82.60	32.20	76.60	109.20	125.20	95.60	36.20
1.75	47.40	69.20	80.80	51.60	24.20	73.60	83.40	89.80	67.20	26.20
2.25	33.43	47.01	56.71	48.80	13.43	42.98	62.23	72.98	48.95	16.86
3.09	23.19	36.31	37.59	29.43	10.83	32.36	44.72	49.06	37.46	14.65
3.82	18.15	25.50	29.06	22.07	6.99	24.89	31.14	40.46	30.28	12.02
4.72	13.59	21.03	23.01	16.47	6.45	20.83	28.77	31.84	24.00	8.93
5.84	11.40	15.97	17.66	13.16	3.93	14.52	20.30	23.92	16.21	6.82
7.21	8.64	12.85	15.06	7.34	3.18	12.08	17.33	21.17	14.28	5.78
8.92	6.62	8.72	10.72	8.14	2.94	8.61	13.13	14.50	11.14	3.78
11.02	4.67	7.22	6.97	6.33	2.42	5.44	8.58	10.45	7.78	2.89
13.62	3.71	5.64	7.22	5.71	1.72	4.47	7.91	8.32	5.84	3.03
16.84	3.28	5.17	6.09	4.06	1.53	3.50	6.26	6.59	4.89	2.11
20.81	2.59	4.39	4.36	3.26	1.49	2.79	4.43	5.72	4.12	1.22
25.73	2.33	3.15	3.59	2.66	1.07	2.09	3.75	4.06	2.97	1.62
31.80	1.77	2.40	3.39	1.90	0.77	1.69	3.05	3.08	2.65	1.25
39.31	1.37	2.24	2.20	1.54	0.54	1.31	2.31	2.67	2.42	0.96
48.59	1.34	1.43	1.92	1.34	0.43	1.23	1.86	2.16	1.61	0.57
60.06	0.80	1.24	1.37	0.90	0.43	1.03	1.61	1.53	1.21	0.51
74.23	0.62	0.98	1.17	0.73	0.30	0.76	1.39	1.32	0.98	0.42
91.76	0.42	0.75	0.83	0.55	0.18	0.59	1.03	1.03	0.71	0.24
113.42	0.39	0.58	0.50	0.23	0.07	0.52	0.86	0.81	0.45	0.14
140.19	0.24	0.35	0.36	0.15	0.07	0.42	0.49	0.44	0.27	0.04
173.29	0.19	0.24	0.19	0.08	0.00	0.24	0.32	0.29	0.10	0.02
214.19	0.12	0.13	0.10	0.04	0.00	0.14	0.14	0.09	0.02	0.01
264.76	0.05	0.08	0.03	0.01	0.00	0.09	0.07	0.04	0.00	0.00
327.26	0.03	0.02	0.01	0.00	0.00	0.04	0.02	0.00	0.00	0.00
404.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 100keV Se 79 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 10.	20.	30.	50.	70.	O or N recoil atoms (atoms/um/ion) 10.	20.	30.	50.	70.
0.08	202.00	224.00	194.67	272.00	248.67	277.33	381.33	417.33	395.33	307.33
0.22	368.00	500.00	582.00	637.33	550.00	706.00	863.33	997.33	1209.33	908.67
0.37	437.33	574.00	674.00	764.00	640.67	719.33	934.67	1118.67	1312.00	1081.33
0.52	234.67	338.00	391.33	450.00	370.67	428.67	564.00	645.33	738.67	632.67
0.67	156.70	216.89	255.19	291.51	227.83	254.20	378.56	460.64	536.75	442.23
0.93	103.21	157.15	178.38	203.44	169.89	199.20	265.03	318.12	382.25	312.60
1.15	83.38	96.46	124.25	154.08	116.89	147.13	201.08	250.13	282.01	238.68
1.42	51.58	74.73	97.21	110.77	91.26	104.49	156.07	190.46	225.84	175.58
1.75	41.73	48.95	75.44	81.59	66.88	81.32	120.64	146.59	165.59	132.41
2.16	30.08	40.25	47.40	54.10	44.37	59.73	81.81	92.63	120.33	105.39
2.67	18.03	27.84	32.92	46.40	38.34	40.97	55.15	70.91	82.82	81.24
3.31	14.31	20.82	26.77	33.71	31.30	31.73	44.48	54.68	58.36	59.63
4.09	10.89	18.45	21.20	23.95	20.63	24.07	27.04	40.57	50.08	38.39
5.05	9.64	10.01	17.52	21.23	17.52	16.50	22.90	31.34	40.51	31.71
6.24	5.25	9.82	12.45	14.48	13.43	12.38	17.18	24.98	29.70	24.83
7.72	5.64	8.43	12.07	13.35	11.47	8.68	14.62	17.84	23.60	19.11
9.54	4.42	6.53	9.23	12.08	10.21	6.87	10.56	14.68	17.77	16.84
11.79	3.61	4.57	7.78	9.45	8.70	6.00	9.69	12.67	15.01	13.70
14.58	2.44	4.37	5.40	6.88	5.98	4.14	7.58	10.41	12.79	10.25
18.02	1.61	3.48	4.55	5.46	4.60	3.90	6.47	8.01	10.76	9.49
22.27	1.37	2.67	4.25	4.48	2.96	2.88	4.90	7.07	8.79	7.23
27.53	1.04	1.58	2.50	3.30	2.13	2.11	4.03	5.39	7.28	5.10
34.03	0.79	1.50	1.50	1.98	1.45	1.76	2.93	4.28	4.72	4.50
42.06	0.49	1.05	1.31	1.33	0.87	1.44	2.34	3.23	3.02	2.28
51.99	0.31	0.62	0.86	0.67	0.42	0.90	1.69	1.97	2.27	1.66
64.26	0.22	0.43	0.56	0.48	0.31	0.47	1.08	1.24	1.36	0.82
79.43	0.15	0.26	0.25	0.17	0.14	0.40	0.53	0.66	0.58	0.68
98.18	0.08	0.12	0.09	0.07	0.00	0.22	0.19	0.39	0.36	0.00
121.35	0.01	0.04	0.04	0.00	0.00	0.07	0.13	0.12	0.00	0.00
150.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00

Table V: 150keV Se 79 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 20.	40.	60.	80.	100.	O or N recoil atoms (atoms/um/ion) 20.	40.	60.	80.	100.
0.10	207.50	249.50	249.00	294.00	258.50	429.00	438.00	542.00	471.00	405.00
0.30	417.50	563.50	659.00	682.50	554.50	713.00	944.50	1105.00	1163.50	972.00
0.50	228.50	300.00	383.00	405.50	362.50	412.00	555.50	611.50	679.50	583.50
0.70	131.00	173.50	226.00	242.00	204.50	223.00	317.00	396.50	412.50	357.50
0.90	97.00	113.05	155.58	162.29	137.30	174.98	232.06	293.99	298.47	246.99
1.24	69.44	84.10	109.26	109.58	105.44	131.56	172.65	212.79	227.44	215.34
1.53	43.83	72.95	87.67	83.38	78.78	103.61	138.86	171.04	167.67	153.57
1.89	37.69	49.60	60.51	62.74	58.53	80.10	103.16	126.72	126.47	113.58
2.33	29.29	32.10	43.54	50.36	46.95	55.17	73.43	89.08	95.50	80.65
2.89	19.64	23.86	34.25	34.08	30.19	36.20	55.35	72.72	66.39	66.06
3.57	13.00	20.22	26.79	26.39	22.06	30.73	43.47	50.03	54.76	43.07
4.41	9.88	15.30	18.59	23.80	18.70	22.84	33.36	39.73	40.79	35.06
5.45	8.51	14.10	15.64	16.93	15.81	15.21	24.41	32.14	34.81	26.39
6.74	6.95	10.36	12.17	15.65	12.03	11.33	16.90	22.60	22.25	21.49
8.33	4.50	8.16	8.72	11.42	10.35	8.21	14.06	15.75	18.84	17.21
10.29	4.51	6.92	8.83	7.96	7.42	6.46	10.60	13.84	14.20	15.02
12.72	3.90	6.04	7.29	8.61	6.74	5.97	8.69	12.19	12.22	11.05
15.72	3.07	4.62	6.61	5.99	5.48	4.32	7.39	10.22	10.52	9.59
19.43	2.12	3.86	4.05	4.84	3.66	3.01	6.41	7.54	8.77	7.66
24.02	1.77	2.94	3.72	3.65	2.79	3.08	5.03	7.53	7.16	6.18
29.69	1.26	2.04	2.74	2.82	2.32	2.56	4.02	5.43	6.26	5.60
36.70	0.96	1.53	2.14	1.91	1.60	1.97	3.46	4.47	4.55	3.76
45.37	0.75	1.12	1.34	1.30	1.28	1.41	2.76	2.98	3.27	3.05
56.08	0.48	0.97	1.01	0.94	0.72	1.06	1.75	2.38	2.59	1.69
69.31	0.43	0.55	0.71	0.60	0.49	0.92	1.40	1.83	1.66	1.16
85.68	0.21	0.42	0.42	0.31	0.25	0.55	0.84	1.18	0.88	0.45
105.90	0.12	0.19	0.18	0.14	0.08	0.34	0.53	0.49	0.44	0.43
130.90	0.05	0.06	0.11	0.07	0.00	0.17	0.25	0.35	0.29	0.00
161.80	0.04	0.03	0.00	0.00	0.00	0.11	0.14	0.00	0.00	0.00
200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 200keV Se 79 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 25.	50.	75.	100.	125.	O or N recoil atoms (atoms/um/ion) 25.	50.	75.	100.	125.
0.15	240.00	342.00	361.33	386.00	373.00	411.33	548.67	638.67	681.33	601.00
0.45	250.00	369.67	444.33	482.67	441.00	470.67	608.33	706.00	805.33	695.67
0.75	117.67	146.67	166.00	200.33	195.33	176.67	252.00	312.67	369.00	328.67
1.05	67.67	95.33	119.67	146.33	119.33	141.67	184.67	221.00	249.33	232.67
1.35	54.72	74.12	93.77	90.79	85.56	105.21	148.49	166.65	194.01	173.36
1.85	31.64	51.60	60.74	70.29	60.52	71.78	93.65	132.30	145.89	136.34
2.29	27.59	37.40	41.48	50.07	42.30	56.61	78.47	96.86	100.95	87.26
2.83	21.66	25.96	31.58	36.87	31.58	46.46	55.22	80.51	77.37	75.22
3.50	11.77	18.86	28.22	28.35	25.95	31.70	45.61	51.09	61.93	52.43
4.33	10.39	14.82	17.64	22.94	20.56	22.72	29.97	38.63	43.07	38.31
5.35	8.75	12.08	16.19	18.73	15.06	15.93	23.02	28.98	32.57	29.33
6.61	5.31	8.64	10.55	13.24	11.33	12.11	19.97	22.81	26.77	22.10
8.17	4.99	7.62	9.23	10.72	9.17	8.65	14.90	16.39	20.00	18.91
10.10	3.99	6.16	7.42	9.78	8.53	6.63	11.03	13.40	15.62	13.91
12.49	2.74	5.03	6.79	7.87	6.26	4.99	7.76	11.66	13.05	10.80
15.44	2.43	4.82	4.98	4.89	5.55	4.03	6.89	8.89	9.65	9.56
19.08	2.40	3.34	4.17	4.89	4.17	3.95	4.96	7.51	8.64	7.63
23.58	1.69	2.80	3.57	3.40	3.83	2.78	4.86	5.76	7.15	6.20
29.15	1.43	2.30	2.52	2.92	2.59	2.52	3.94	4.92	6.11	5.37
36.03	1.07	1.78	2.14	2.52	1.98	1.60	3.13	4.24	4.72	4.74
44.54	0.89	1.19	1.57	1.46	1.35	1.58	2.66	3.48	4.00	3.44
55.05	0.42	0.88	1.17	1.23	1.10	1.02	2.13	2.63	2.82	2.54
68.05	0.38	0.58	0.81	0.72	0.55	0.97	1.44	1.75	1.82	1.84
84.12	0.33	0.47	0.64	0.60	0.38	0.61	1.01	1.34	1.30	1.12
103.97	0.19	0.33	0.32	0.25	0.23	0.43	0.69	0.83	0.64	0.56
128.52	0.08	0.20	0.17	0.15	0.07	0.24	0.51	0.46	0.38	0.30
158.85	0.07	0.06	0.06	0.04	0.04	0.14	0.20	0.20	0.20	0.09
196.35	0.02	0.02	0.03	0.01	0.00	0.07	0.09	0.09	0.04	0.00
242.71	0.01	0.00	0.01	0.00	0.00	0.02	0.02	0.01	0.00	0.00
300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 300keV Se 79 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 30.	60.	100.	125.	175.	O or N recoil atoms (atoms/um/ion) 30.	60.	100.	125.	175.
0.20	219.50	266.50	315.25	321.00	351.50	406.50	441.75	572.25	601.25	599.50
0.60	111.50	147.75	188.50	222.00	227.25	185.50	234.00	315.50	347.50	367.75
1.00	50.50	71.00	97.00	107.50	115.25	98.25	135.50	174.75	189.25	200.25
1.40	37.75	57.00	65.25	76.00	74.75	76.50	107.75	135.00	131.25	155.50
1.80	28.17	33.95	42.35	52.05	50.55	60.25	71.45	100.36	99.43	97.75
2.47	18.00	26.12	32.01	41.57	35.04	39.82	52.08	69.44	75.97	78.68
3.06	11.65	21.46	23.45	25.90	30.50	30.19	40.62	58.70	59.16	59.31
3.78	11.16	15.75	18.97	21.08	25.67	24.06	32.86	39.68	45.38	45.26
4.67	9.43	11.84	15.95	17.25	15.95	17.45	21.87	26.58	30.30	33.00
5.77	5.11	7.39	11.60	11.36	15.74	11.60	19.40	20.29	23.70	28.57
7.13	5.19	6.76	9.78	8.53	10.97	9.85	12.67	18.12	18.19	19.83
8.82	3.66	5.36	7.17	7.70	8.29	6.80	9.08	13.33	13.55	14.82
10.90	3.48	3.83	5.46	5.67	6.92	5.07	7.39	11.09	10.36	13.58
13.47	1.91	3.44	4.62	5.49	4.66	4.45	6.50	7.79	8.83	9.73
16.65	1.74	2.87	3.74	4.14	4.19	2.81	4.78	6.50	8.04	7.43
20.58	1.25	2.57	3.03	3.66	3.64	2.12	3.76	5.37	6.76	6.49
25.44	1.23	1.69	2.50	3.07	2.94	2.21	3.28	4.86	4.84	5.41
31.45	0.89	1.82	1.95	2.59	2.52	1.30	2.40	3.90	4.47	4.51
38.87	0.71	1.58	1.76	1.79	1.83	1.36	1.95	3.07	3.82	3.76
48.04	0.56	1.10	1.44	1.69	1.43	1.09	1.87	2.85	2.94	3.16
59.39	0.42	0.69	1.07	1.15	0.93	0.89	1.33	2.04	2.22	2.40
73.41	0.28	0.52	0.75	0.71	0.74	0.61	1.19	1.68	1.89	1.93
90.73	0.22	0.41	0.66	0.68	0.49	0.55	0.86	1.23	1.40	1.20
112.15	0.25	0.28	0.40	0.38	0.31	0.35	0.63	0.87	0.96	0.81
138.63	0.11	0.18	0.20	0.26	0.21	0.28	0.40	0.55	0.51	0.41
171.35	0.06	0.10	0.15	0.12	0.11	0.13	0.26	0.32	0.33	0.22
211.81	0.03	0.06	0.04	0.05	0.02	0.09	0.15	0.15	0.12	0.10
261.80	0.03	0.03	0.03	0.02	0.00	0.04	0.07	0.05	0.04	0.00
323.61	0.01	0.01	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00
400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table V: 400keV Se 79 in SiO2 on GaAs

GaAs Depth	Si recoil atoms (atoms/um/ion) Cap thickness (nm) 50.	100.	150.	200.	250.	O or N recoil atoms (atoms/um/ion) 50.	100.	150.	200.	250.
0.25	170.00	206.20	266.80	295.40	298.00	287.60	371.60	460.20	547.60	513.40
0.75	68.60	89.40	107.80	136.20	132.00	108.20	145.60	198.80	223.40	229.80
1.25	35.60	51.40	59.60	74.20	75.40	66.80	94.80	119.80	141.20	137.80
1.75	29.20	36.80	45.00	55.20	51.60	56.80	74.60	88.80	110.80	97.00
2.25	16.42	25.97	30.89	40.59	35.22	41.64	53.13	66.26	80.59	78.65
3.09	14.53	19.50	23.19	24.72	23.70	26.76	38.86	48.93	57.59	50.58
3.82	9.32	14.35	18.39	21.21	19.62	24.03	28.45	35.68	42.30	41.44
4.72	6.94	10.91	13.39	14.38	14.68	17.46	20.43	32.24	30.95	29.66
5.84	5.46	7.86	10.19	12.68	12.92	12.12	15.17	22.95	24.56	25.20
7.21	4.16	6.23	7.99	9.67	8.64	9.61	12.85	18.44	19.54	16.04
8.92	2.78	5.25	6.93	7.98	6.57	6.30	9.03	12.45	14.55	13.45
11.02	2.93	4.46	4.93	5.74	5.23	4.76	6.29	10.92	10.71	9.90
13.62	1.96	3.64	4.71	5.50	4.68	3.37	5.43	7.60	7.94	8.87
16.84	1.42	2.84	3.42	4.51	3.50	3.14	4.03	5.53	6.26	7.37
20.81	1.33	1.98	2.97	3.04	3.24	2.52	3.78	4.66	6.05	5.49
25.73	1.13	2.38	2.20	2.91	2.42	1.67	2.64	3.82	5.13	3.97
31.80	0.82	1.63	1.87	2.27	2.33	1.06	2.30	3.62	3.59	3.65
39.31	0.65	1.44	1.55	1.75	1.81	1.04	2.07	3.16	3.09	2.76
48.59	0.57	0.95	1.36	1.61	1.35	1.11	1.64	2.47	2.52	2.69
60.06	0.48	0.71	1.11	1.23	1.15	0.74	1.57	2.14	2.48	2.12
74.23	0.40	0.63	0.80	0.93	0.80	0.49	1.45	1.65	1.75	1.68
91.76	0.29	0.41	0.61	0.66	0.52	0.59	0.93	1.27	1.42	1.21
113.42	0.20	0.38	0.47	0.43	0.34	0.42	0.66	0.96	1.04	0.79
140.19	0.15	0.22	0.38	0.27	0.20	0.28	0.50	0.59	0.64	0.54
173.29	0.09	0.17	0.20	0.15	0.15	0.25	0.33	0.38	0.39	0.28
214.19	0.06	0.13	0.12	0.11	0.05	0.12	0.21	0.25	0.19	0.12
264.76	0.04	0.07	0.06	0.05	0.02	0.10	0.09	0.12	0.06	0.04
327.26	0.02	0.04	0.01	0.01	0.00	0.04	0.06	0.03	0.01	0.00
404.51	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table VI. Recoil-Ion Distribution Parameters

Table VI is on following pages: pages 390 through 413.

Table VI. Recoil-ion Distribution Parameters

To calculate the recoil-atom concentration for Si or Se ion implantation through Si_3N_4 or SiO_2 caps, find the appropriate three tables of A,a, and n. On the bottom of each page, the Ion/Cap material/Recoil-atom/parameter are summarized.

To obtain n, A, or a divide your cap thickness by the Rp value for your ion energy, and look across the row for the closest t/Rp value, and interpolate.

The distribution is calculated using

$$R(x) = \frac{A}{x^n + 0.1} \exp\left(-(x/a)^2\right) \qquad (2\text{-}1)$$

where the depth x and a are in nm, and A is in recoil atoms/μm/ion, so multiply A by your implant dose. (In the range-scaling method, one often calculates the dose in the GaAs, taking account of the dose lost in the cap material. However, in this calculation use the **incident** dose.)

Contents of Table VI.

Recoil Distribution Parameters for Si, Se in SiO2 and Si3N4 for energies from 50 to 400keV.

Table VI: Recoil Distribution Parameters

Ion: Si Material: Si3N4 density = 3.0 Recoil atom: Si Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	1.62	1.61	1.59	1.58	1.59	1.60	1.62	1.65	1.68	1.71	1.74	1.77	1.81
60	63.5	1.63	1.60	1.57	1.55	1.55	1.55	1.57	1.60	1.62	1.65	1.68	1.70	1.73
70	73.3	1.63	1.59	1.54	1.52	1.51	1.51	1.52	1.55	1.57	1.59	1.62	1.64	1.66
80	83.1	1.62	1.57	1.52	1.48	1.47	1.47	1.48	1.50	1.52	1.55	1.57	1.58	1.60
90	93.0	1.60	1.55	1.49	1.45	1.43	1.43	1.44	1.46	1.48	1.51	1.52	1.54	1.55
100	103.0	1.57	1.52	1.46	1.42	1.40	1.40	1.41	1.43	1.46	1.48	1.50	1.52	1.53
110	113.0	1.52	1.47	1.42	1.38	1.37	1.38	1.39	1.42	1.44	1.47	1.49	1.52	1.54
120	123.1	1.46	1.42	1.39	1.35	1.34	1.36	1.38	1.41	1.43	1.46	1.49	1.53	1.57
130	133.1	1.40	1.37	1.35	1.32	1.32	1.34	1.38	1.41	1.43	1.46	1.50	1.55	1.60
140	143.1	1.34	1.33	1.31	1.29	1.29	1.33	1.38	1.40	1.43	1.46	1.51	1.57	1.63
150	152.9	1.30	1.30	1.28	1.26	1.27	1.32	1.37	1.40	1.42	1.46	1.51	1.58	1.65
160	162.5	1.29	1.28	1.26	1.23	1.24	1.30	1.36	1.39	1.41	1.44	1.50	1.57	1.65
170	172.0	1.29	1.28	1.24	1.21	1.22	1.28	1.34	1.38	1.40	1.42	1.47	1.55	1.62
180	181.4	1.31	1.28	1.23	1.19	1.20	1.26	1.33	1.37	1.38	1.39	1.44	1.52	1.59
190	190.9	1.34	1.30	1.23	1.18	1.18	1.24	1.31	1.35	1.36	1.37	1.41	1.49	1.56
200	200.4	1.36	1.31	1.23	1.18	1.18	1.23	1.30	1.34	1.34	1.34	1.39	1.46	1.53
210	210.1	1.38	1.33	1.25	1.19	1.18	1.23	1.29	1.33	1.32	1.32	1.37	1.44	1.52
220	219.9	1.39	1.34	1.26	1.20	1.19	1.23	1.29	1.32	1.31	1.31	1.36	1.44	1.51
230	229.8	1.39	1.35	1.28	1.23	1.21	1.24	1.29	1.31	1.30	1.31	1.36	1.44	1.52
240	239.8	1.39	1.36	1.30	1.25	1.23	1.25	1.29	1.31	1.30	1.31	1.36	1.45	1.53
250	249.7	1.39	1.37	1.32	1.28	1.26	1.27	1.29	1.30	1.30	1.31	1.37	1.46	1.55
260	259.7	1.38	1.37	1.34	1.31	1.29	1.29	1.29	1.30	1.30	1.32	1.38	1.47	1.58
270	269.6	1.37	1.38	1.36	1.34	1.32	1.30	1.30	1.30	1.30	1.32	1.39	1.49	1.60
280	279.5	1.36	1.38	1.38	1.37	1.34	1.32	1.30	1.29	1.30	1.33	1.40	1.51	1.62
290	289.2	1.34	1.37	1.39	1.39	1.36	1.33	1.30	1.29	1.30	1.34	1.42	1.52	1.65
300	298.7	1.33	1.37	1.40	1.40	1.37	1.33	1.30	1.29	1.30	1.35	1.43	1.54	1.66
310	308.1	1.32	1.36	1.40	1.40	1.38	1.33	1.30	1.28	1.30	1.35	1.43	1.55	1.67
320	317.2	1.31	1.35	1.39	1.40	1.37	1.33	1.29	1.28	1.30	1.35	1.44	1.55	1.68
330	326.2	1.30	1.34	1.38	1.39	1.36	1.32	1.28	1.27	1.30	1.35	1.44	1.55	1.68
340	335.1	1.29	1.32	1.36	1.37	1.34	1.30	1.27	1.26	1.29	1.35	1.44	1.55	1.67
350	343.9	1.28	1.31	1.34	1.34	1.32	1.28	1.25	1.25	1.29	1.35	1.44	1.55	1.67
360	352.5	1.27	1.29	1.31	1.31	1.29	1.26	1.24	1.25	1.28	1.35	1.44	1.54	1.65
370	361.1	1.26	1.27	1.29	1.28	1.26	1.23	1.22	1.24	1.28	1.35	1.43	1.53	1.64
380	369.7	1.25	1.25	1.26	1.24	1.22	1.21	1.21	1.23	1.27	1.34	1.42	1.52	1.62
390	378.1	1.24	1.23	1.22	1.20	1.19	1.18	1.19	1.22	1.27	1.34	1.42	1.51	1.60
400	386.6	1.23	1.21	1.19	1.17	1.15	1.15	1.17	1.21	1.26	1.33	1.41	1.50	1.58

Si/Si3N4/Si/n

Table VI: Recoil Distribution Parameters

Ion: Si Material: Si3N4 density = 3.0 Recoil atom: Si Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	80	102	124	145	162	175	181	178	167	149	129	107	85
60	63.5	75	94	114	133	148	158	163	160	151	137	119	99	78
70	73.3	69	86	104	121	134	142	145	143	137	125	110	92	71
80	83.1	63	78	94	109	120	127	129	128	124	115	102	85	66
90	93.0	58	71	85	97	107	113	115	116	113	107	96	80	61
100	103.0	52	64	76	86	95	101	105	106	106	101	92	77	58
110	113.0	46	57	67	76	84	91	97	101	102	99	90	76	57
120	123.1	41	50	59	66	74	84	93	99	101	99	90	76	58
130	133.1	37	45	52	58	66	78	90	98	102	100	91	77	59
140	143.1	33	40	46	50	59	73	88	98	103	101	92	78	60
150	152.9	31	37	41	44	53	68	85	97	103	101	92	78	61
160	162.5	30	35	38	40	48	64	82	95	100	99	90	77	62
170	172.0	31	34	35	37	44	60	78	91	96	95	87	75	61
180	181.4	32	34	34	35	42	57	74	86	91	89	82	72	60
190	190.9	33	35	33	34	40	54	69	81	85	84	78	68	59
200	200.4	34	35	33	34	39	52	66	76	80	79	73	65	57
210	210.1	34	35	33	34	39	50	62	72	76	75	70	62	55
220	219.9	33	35	33	34	39	49	60	69	73	72	67	60	53
230	229.8	32	34	34	35	40	48	58	66	70	69	65	58	51
240	239.8	30	33	34	36	41	48	57	65	68	67	63	56	49
250	249.7	28	32	34	37	42	49	56	63	66	66	62	55	47
260	259.7	26	31	34	38	43	49	56	62	65	65	61	54	46
270	269.6	23	30	35	39	44	49	55	61	65	65	60	53	44
280	279.5	21	28	35	40	45	49	55	61	64	64	60	52	43
290	289.2	19	27	34	40	45	49	54	60	64	64	60	52	42
300	298.7	17	26	34	40	45	49	54	59	63	64	60	51	41
310	308.1	15	24	33	39	44	48	53	58	62	63	59	51	40
320	317.2	14	23	32	38	43	47	51	57	61	63	59	51	40
330	326.2	13	21	30	37	41	45	49	55	60	62	59	51	40
340	335.1	12	20	28	35	39	43	47	53	59	62	59	51	40
350	343.9	11	19	27	32	36	40	45	52	58	61	58	51	40
360	352.5	11	18	24	29	34	38	43	50	56	60	58	51	40
370	361.1	10	16	22	27	30	35	40	48	55	59	58	51	41
380	369.7	10	15	20	24	27	32	38	45	53	58	57	51	41
390	378.1	10	14	17	20	24	29	35	43	52	57	57	51	42
400	386.6	10	13	15	17	20	25	32	41	50	57	57	51	43

Si/Si3N4/Si/A

Table VI: Recoil Distribution Parameters

Ion: Si Material: Si3N4 density = 3.0 Recoil atom: Si Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	80	70	61	54	50	49	48	47	45	41	38	36	34
60	63.5	88	79	70	62	58	56	54	51	47	43	40	38	36
70	73.3	97	88	78	71	66	62	59	55	50	45	41	40	39
80	83.1	105	96	87	79	73	69	64	59	53	48	44	42	42
90	93.0	113	104	95	87	81	75	70	64	57	51	47	45	44
100	103.0	120	111	102	94	87	81	75	69	62	55	51	48	47
110	113.0	127	118	110	101	93	87	81	74	67	61	56	52	50
120	123.1	134	125	116	107	99	92	86	80	73	67	61	57	53
130	133.1	141	132	123	113	104	98	92	86	79	73	67	61	55
140	143.1	150	140	130	119	110	103	98	92	85	78	71	64	57
150	152.9	160	149	137	125	115	109	105	98	90	82	74	66	58
160	162.5	173	159	145	131	120	116	112	104	94	84	75	66	57
170	172.0	187	171	153	137	126	122	119	111	97	84	73	65	56
180	181.4	201	183	162	144	133	129	126	116	100	83	72	63	55
190	190.9	215	196	172	153	141	137	133	121	102	82	70	62	54
200	200.4	227	208	184	163	150	144	139	126	103	82	68	61	53
210	210.1	237	220	197	176	160	152	145	129	105	82	68	61	54
220	219.9	245	231	210	190	172	160	149	131	106	83	70	63	55
230	229.8	251	241	225	205	184	167	152	133	108	85	72	65	58
240	239.8	256	251	240	220	197	175	155	134	109	88	75	68	60
250	249.7	260	261	255	236	209	182	158	135	111	91	79	71	64
260	259.7	264	270	269	252	222	189	160	135	112	94	83	75	67
270	269.6	268	279	283	266	233	195	161	135	114	98	87	79	71
280	279.5	272	288	295	280	244	201	163	136	116	102	91	82	74
290	289.2	277	296	307	291	253	206	164	136	118	105	95	86	77
300	298.7	283	304	316	300	260	210	166	137	120	108	98	89	79
310	308.1	291	311	323	307	265	213	168	139	122	111	101	91	81
320	317.2	301	318	329	311	268	215	170	141	124	113	103	92	82
330	326.2	312	326	333	313	269	217	173	144	126	115	104	93	83
340	335.1	324	333	335	312	269	218	175	147	129	116	105	94	83
350	343.9	337	339	336	310	267	219	178	150	131	118	105	94	83
360	352.5	352	346	336	307	264	219	181	154	134	119	105	93	83
370	361.1	367	353	335	302	260	219	184	157	137	120	105	93	82
380	369.7	382	359	333	297	256	218	187	161	140	120	105	92	81
390	378.1	398	366	331	291	251	217	190	166	142	121	104	91	80
400	386.6	414	372	329	285	246	216	193	170	145	122	103	90	78

Si/Si3N4/Si/a

Table VI: Recoil Distribution Parameters

Ion: Si Material: Si3N4 density = 3.0 Recoil atom: N Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	1.62	1.58	1.54	1.51	1.50	1.50	1.50	1.50	1.49	1.47	1.46	1.46	1.47
60	63.5	1.62	1.57	1.53	1.49	1.48	1.48	1.48	1.48	1.46	1.45	1.44	1.44	1.45
70	73.3	1.61	1.57	1.51	1.47	1.46	1.45	1.45	1.45	1.44	1.43	1.42	1.43	1.43
80	83.1	1.61	1.56	1.50	1.46	1.44	1.43	1.43	1.43	1.42	1.41	1.41	1.41	1.42
90	93.0	1.60	1.54	1.49	1.44	1.42	1.41	1.41	1.40	1.40	1.39	1.39	1.39	1.40
100	103.0	1.58	1.53	1.48	1.43	1.40	1.39	1.38	1.38	1.38	1.37	1.37	1.38	1.39
110	113.0	1.57	1.52	1.46	1.42	1.39	1.37	1.36	1.36	1.35	1.35	1.35	1.36	1.37
120	123.1	1.54	1.50	1.45	1.41	1.38	1.36	1.34	1.33	1.33	1.33	1.34	1.35	1.36
130	133.1	1.52	1.48	1.44	1.40	1.37	1.34	1.33	1.32	1.31	1.32	1.32	1.33	1.34
140	143.1	1.50	1.46	1.43	1.39	1.36	1.33	1.31	1.31	1.30	1.31	1.31	1.32	1.33
150	152.9	1.48	1.44	1.41	1.38	1.35	1.33	1.31	1.30	1.30	1.31	1.31	1.32	1.32
160	162.5	1.46	1.43	1.40	1.37	1.34	1.32	1.31	1.31	1.31	1.32	1.32	1.31	1.31
170	172.0	1.44	1.42	1.39	1.36	1.33	1.31	1.31	1.32	1.33	1.33	1.33	1.32	1.31
180	181.4	1.43	1.41	1.37	1.34	1.32	1.31	1.32	1.34	1.35	1.35	1.34	1.32	1.30
190	190.9	1.42	1.40	1.36	1.32	1.30	1.31	1.33	1.36	1.37	1.36	1.35	1.32	1.30
200	200.4	1.43	1.39	1.34	1.30	1.29	1.31	1.34	1.37	1.38	1.37	1.35	1.33	1.30
210	210.1	1.44	1.39	1.33	1.29	1.28	1.31	1.35	1.38	1.39	1.38	1.35	1.32	1.30
220	219.9	1.46	1.39	1.31	1.27	1.27	1.31	1.36	1.39	1.39	1.37	1.35	1.32	1.30
230	229.8	1.48	1.39	1.30	1.25	1.26	1.31	1.37	1.39	1.38	1.36	1.34	1.32	1.30
240	239.8	1.51	1.40	1.28	1.24	1.25	1.31	1.37	1.39	1.38	1.35	1.33	1.31	1.30
250	249.7	1.54	1.40	1.27	1.22	1.25	1.31	1.37	1.38	1.36	1.33	1.31	1.30	1.30
260	259.7	1.57	1.41	1.26	1.21	1.24	1.32	1.37	1.38	1.35	1.32	1.30	1.30	1.31
270	269.6	1.59	1.41	1.25	1.20	1.24	1.32	1.37	1.37	1.33	1.30	1.28	1.29	1.31
280	279.5	1.62	1.42	1.24	1.19	1.23	1.32	1.37	1.36	1.32	1.28	1.27	1.28	1.32
290	289.2	1.63	1.42	1.24	1.18	1.23	1.32	1.37	1.35	1.30	1.26	1.25	1.28	1.32
300	298.7	1.64	1.42	1.23	1.17	1.23	1.32	1.37	1.35	1.29	1.24	1.24	1.27	1.33
310	308.1	1.64	1.42	1.23	1.17	1.22	1.31	1.36	1.34	1.28	1.23	1.23	1.27	1.33
320	317.2	1.63	1.41	1.23	1.17	1.22	1.31	1.36	1.34	1.27	1.22	1.22	1.27	1.34
330	326.2	1.61	1.41	1.24	1.18	1.22	1.31	1.36	1.33	1.27	1.22	1.22	1.27	1.35
340	335.1	1.59	1.40	1.24	1.18	1.22	1.30	1.35	1.33	1.27	1.22	1.22	1.27	1.35
350	343.9	1.56	1.39	1.25	1.19	1.23	1.30	1.35	1.33	1.27	1.22	1.22	1.28	1.36
360	352.5	1.53	1.38	1.25	1.20	1.23	1.29	1.34	1.33	1.27	1.22	1.22	1.28	1.37
370	361.1	1.49	1.37	1.26	1.21	1.23	1.29	1.34	1.33	1.27	1.22	1.23	1.29	1.38
380	369.7	1.45	1.36	1.27	1.22	1.23	1.28	1.33	1.33	1.28	1.23	1.23	1.29	1.38
390	378.1	1.40	1.34	1.28	1.23	1.23	1.28	1.33	1.33	1.28	1.23	1.24	1.30	1.39
400	386.6	1.36	1.33	1.29	1.25	1.23	1.27	1.32	1.33	1.29	1.24	1.24	1.31	1.40

Si/Si3N4/N/n

Table VI: Recoil Distribution Parameters

Ion: Si Material: Si3N4 density = 3.0 Recoil atom: N Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	134	156	178	202	227	246	255	248	225	193	158	127	99
60	63.5	123	144	165	186	207	224	232	227	209	183	153	124	96
70	73.3	112	131	151	171	189	203	209	206	193	173	147	120	93
80	83.1	102	120	139	156	171	182	188	186	178	162	141	116	89
90	93.0	93	110	127	143	155	164	169	168	163	152	135	112	85
100	103.0	86	101	117	131	141	148	152	153	150	142	127	106	81
110	113.0	81	94	108	120	129	135	139	140	138	132	119	100	76
120	123.1	77	88	101	112	120	125	128	130	128	123	111	94	72
130	133.1	74	84	94	104	112	117	120	122	121	115	104	87	67
140	143.1	71	80	89	98	105	111	115	117	115	110	98	83	64
150	152.9	68	76	84	92	99	106	111	114	113	107	95	79	61
160	162.5	65	72	79	86	94	101	108	113	113	108	96	79	61
170	172.0	61	68	74	81	89	97	106	113	116	111	98	80	61
180	181.4	57	64	70	76	84	94	105	114	119	116	102	82	62
190	190.9	53	60	66	72	80	91	104	115	122	120	106	84	62
200	200.4	51	57	61	67	76	88	103	116	125	124	109	86	63
210	210.1	49	54	58	63	73	86	101	116	125	125	110	86	62
220	219.9	48	52	54	59	69	84	100	114	124	124	109	85	61
230	229.8	48	50	51	56	66	81	98	112	122	121	107	83	60
240	239.8	48	48	47	52	63	79	96	109	118	117	103	80	57
250	249.7	49	47	44	49	61	77	93	106	114	112	99	77	55
260	259.7	50	45	42	46	59	75	91	103	109	106	93	73	52
270	269.6	51	44	39	44	57	73	89	99	103	100	88	69	49
280	279.5	52	43	37	41	55	72	86	95	98	94	82	65	47
290	289.2	52	42	35	39	53	70	84	92	93	88	77	62	45
300	298.7	52	41	34	38	51	68	82	89	89	83	72	58	43
310	308.1	51	40	33	36	50	67	80	86	85	79	69	56	41
320	317.2	50	39	32	35	48	65	78	84	82	75	66	54	40
330	326.2	47	38	31	34	47	63	77	82	80	73	63	53	40
340	335.1	45	36	30	33	46	62	75	81	78	71	62	52	40
350	343.9	42	35	30	33	44	60	74	79	77	69	61	51	40
360	352.5	38	33	30	33	43	59	72	78	76	69	60	51	41
370	361.1	34	31	29	32	42	57	71	78	76	68	60	51	42
380	369.7	30	30	29	32	41	56	70	77	75	68	60	51	43
390	378.1	26	28	29	32	40	54	69	77	75	68	60	52	44
400	386.6	22	26	30	32	39	53	68	76	75	68	60	52	45

Si/Si3N4/N/A

Table VI: Recoil Distribution Parameters

Ion: Si Material: Si3N4 density = 3.0 Recoil atom: N Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	99	93	87	82	78	74	70	66	62	57	53	49	46
60	63.5	119	109	99	91	85	81	78	74	69	64	59	54	51
70	73.3	138	125	111	99	92	88	85	82	76	70	64	59	55
80	83.1	156	140	122	108	100	96	93	89	83	76	69	64	59
90	93.0	171	153	133	118	109	104	101	97	90	82	74	68	63
100	103.0	184	165	144	128	118	113	110	105	97	88	79	72	66
110	113.0	194	175	155	139	129	123	119	112	103	93	83	75	68
120	123.1	201	184	165	150	140	134	128	120	109	98	87	78	70
130	133.1	208	192	176	162	152	144	137	127	115	103	91	81	71
140	143.1	214	200	186	173	162	154	145	133	120	107	95	83	72
150	152.9	222	209	196	183	171	162	152	139	125	111	98	86	74
160	162.5	232	220	207	192	179	168	157	144	130	115	102	88	75
170	172.0	245	232	218	201	184	172	161	148	134	119	105	91	77
180	181.4	261	246	228	207	189	175	165	153	138	123	108	93	78
190	190.9	281	261	237	213	192	179	169	157	143	126	111	96	80
200	200.4	305	278	245	216	195	182	174	163	147	129	113	97	82
210	210.1	335	295	252	218	197	187	180	168	151	132	114	98	83
220	219.9	367	313	257	218	198	192	187	175	155	134	115	99	84
230	229.8	402	331	262	218	200	198	196	182	160	136	116	99	84
240	239.8	439	350	266	217	202	204	205	190	164	137	116	99	85
250	249.7	475	368	269	215	203	211	214	198	169	139	115	99	86
260	259.7	510	385	273	214	205	219	224	206	173	140	115	98	86
270	269.6	543	402	276	213	208	226	234	214	178	141	115	98	87
280	279.5	572	417	280	214	211	233	243	221	182	142	115	98	88
290	289.2	596	430	285	216	215	240	251	229	187	144	115	98	89
300	298.7	614	442	292	220	219	247	259	235	191	146	115	99	90
310	308.1	625	451	299	226	225	253	265	241	195	148	116	100	92
320	317.2	629	458	308	234	231	258	271	246	199	150	118	101	94
330	326.2	628	463	318	244	239	263	275	251	203	153	120	103	96
340	335.1	621	466	328	255	247	268	279	255	207	156	122	105	98
350	343.9	610	468	340	268	255	272	282	259	210	159	125	108	101
360	352.5	596	468	352	282	264	276	284	262	214	162	128	111	103
370	361.1	578	468	365	297	274	280	286	265	218	166	131	114	106
380	369.7	559	467	379	313	284	284	287	268	221	170	134	117	109
390	378.1	538	466	392	329	294	287	289	270	225	173	138	121	112
400	386.6	516	464	406	345	304	291	290	273	228	177	141	124	115

Si/Si3N4/N/a

Table VI: Recoil Distribution Parameters

Ion: Si Material: SiO2 density = 2.0 Recoil atom: Si Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	1.65	1.60	1.55	1.51	1.48	1.46	1.46	1.46	1.47	1.49	1.52	1.55	1.59
60	63.1	1.53	1.51	1.49	1.47	1.45	1.44	1.43	1.43	1.45	1.47	1.49	1.51	1.53
70	72.7	1.45	1.44	1.44	1.44	1.43	1.42	1.41	1.42	1.43	1.45	1.47	1.48	1.49
80	82.6	1.44	1.43	1.42	1.42	1.41	1.41	1.41	1.42	1.44	1.46	1.47	1.48	1.49
90	92.7	1.50	1.47	1.44	1.41	1.41	1.41	1.42	1.43	1.45	1.47	1.49	1.50	1.52
100	103.0	1.57	1.52	1.46	1.42	1.40	1.40	1.41	1.43	1.46	1.48	1.50	1.52	1.53
110	113.2	1.61	1.54	1.47	1.42	1.39	1.38	1.39	1.41	1.44	1.47	1.49	1.50	1.51
120	123.3	1.62	1.55	1.47	1.41	1.37	1.35	1.34	1.37	1.40	1.44	1.45	1.46	1.46
130	133.3	1.60	1.53	1.46	1.40	1.35	1.31	1.30	1.32	1.36	1.40	1.41	1.41	1.40
140	143.2	1.57	1.50	1.44	1.38	1.33	1.27	1.25	1.28	1.32	1.36	1.37	1.37	1.35
150	152.9	1.53	1.47	1.41	1.36	1.30	1.25	1.22	1.25	1.29	1.33	1.34	1.34	1.32
160	162.5	1.49	1.44	1.38	1.33	1.27	1.23	1.22	1.24	1.28	1.32	1.33	1.34	1.33
170	171.9	1.45	1.40	1.34	1.29	1.24	1.22	1.23	1.26	1.29	1.32	1.34	1.36	1.37
180	181.4	1.41	1.37	1.30	1.25	1.22	1.22	1.25	1.28	1.30	1.32	1.35	1.39	1.43
190	190.8	1.38	1.34	1.27	1.21	1.19	1.22	1.28	1.31	1.32	1.33	1.37	1.43	1.48
200	200.4	1.36	1.31	1.23	1.18	1.18	1.23	1.30	1.34	1.34	1.34	1.39	1.46	1.53
210	210.1	1.34	1.30	1.21	1.16	1.16	1.24	1.32	1.36	1.35	1.34	1.39	1.47	1.56
220	219.9	1.33	1.28	1.20	1.15	1.16	1.24	1.33	1.36	1.35	1.34	1.39	1.47	1.57
230	229.8	1.32	1.27	1.19	1.14	1.16	1.24	1.33	1.36	1.34	1.33	1.37	1.46	1.56
240	239.8	1.32	1.27	1.18	1.14	1.16	1.25	1.33	1.36	1.33	1.31	1.36	1.44	1.53
250	249.8	1.32	1.26	1.18	1.15	1.17	1.25	1.33	1.34	1.31	1.30	1.33	1.41	1.50
260	259.7	1.32	1.26	1.19	1.16	1.18	1.26	1.32	1.33	1.29	1.28	1.31	1.38	1.46
270	269.7	1.31	1.26	1.19	1.17	1.20	1.26	1.31	1.31	1.27	1.25	1.28	1.34	1.42
280	279.5	1.31	1.25	1.20	1.18	1.21	1.26	1.30	1.29	1.25	1.23	1.25	1.30	1.37
290	289.2	1.29	1.25	1.20	1.19	1.23	1.27	1.29	1.27	1.23	1.21	1.22	1.27	1.33
300	298.7	1.28	1.24	1.20	1.21	1.24	1.27	1.28	1.26	1.22	1.19	1.20	1.24	1.29
310	308.0	1.26	1.22	1.20	1.22	1.25	1.28	1.28	1.24	1.20	1.17	1.18	1.21	1.26
320	317.2	1.23	1.20	1.20	1.22	1.26	1.29	1.27	1.23	1.19	1.16	1.16	1.19	1.25
330	326.2	1.19	1.18	1.19	1.23	1.27	1.29	1.27	1.23	1.18	1.14	1.15	1.18	1.23
340	335.1	1.15	1.16	1.18	1.23	1.28	1.30	1.28	1.23	1.17	1.13	1.13	1.17	1.23
350	343.9	1.11	1.13	1.17	1.23	1.29	1.31	1.28	1.22	1.16	1.12	1.12	1.16	1.23
360	352.5	1.06	1.10	1.16	1.24	1.30	1.32	1.29	1.23	1.16	1.11	1.12	1.16	1.23
370	361.1	1.01	1.07	1.14	1.24	1.31	1.33	1.29	1.23	1.16	1.11	1.11	1.16	1.24
380	369.6	0.96	1.03	1.13	1.23	1.31	1.33	1.30	1.23	1.15	1.10	1.10	1.17	1.26
390	378.1	0.91	1.00	1.11	1.23	1.32	1.34	1.31	1.24	1.15	1.09	1.10	1.17	1.27
400	386.6	0.85	0.97	1.10	1.23	1.33	1.35	1.32	1.24	1.15	1.09	1.10	1.17	1.28

Si/ SiO2/Si/n

Table VI: Recoil Distribution Parameters

Ion: Si Material: SiO2 density = 2.0 Recoil atom: Si Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	49	58	68	76	82	87	92	96	100	104	106	108	108
60	63.1	48	54	60	66	71	75	79	84	91	97	101	103	104
70	72.7	48	52	56	61	65	68	73	79	86	93	96	97	97
80	82.6	49	55	60	65	70	74	79	84	90	94	94	91	86
90	92.7	51	60	69	77	84	89	93	97	99	99	94	84	71
100	103.0	52	64	76	86	95	101	105	106	106	101	92	77	58
110	113.2	49	61	74	86	94	99	102	103	102	97	87	71	51
120	123.3	44	55	66	77	83	87	88	90	90	87	79	66	50
130	133.3	37	45	54	62	67	68	69	72	74	74	70	62	52
140	143.2	31	36	42	47	50	50	50	54	59	63	63	60	55
150	152.9	27	29	32	35	36	35	36	42	49	55	58	59	59
160	162.5	26	26	27	28	29	29	32	39	48	54	58	60	61
170	171.9	27	27	26	26	28	31	36	45	53	58	61	61	61
180	181.4	29	29	27	28	31	36	45	55	62	65	65	63	60
190	190.8	31	32	30	31	35	44	56	66	72	73	70	64	59
200	200.4	34	35	33	34	39	52	66	76	80	79	73	65	57
210	210.1	34	36	34	35	42	56	71	82	85	82	75	65	55
220	219.9	34	36	35	36	43	58	74	83	86	82	74	64	54
230	229.8	33	35	33	35	43	57	73	82	83	79	72	62	52
240	239.8	30	32	31	33	41	55	69	77	78	75	68	59	51
250	249.8	27	29	29	31	38	51	64	71	71	68	63	56	50
260	259.7	24	26	26	28	35	46	57	63	63	61	57	53	49
270	269.7	20	22	22	25	31	41	49	54	54	53	51	49	48
280	279.5	17	18	19	22	27	35	41	45	45	45	45	46	47
290	289.2	13	14	16	19	24	30	34	36	37	37	39	42	46
300	298.7	10	11	13	16	21	25	28	29	29	31	34	39	46
310	308.0	7	8	10	14	18	21	23	23	23	25	30	37	45
320	317.2	5	6	9	12	16	19	20	19	19	21	27	35	44
330	326.2	3	5	8	12	15	17	17	17	16	18	24	33	44
340	335.1	2	4	7	11	15	16	16	15	15	17	23	32	43
350	343.9	1	3	7	11	15	16	16	15	14	16	21	31	42
360	352.5	0	3	6	11	15	17	17	16	14	15	21	30	42
370	361.1	0	3	7	11	15	18	18	17	16	16	21	30	41
380	369.6	0	3	7	12	16	19	20	19	17	17	21	30	40
390	378.1	-1	3	8	13	17	21	22	22	19	18	21	29	40
400	386.6	-1	3	8	13	18	22	25	24	21	19	22	29	39

Si/ SiO2/Si/A

Table VI: Recoil Distribution Parameters

Ion: Si Material: SiO2 density = 2.0 Recoil atom: Si Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	68	66	64	61	58	54	51	49	48	48	48	47	46
60	63.1	70	70	69	69	67	65	64	63	63	63	62	59	56
70	72.7	75	75	75	75	75	74	74	73	73	72	70	66	62
80	82.6	85	84	82	80	79	78	77	76	74	71	68	64	60
90	92.7	101	96	90	85	82	79	76	72	67	62	58	55	53
100	103.0	120	111	102	94	87	81	75	69	62	55	51	48	47
110	113.2	140	129	119	109	99	89	80	72	66	60	55	51	48
120	123.3	160	148	138	128	116	101	88	82	78	73	68	61	55
130	133.3	178	167	157	147	134	115	99	94	93	91	85	75	65
140	143.2	195	183	173	165	150	128	111	106	108	108	101	88	74
150	152.9	208	196	186	177	162	138	120	116	118	118	110	97	80
160	162.5	218	204	192	181	165	143	126	122	122	119	111	97	80
170	171.9	224	209	193	179	163	144	130	124	119	113	103	90	75
180	181.4	228	210	190	174	158	143	133	124	114	102	91	80	67
190	190.8	229	209	187	168	153	143	135	124	107	91	79	70	59
200	200.4	227	208	184	163	150	144	139	126	103	82	68	61	53
210	210.1	224	206	183	163	151	149	146	130	103	78	63	57	51
220	219.9	219	205	184	166	157	158	155	137	107	79	63	57	51
230	229.8	213	203	187	173	166	169	166	147	114	84	67	60	55
240	239.8	207	202	192	182	179	183	179	158	124	93	75	67	61
250	249.8	200	202	198	194	194	198	193	171	136	104	85	76	69
260	259.7	193	201	205	207	210	215	209	184	150	117	97	86	79
270	269.7	187	202	213	221	228	232	224	199	164	132	110	98	89
280	279.5	182	203	221	235	245	249	240	213	178	146	124	110	100
290	289.2	178	205	230	249	263	267	255	228	193	160	137	122	112
300	298.7	176	208	238	263	279	283	270	241	206	172	148	133	123
310	308.0	177	212	246	275	294	298	284	254	217	183	158	143	133
320	317.2	179	216	254	287	307	311	297	266	228	191	166	151	142
330	326.2	182	222	262	297	319	324	309	277	237	198	172	158	151
340	335.1	188	228	269	306	330	335	320	287	244	204	177	164	159
350	343.9	194	235	277	314	340	346	331	297	251	208	180	169	167
360	352.5	202	242	284	322	348	355	341	306	257	211	183	174	175
370	361.1	211	250	291	330	356	365	351	315	262	213	184	178	182
380	369.6	220	257	297	337	364	373	360	323	267	214	185	181	189
390	378.1	230	266	304	343	371	382	370	331	272	215	186	184	195
400	386.6	240	274	311	350	378	390	379	339	276	216	186	187	202

Si/ SiO2/Si/a

Table VI: Recoil Distribution Parameters

Ion: Si Material: SiO2 density = 2.0 Recoil atom: O Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	1.64	1.59	1.53	1.48	1.45	1.44	1.43	1.42	1.41	1.41	1.41	1.41	1.41
60	63.1	1.49	1.47	1.44	1.42	1.41	1.40	1.40	1.39	1.39	1.39	1.39	1.39	1.39
70	72.7	1.39	1.39	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
80	82.6	1.39	1.39	1.38	1.38	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.38
90	92.7	1.48	1.46	1.43	1.40	1.39	1.38	1.38	1.38	1.37	1.37	1.37	1.38	1.38
100	103.0	1.58	1.53	1.48	1.43	1.40	1.39	1.38	1.38	1.38	1.37	1.37	1.38	1.39
110	113.2	1.62	1.56	1.49	1.44	1.40	1.39	1.38	1.38	1.36	1.36	1.35	1.36	1.38
120	123.3	1.61	1.55	1.48	1.42	1.39	1.38	1.37	1.36	1.34	1.33	1.33	1.34	1.35
130	133.3	1.56	1.51	1.45	1.39	1.36	1.36	1.36	1.34	1.32	1.30	1.30	1.31	1.32
140	143.2	1.50	1.46	1.41	1.36	1.34	1.34	1.35	1.33	1.30	1.28	1.27	1.28	1.29
150	152.9	1.44	1.41	1.37	1.33	1.31	1.32	1.33	1.32	1.29	1.27	1.26	1.26	1.27
160	162.5	1.41	1.39	1.35	1.31	1.29	1.31	1.33	1.32	1.30	1.27	1.26	1.26	1.26
170	171.9	1.40	1.38	1.34	1.30	1.29	1.31	1.33	1.33	1.31	1.29	1.28	1.27	1.26
180	181.4	1.41	1.38	1.33	1.29	1.28	1.31	1.33	1.34	1.33	1.32	1.30	1.28	1.27
190	190.8	1.42	1.38	1.34	1.30	1.29	1.31	1.34	1.36	1.36	1.34	1.33	1.30	1.28
200	200.4	1.43	1.39	1.34	1.30	1.29	1.31	1.34	1.37	1.38	1.37	1.35	1.33	1.30
210	210.1	1.43	1.40	1.35	1.31	1.30	1.32	1.35	1.38	1.40	1.40	1.38	1.34	1.31
220	219.9	1.42	1.40	1.36	1.33	1.31	1.32	1.35	1.39	1.41	1.41	1.39	1.36	1.32
230	229.8	1.41	1.40	1.37	1.34	1.32	1.33	1.35	1.39	1.42	1.42	1.41	1.37	1.33
240	239.8	1.40	1.40	1.38	1.35	1.33	1.33	1.35	1.39	1.42	1.43	1.41	1.38	1.34
250	249.8	1.38	1.39	1.39	1.37	1.35	1.34	1.35	1.38	1.42	1.43	1.42	1.39	1.35
260	259.7	1.36	1.39	1.39	1.38	1.36	1.34	1.35	1.38	1.41	1.43	1.42	1.39	1.36
270	269.7	1.35	1.38	1.40	1.40	1.37	1.35	1.35	1.37	1.40	1.42	1.42	1.39	1.36
280	279.5	1.33	1.38	1.41	1.41	1.38	1.35	1.34	1.36	1.39	1.41	1.41	1.39	1.36
290	289.2	1.32	1.38	1.42	1.42	1.39	1.36	1.34	1.35	1.38	1.40	1.40	1.39	1.37
300	298.7	1.31	1.38	1.43	1.43	1.40	1.36	1.34	1.34	1.36	1.38	1.39	1.38	1.37
310	308.0	1.31	1.38	1.43	1.44	1.41	1.36	1.33	1.33	1.35	1.36	1.37	1.38	1.37
320	317.2	1.32	1.38	1.43	1.44	1.41	1.37	1.33	1.32	1.33	1.34	1.36	1.37	1.38
330	326.2	1.33	1.39	1.44	1.44	1.41	1.37	1.33	1.31	1.31	1.32	1.34	1.36	1.38
340	335.1	1.34	1.39	1.44	1.44	1.41	1.37	1.33	1.30	1.29	1.30	1.32	1.35	1.38
350	343.9	1.36	1.40	1.44	1.44	1.41	1.37	1.32	1.30	1.28	1.27	1.29	1.33	1.38
360	352.5	1.38	1.41	1.44	1.44	1.41	1.36	1.32	1.29	1.26	1.25	1.27	1.32	1.39
370	361.1	1.41	1.43	1.44	1.43	1.40	1.36	1.32	1.28	1.24	1.22	1.24	1.31	1.39
380	369.6	1.43	1.44	1.44	1.43	1.40	1.36	1.32	1.27	1.22	1.19	1.22	1.29	1.39
390	378.1	1.46	1.45	1.44	1.42	1.39	1.36	1.32	1.26	1.20	1.16	1.19	1.28	1.39
400	386.6	1.49	1.46	1.44	1.42	1.39	1.36	1.32	1.25	1.18	1.13	1.16	1.26	1.39

Si/ SiO2/O/n

Table VI: Recoil Distribution Parameters

Ion: Si Material: SiO2 density = 2.0 Recoil atom: O Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	106	121	135	150	163	176	187	197	206	211	213	209	202
60	63.1	94	107	119	131	144	156	168	180	189	196	200	201	198
70	72.7	86	97	108	119	130	142	154	165	174	181	186	188	186
80	82.6	82	94	106	117	128	139	149	157	164	167	167	164	157
90	92.7	84	98	112	124	135	144	151	155	157	154	146	133	115
100	103.0	86	101	117	131	141	148	152	153	150	142	127	106	81
110	113.2	84	99	114	128	138	144	146	145	141	131	116	94	69
120	123.3	78	92	105	117	126	132	135	134	130	122	110	94	75
130	133.3	71	82	93	102	110	117	122	122	119	115	109	101	91
140	143.2	64	72	80	86	94	102	108	110	111	110	110	110	110
150	152.9	57	63	69	74	80	90	98	103	105	108	112	117	122
160	162.5	53	58	62	66	73	83	93	100	105	109	113	117	122
170	171.9	52	56	59	63	70	82	93	102	109	112	112	112	112
180	181.4	51	56	59	63	71	83	96	107	114	116	112	103	96
190	190.8	51	56	60	65	74	86	100	112	120	120	110	94	78
200	200.4	51	57	61	67	76	88	103	116	125	124	109	86	63
210	210.1	49	57	62	69	77	89	103	117	127	125	108	81	53
220	219.9	47	56	62	69	77	88	102	116	127	125	108	79	49
230	229.8	44	54	61	68	76	86	99	113	124	124	107	79	49
240	239.8	41	51	60	67	73	82	94	109	120	122	107	81	53
250	249.8	38	49	58	64	70	77	88	103	115	118	107	84	61
260	259.7	34	46	55	62	67	72	82	96	109	114	106	89	70
270	269.7	31	43	53	59	63	67	75	88	101	109	105	94	80
280	279.5	27	40	50	56	59	62	69	81	94	103	104	99	91
290	289.2	25	37	48	54	55	57	62	73	87	97	103	103	101
300	298.7	23	35	46	51	52	53	57	67	80	92	100	106	110
310	308.0	21	34	45	49	50	49	53	62	73	86	97	108	117
320	317.2	21	33	43	48	48	47	50	57	68	80	94	108	121
330	326.2	21	32	42	47	47	46	47	54	63	75	90	107	124
340	335.1	22	32	42	46	46	45	46	51	58	69	85	105	125
350	343.9	23	32	41	45	46	45	45	49	54	64	80	102	125
360	352.5	25	33	41	45	46	45	45	47	50	59	75	98	123
370	361.1	27	34	41	45	46	46	46	46	47	53	69	93	121
380	369.6	29	35	41	45	46	47	47	45	44	48	63	88	117
390	378.1	32	36	41	45	47	48	48	45	41	43	57	83	114
400	386.6	34	38	41	45	48	49	49	44	38	38	51	78	110

Si/ SiO2/O/A

Table VI: Recoil Distribution Parameters

Ion: Si Material: SiO2 density = 2.0 Recoil atom: O Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
50	53.7	103	97	91	85	80	76	72	70	68	66	65	62	59
60	63.1	120	115	109	104	98	92	86	82	79	77	75	74	71
70	72.7	137	131	125	119	112	105	98	92	88	85	83	81	78
80	82.6	153	144	134	126	118	111	104	98	92	88	84	81	77
90	92.7	169	154	139	126	118	112	107	101	94	87	80	75	71
100	103.0	184	165	144	128	118	113	110	105	97	88	79	72	66
110	113.2	199	178	155	136	126	120	117	113	106	96	86	78	70
120	123.3	212	192	170	150	138	132	129	125	118	109	99	90	81
130	133.3	225	206	186	167	154	146	142	138	132	124	115	105	95
140	143.2	238	221	202	183	169	160	154	150	144	137	129	118	108
150	152.9	251	233	215	196	180	170	164	158	153	146	137	126	115
160	162.5	263	244	224	203	186	176	169	162	155	147	137	126	114
170	171.9	275	253	229	206	188	178	170	163	153	143	132	120	107
180	181.4	287	261	233	208	189	178	171	162	150	137	124	111	97
190	190.8	297	269	238	210	190	179	171	161	147	131	116	102	88
200	200.4	305	278	245	216	195	182	174	163	147	129	113	97	82
210	210.1	312	287	257	228	204	189	179	168	152	134	116	99	81
220	219.9	317	298	272	244	218	200	188	177	161	144	125	106	87
230	229.8	320	310	291	264	236	214	200	188	174	158	139	119	97
240	239.8	322	322	312	288	257	230	213	202	190	176	157	135	111
250	249.8	324	335	334	314	280	249	228	218	208	196	177	154	127
260	259.7	326	348	357	341	305	268	244	234	227	217	199	174	146
270	269.7	327	360	380	368	330	289	261	250	246	238	221	196	165
280	279.5	329	372	402	394	355	309	278	266	264	259	242	216	184
290	289.2	332	384	422	419	379	329	294	281	280	277	261	235	202
300	298.7	336	394	440	440	401	348	309	294	293	291	277	251	218
310	308.0	342	404	454	459	421	366	322	305	304	302	288	263	231
320	317.2	349	413	466	474	438	382	335	314	310	309	296	272	242
330	326.2	357	420	474	486	453	396	345	320	314	312	300	278	250
340	335.1	367	427	480	496	467	410	355	325	316	312	301	281	256
350	343.9	377	433	485	503	478	422	364	329	315	310	299	281	260
360	352.5	389	439	487	509	489	434	372	331	313	305	295	280	262
370	361.1	401	444	488	513	498	445	380	332	309	298	289	277	264
380	369.6	413	449	488	516	506	455	387	332	304	291	282	273	264
390	378.1	426	453	487	518	514	465	394	332	298	282	274	268	264
400	386.6	439	457	486	520	522	475	400	332	292	273	265	263	264

Si/ SiO2/O/a

Table VI: Recoil Distribution Parameters

Ion: Se Material: Si3N4 density = 3.0 Recoil atom: Si Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	1.35	1.33	1.30	1.28	1.27	1.27	1.28	1.30	1.31	1.33	1.34	1.33	1.30
110	48.5	1.32	1.30	1.28	1.26	1.25	1.25	1.26	1.27	1.29	1.31	1.32	1.30	1.28
120	52.4	1.30	1.28	1.27	1.25	1.23	1.23	1.24	1.25	1.27	1.29	1.29	1.28	1.26
130	56.2	1.28	1.26	1.25	1.23	1.22	1.21	1.22	1.24	1.25	1.26	1.27	1.26	1.24
140	60.0	1.26	1.25	1.23	1.22	1.20	1.20	1.21	1.22	1.23	1.24	1.25	1.24	1.22
150	63.9	1.24	1.23	1.22	1.21	1.19	1.19	1.19	1.21	1.22	1.23	1.23	1.22	1.21
160	67.8	1.23	1.22	1.21	1.20	1.19	1.18	1.18	1.19	1.20	1.21	1.21	1.21	1.20
170	71.7	1.22	1.21	1.21	1.19	1.18	1.18	1.18	1.19	1.19	1.20	1.20	1.20	1.20
180	75.6	1.22	1.21	1.20	1.19	1.18	1.18	1.17	1.18	1.18	1.18	1.18	1.19	1.20
190	79.5	1.22	1.21	1.20	1.19	1.18	1.17	1.17	1.17	1.17	1.17	1.17	1.18	1.20
200	83.4	1.22	1.21	1.20	1.19	1.18	1.17	1.17	1.17	1.17	1.17	1.17	1.18	1.19
210	87.3	1.22	1.21	1.20	1.19	1.18	1.17	1.17	1.16	1.16	1.16	1.16	1.17	1.18
220	91.2	1.22	1.21	1.20	1.19	1.17	1.17	1.16	1.16	1.16	1.15	1.15	1.16	1.17
230	95.1	1.22	1.21	1.20	1.18	1.17	1.16	1.16	1.15	1.15	1.15	1.15	1.15	1.16
240	99.0	1.23	1.21	1.20	1.18	1.17	1.16	1.15	1.15	1.15	1.15	1.14	1.14	1.14
250	103.0	1.23	1.21	1.19	1.18	1.16	1.15	1.15	1.14	1.15	1.15	1.14	1.13	1.12
260	106.9	1.23	1.21	1.19	1.17	1.16	1.15	1.14	1.14	1.15	1.15	1.14	1.12	1.11
270	110.8	1.24	1.22	1.19	1.17	1.15	1.14	1.14	1.14	1.14	1.15	1.14	1.11	1.09
280	114.8	1.24	1.22	1.19	1.17	1.15	1.14	1.13	1.13	1.14	1.15	1.14	1.10	1.07
290	118.8	1.24	1.21	1.19	1.16	1.14	1.13	1.13	1.13	1.14	1.15	1.14	1.09	1.06
300	122.8	1.24	1.21	1.19	1.16	1.14	1.13	1.12	1.13	1.14	1.15	1.14	1.09	1.05
310	126.8	1.23	1.21	1.18	1.16	1.14	1.12	1.12	1.12	1.14	1.15	1.14	1.09	1.04
320	130.9	1.23	1.20	1.18	1.15	1.13	1.12	1.12	1.12	1.14	1.15	1.14	1.09	1.04
330	135.0	1.22	1.20	1.17	1.15	1.13	1.12	1.11	1.12	1.13	1.15	1.14	1.09	1.04
340	139.0	1.21	1.19	1.17	1.15	1.13	1.12	1.11	1.12	1.13	1.15	1.14	1.09	1.05
350	143.1	1.20	1.18	1.16	1.14	1.13	1.12	1.11	1.12	1.13	1.14	1.14	1.10	1.05
360	147.3	1.19	1.17	1.16	1.14	1.12	1.12	1.11	1.12	1.13	1.14	1.14	1.10	1.06
370	151.4	1.18	1.16	1.15	1.14	1.12	1.12	1.11	1.11	1.12	1.14	1.14	1.11	1.07
380	155.5	1.17	1.15	1.14	1.13	1.12	1.12	1.11	1.11	1.12	1.13	1.14	1.12	1.08
390	159.7	1.15	1.14	1.14	1.13	1.12	1.12	1.11	1.11	1.12	1.13	1.14	1.12	1.10
400	163.8	1.14	1.13	1.13	1.13	1.12	1.12	1.11	1.11	1.12	1.13	1.14	1.13	1.11

Se/Si3N4/Si/n

Table VI: Recoil Distribution Parameters

Ion: Se Material: Si3N4 density = 3.0 Recoil atom: Si Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	119	146	172	199	226	249	264	266	258	242	190	122	50
110	48.5	118	141	165	189	212	234	248	252	247	231	180	115	48
120	52.4	116	137	158	179	200	219	233	239	235	221	170	108	47
130	56.2	114	133	151	170	188	205	219	227	225	212	161	102	45
140	60.0	112	128	145	162	178	194	208	216	216	203	153	96	44
150	63.9	108	124	139	155	171	186	199	207	208	196	146	92	44
160	67.8	104	119	135	151	166	181	193	202	202	190	140	89	43
170	71.7	99	115	131	148	164	178	190	198	197	184	136	88	43
180	75.6	94	111	127	145	162	177	189	196	193	180	133	87	43
190	79.5	89	107	124	144	162	177	188	194	190	176	131	86	43
200	83.4	85	103	122	142	161	176	187	192	187	173	129	85	42
210	87.3	82	101	119	140	159	175	185	189	184	170	128	84	40
220	91.2	80	98	117	137	156	172	182	186	181	168	127	82	38
230	95.1	78	96	115	135	153	168	178	182	177	165	125	80	36
240	99.0	78	95	113	132	149	164	173	177	174	163	124	77	33
250	103.0	77	94	110	128	145	159	168	172	170	161	123	75	30
260	106.9	77	93	108	125	141	154	163	167	166	159	123	72	27
270	110.8	77	92	106	122	136	148	157	162	163	156	122	70	24
280	114.8	78	91	105	119	132	143	152	158	159	154	121	68	21
290	118.8	78	90	103	115	127	138	147	153	156	152	120	66	19
300	122.8	77	89	101	112	123	134	142	149	153	150	119	64	17
310	126.8	77	88	99	110	120	130	139	145	150	148	118	63	15
320	130.9	76	86	97	107	117	127	135	143	147	146	117	62	14
330	135.0	74	84	95	105	115	124	133	140	145	144	115	61	14
340	139.0	72	82	93	103	113	122	131	138	143	142	114	61	14
350	143.1	70	80	91	101	111	120	129	136	141	140	112	61	14
360	147.3	68	78	89	99	109	119	128	135	139	138	111	61	14
370	151.4	65	76	87	97	108	118	127	134	137	135	109	62	15
380	155.5	63	74	85	96	107	117	126	133	136	133	108	63	16
390	159.7	60	71	83	94	106	116	125	132	134	131	106	63	17
400	163.8	57	69	80	93	105	116	125	131	133	129	105	64	18

Se/Si3N4/Si/A

Table VI: Recoil Distribution Parameters

Ion: Se Material: Si3N4 density = 3.0 Recoil atom: Si Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	75	76	79	80	77	71	65	61	59	57	56	54	51
110	48.5	84	84	85	85	82	77	71	67	64	62	60	56	51
120	52.4	92	91	91	90	87	82	77	72	69	67	64	58	52
130	56.2	100	98	97	95	92	88	82	78	74	71	68	61	53
140	60.0	108	105	103	100	97	93	88	83	79	76	71	63	55
150	63.9	116	112	108	105	101	97	93	88	83	80	73	66	58
160	67.8	123	118	114	110	106	102	98	93	88	83	76	69	63
170	71.7	129	124	119	114	110	106	102	97	92	86	77	72	68
180	75.6	135	130	125	119	115	111	106	102	96	89	79	76	74
190	79.5	141	136	130	125	120	115	111	106	100	93	80	79	80
200	83.4	146	141	136	130	125	120	115	110	104	96	82	82	85
210	87.3	151	146	142	136	131	125	119	114	107	99	85	85	88
220	91.2	156	152	147	143	137	131	124	118	111	103	88	87	91
230	95.1	161	157	154	150	144	136	129	121	115	107	92	90	92
240	99.0	166	162	160	157	151	143	133	125	118	111	97	92	92
250	103.0	171	168	166	164	158	149	138	129	122	115	101	94	92
260	106.9	175	173	172	171	166	155	143	133	125	119	106	97	92
270	110.8	180	179	179	178	173	162	148	137	129	124	111	99	91
280	114.8	186	184	185	185	180	168	153	141	133	128	115	101	90
290	118.8	191	190	191	192	187	174	158	145	137	133	120	104	90
300	122.8	197	196	198	198	193	180	164	149	141	137	125	106	90
310	126.8	204	203	204	204	199	186	169	154	146	141	129	109	91
320	130.9	211	209	210	210	205	191	174	159	150	146	133	112	92
330	135.0	218	216	216	216	210	196	179	164	155	150	136	115	93
340	139.0	225	223	222	221	214	201	184	169	160	154	140	117	96
350	143.1	233	230	228	226	219	206	190	175	165	158	143	121	98
360	147.3	242	237	234	230	223	210	195	180	170	162	146	124	101
370	151.4	250	244	239	235	227	215	200	186	175	167	149	127	104
380	155.5	259	251	245	239	231	219	205	191	180	171	152	130	108
390	159.7	267	259	251	243	235	224	211	197	185	175	155	133	111
400	163.8	276	266	257	248	238	228	216	203	190	179	158	136	115

Se/Si3N4/Si/a

Table VI: Recoil Distribution Parameters

Ion: Se Material: Si3N4 density = 3.0 Recoil atom: N Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	1.35	1.32	1.29	1.27	1.25	1.24	1.23	1.23	1.23	1.23	1.23	1.21	1.18
110	48.5	1.34	1.32	1.29	1.26	1.24	1.23	1.22	1.22	1.22	1.22	1.22	1.20	1.16
120	52.4	1.34	1.31	1.28	1.26	1.23	1.22	1.21	1.21	1.21	1.21	1.21	1.18	1.14
130	56.2	1.33	1.30	1.28	1.25	1.22	1.21	1.20	1.20	1.20	1.21	1.20	1.17	1.12
140	60.0	1.32	1.30	1.27	1.24	1.22	1.20	1.19	1.19	1.20	1.20	1.19	1.16	1.11
150	63.9	1.31	1.29	1.27	1.24	1.22	1.20	1.19	1.19	1.19	1.19	1.19	1.15	1.09
160	67.8	1.30	1.28	1.26	1.24	1.22	1.20	1.19	1.19	1.19	1.19	1.18	1.14	1.09
170	71.7	1.28	1.27	1.25	1.24	1.22	1.20	1.19	1.19	1.19	1.19	1.18	1.14	1.08
180	75.6	1.27	1.26	1.25	1.23	1.22	1.21	1.20	1.19	1.19	1.19	1.18	1.14	1.08
190	79.5	1.26	1.25	1.24	1.23	1.22	1.21	1.20	1.19	1.19	1.19	1.17	1.13	1.08
200	83.4	1.25	1.25	1.24	1.23	1.22	1.21	1.21	1.20	1.19	1.19	1.17	1.13	1.08
210	87.3	1.25	1.25	1.24	1.23	1.22	1.22	1.21	1.20	1.19	1.19	1.17	1.13	1.09
220	91.2	1.26	1.25	1.24	1.23	1.22	1.21	1.21	1.20	1.19	1.19	1.17	1.13	1.09
230	95.1	1.27	1.26	1.24	1.23	1.22	1.21	1.20	1.20	1.19	1.19	1.17	1.13	1.09
240	99.0	1.28	1.26	1.24	1.22	1.21	1.20	1.20	1.20	1.19	1.19	1.17	1.13	1.08
250	103.0	1.30	1.28	1.25	1.22	1.20	1.20	1.19	1.19	1.19	1.19	1.17	1.13	1.08
260	106.9	1.32	1.29	1.25	1.22	1.20	1.19	1.19	1.19	1.19	1.19	1.17	1.12	1.08
270	110.8	1.34	1.30	1.26	1.22	1.19	1.18	1.18	1.19	1.19	1.19	1.17	1.12	1.08
280	114.8	1.35	1.31	1.26	1.22	1.19	1.17	1.18	1.18	1.19	1.19	1.17	1.12	1.08
290	118.8	1.37	1.32	1.27	1.22	1.18	1.17	1.17	1.18	1.19	1.19	1.17	1.12	1.08
300	122.8	1.38	1.33	1.27	1.22	1.18	1.16	1.16	1.18	1.19	1.19	1.17	1.12	1.08
310	126.8	1.39	1.34	1.28	1.22	1.17	1.16	1.16	1.17	1.19	1.19	1.17	1.12	1.07
320	130.9	1.40	1.34	1.28	1.22	1.17	1.15	1.16	1.17	1.18	1.19	1.17	1.11	1.07
330	135.0	1.40	1.35	1.28	1.22	1.17	1.15	1.15	1.17	1.18	1.19	1.16	1.11	1.07
340	139.0	1.40	1.35	1.28	1.22	1.17	1.15	1.15	1.17	1.18	1.19	1.16	1.11	1.07
350	143.1	1.40	1.35	1.29	1.22	1.17	1.15	1.15	1.17	1.18	1.18	1.16	1.11	1.07
360	147.3	1.40	1.35	1.29	1.22	1.18	1.15	1.15	1.16	1.18	1.18	1.15	1.11	1.07
370	151.4	1.40	1.34	1.29	1.23	1.18	1.15	1.15	1.16	1.18	1.18	1.15	1.10	1.07
380	155.5	1.39	1.34	1.29	1.23	1.18	1.15	1.15	1.16	1.17	1.17	1.14	1.10	1.06
390	159.7	1.38	1.34	1.29	1.23	1.18	1.16	1.15	1.16	1.17	1.17	1.14	1.10	1.06
400	163.8	1.38	1.33	1.29	1.24	1.19	1.16	1.15	1.16	1.17	1.17	1.13	1.10	1.06

Se/Si3N4/N/n

Table VI: Recoil Distribution Parameters

Ion: Se Material: Si3N4 density = 3.0 Recoil atom: N Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	155	188	223	256	282	299	306	304	293	275	220	146	66
110	48.5	153	183	214	244	268	285	293	293	284	266	209	138	63
120	52.4	151	177	205	232	255	272	282	282	274	257	199	130	60
130	56.2	149	172	196	221	243	261	271	273	266	248	190	123	57
140	60.0	146	167	189	212	234	251	262	265	259	241	183	117	54
150	63.9	143	163	183	206	227	245	256	260	254	236	178	113	52
160	67.8	139	159	179	202	224	242	253	257	250	233	175	111	50
170	71.7	135	155	176	200	223	241	252	255	249	231	175	111	48
180	75.6	131	152	174	200	223	242	253	255	248	231	176	111	47
190	79.5	127	150	173	200	224	242	253	255	248	231	177	112	45
200	83.4	124	148	172	199	224	242	253	255	247	231	179	113	43
210	87.3	123	147	170	198	222	241	251	253	246	231	180	112	42
220	91.2	123	146	169	195	219	237	247	250	244	230	181	111	40
230	95.1	123	145	167	192	214	232	243	246	241	229	181	110	38
240	99.0	124	145	165	188	209	226	237	241	238	227	180	108	36
250	103.0	126	145	163	184	203	219	230	235	234	225	179	105	34
260	106.9	128	145	161	179	196	212	223	229	230	223	178	103	32
270	110.8	131	145	159	174	189	204	216	223	226	221	176	100	30
280	114.8	133	145	157	169	183	196	208	217	222	218	174	97	28
290	118.8	134	145	155	165	176	189	202	212	218	215	172	94	26
300	122.8	136	145	153	161	171	183	196	207	214	212	169	92	25
310	126.8	137	144	151	157	166	177	190	202	210	209	166	89	24
320	130.9	137	143	149	154	162	173	186	198	207	206	163	87	24
330	135.0	137	142	147	152	159	169	182	195	204	203	160	86	23
340	139.0	136	141	146	150	156	166	179	192	201	199	156	84	23
350	143.1	135	140	145	148	154	164	177	190	198	196	152	83	23
360	147.3	133	138	143	147	152	162	175	188	196	192	149	82	23
370	151.4	131	137	142	146	151	161	174	187	194	189	145	81	24
380	155.5	129	135	141	145	150	160	173	185	191	185	141	80	24
390	159.7	127	134	140	144	149	159	172	184	189	182	136	79	25
400	163.8	125	132	139	143	149	158	171	183	187	178	132	79	25

Se/Si3N4/N/A

Table VI: Recoil Distribution Parameters

Ion: Se Material: Si3N4 density = 3.0 Recoil atom: N Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	84	86	88	89	87	81	76	71	69	67	63	59	54
110	48.5	99	98	98	97	94	88	82	77	74	72	68	63	57
120	52.4	114	111	108	105	100	94	88	83	79	77	73	67	60
130	56.2	127	123	118	113	107	100	94	88	84	81	77	71	63
140	60.0	140	133	127	121	114	107	100	94	89	86	82	75	66
150	63.9	150	143	135	128	121	113	106	100	94	90	85	78	69
160	67.8	158	151	143	135	128	120	113	105	99	95	89	81	72
170	71.7	165	157	150	142	134	127	119	111	104	99	91	83	74
180	75.6	171	163	156	148	141	133	125	117	109	103	94	85	76
190	79.5	176	169	162	155	148	140	131	122	114	107	97	87	77
200	83.4	182	175	167	161	154	146	137	127	118	111	99	89	79
210	87.3	188	181	173	167	160	152	142	132	123	115	102	91	80
220	91.2	195	187	180	173	165	157	147	137	128	119	105	93	81
230	95.1	203	195	186	178	170	162	152	142	132	123	108	95	82
240	99.0	211	202	193	184	175	167	157	147	137	127	111	97	82
250	103.0	220	210	199	189	180	171	161	151	141	131	115	99	83
260	106.9	230	218	206	195	185	175	166	156	145	135	118	101	84
270	110.8	240	227	214	201	189	179	170	160	149	139	121	103	85
280	114.8	251	236	221	207	194	183	173	164	154	143	124	105	86
290	118.8	261	245	229	212	198	187	177	168	157	147	127	107	87
300	122.8	273	255	237	219	203	191	181	171	161	151	130	109	89
310	126.8	284	265	245	225	208	194	184	175	165	154	133	112	91
320	130.9	295	275	253	231	213	198	187	178	169	158	135	114	93
330	135.0	307	285	262	238	217	202	191	182	172	161	137	116	96
340	139.0	319	295	271	245	223	205	194	185	175	164	139	118	99
350	143.1	331	306	280	252	228	209	197	188	179	167	141	120	102
360	147.3	343	316	289	259	233	213	200	191	182	170	143	122	105
370	151.4	355	327	299	267	238	216	203	194	185	173	145	125	108
380	155.5	368	338	308	274	243	220	206	197	188	176	147	127	112
390	159.7	380	349	317	281	249	224	209	200	192	179	148	129	115
400	163.8	392	360	327	289	254	227	212	203	195	182	150	131	119

Se/Si3N4/N/a

Table VI: Recoil Distribution Parameters

Ion: Se Material: SiO2 density = 2.0 Recoil atom: Si Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	1.40	1.36	1.32	1.29	1.26	1.25	1.24	1.23	1.22	1.22	1.22	1.23	1.24
110	48.5	1.37	1.34	1.30	1.27	1.24	1.22	1.21	1.21	1.20	1.20	1.21	1.22	1.23
120	52.4	1.35	1.31	1.28	1.25	1.22	1.20	1.19	1.19	1.19	1.19	1.19	1.20	1.22
130	56.2	1.32	1.29	1.26	1.23	1.20	1.18	1.17	1.17	1.17	1.17	1.18	1.19	1.22
140	60.0	1.30	1.27	1.24	1.21	1.18	1.16	1.15	1.15	1.16	1.16	1.17	1.18	1.20
150	63.9	1.28	1.25	1.23	1.19	1.17	1.15	1.14	1.14	1.15	1.15	1.16	1.17	1.19
160	67.8	1.26	1.24	1.21	1.18	1.15	1.13	1.13	1.13	1.14	1.15	1.15	1.16	1.18
170	71.7	1.25	1.23	1.20	1.17	1.15	1.13	1.12	1.13	1.14	1.14	1.15	1.15	1.16
180	75.6	1.24	1.21	1.19	1.16	1.14	1.12	1.12	1.13	1.14	1.14	1.14	1.14	1.14
190	79.5	1.23	1.21	1.19	1.16	1.14	1.12	1.12	1.12	1.13	1.14	1.14	1.13	1.13
200	83.4	1.22	1.20	1.18	1.15	1.13	1.12	1.12	1.12	1.13	1.14	1.14	1.13	1.11
210	87.3	1.22	1.20	1.18	1.15	1.13	1.12	1.12	1.12	1.13	1.14	1.14	1.12	1.11
220	91.2	1.22	1.19	1.17	1.14	1.12	1.11	1.11	1.12	1.13	1.13	1.13	1.12	1.10
230	95.1	1.22	1.19	1.17	1.14	1.12	1.11	1.11	1.12	1.12	1.13	1.13	1.12	1.10
240	99.0	1.22	1.20	1.17	1.14	1.11	1.11	1.11	1.11	1.12	1.12	1.12	1.11	1.10
250	103.0	1.23	1.20	1.17	1.13	1.11	1.10	1.10	1.11	1.11	1.12	1.12	1.11	1.10
260	106.9	1.23	1.20	1.17	1.13	1.11	1.10	1.10	1.11	1.11	1.11	1.11	1.11	1.10
270	110.8	1.24	1.20	1.17	1.13	1.10	1.09	1.10	1.10	1.10	1.11	1.11	1.11	1.10
280	114.8	1.24	1.21	1.17	1.13	1.10	1.09	1.09	1.10	1.10	1.10	1.10	1.10	1.10
290	118.8	1.25	1.21	1.17	1.12	1.10	1.09	1.09	1.09	1.10	1.10	1.10	1.10	1.11
300	122.8	1.26	1.21	1.17	1.12	1.09	1.08	1.08	1.09	1.09	1.09	1.09	1.10	1.11
310	126.8	1.26	1.22	1.17	1.12	1.09	1.08	1.08	1.09	1.09	1.09	1.09	1.10	1.11
320	130.9	1.26	1.22	1.17	1.12	1.09	1.07	1.08	1.08	1.09	1.09	1.09	1.10	1.11
330	135.0	1.27	1.22	1.17	1.12	1.09	1.07	1.07	1.08	1.08	1.08	1.09	1.09	1.10
340	139.0	1.27	1.23	1.17	1.12	1.08	1.07	1.07	1.08	1.08	1.08	1.08	1.09	1.10
350	143.1	1.27	1.23	1.18	1.12	1.08	1.06	1.06	1.07	1.08	1.08	1.08	1.09	1.10
360	147.3	1.28	1.23	1.18	1.12	1.08	1.06	1.06	1.07	1.08	1.08	1.08	1.09	1.09
370	151.4	1.28	1.23	1.18	1.13	1.08	1.06	1.05	1.07	1.08	1.08	1.08	1.08	1.09
380	155.5	1.28	1.23	1.18	1.13	1.08	1.05	1.05	1.06	1.08	1.08	1.08	1.08	1.08
390	159.7	1.28	1.23	1.19	1.13	1.08	1.05	1.05	1.06	1.08	1.08	1.08	1.08	1.08
400	163.8	1.28	1.23	1.19	1.13	1.08	1.05	1.04	1.06	1.07	1.08	1.08	1.07	1.07

Se/ SiO2/Si/n

Table VI: Recoil Distribution Parameters

Ion: Se Material: SiO2 density = 2.0 Recoil atom: Si Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	69	83	95	109	122	135	147	156	163	166	165	154	138
110	48.5	68	80	91	102	114	126	137	146	153	158	158	149	135
120	52.4	67	77	87	96	106	117	127	137	144	149	151	144	132
130	56.2	65	74	83	91	100	109	119	128	136	142	145	139	128
140	60.0	64	71	79	86	93	102	111	121	129	135	140	135	125
150	63.9	62	69	76	82	89	96	105	115	123	130	136	131	121
160	67.8	59	66	73	79	85	93	101	110	119	126	133	128	117
170	71.7	56	63	70	77	83	91	99	108	116	124	132	125	113
180	75.6	54	61	68	75	82	89	97	106	114	122	131	123	109
190	79.5	51	59	66	74	81	89	97	105	113	121	130	121	106
200	83.4	49	57	65	73	81	88	96	103	111	120	129	119	103
210	87.3	47	55	63	72	80	87	95	102	110	118	127	117	102
220	91.2	46	54	62	70	79	86	93	100	107	115	124	115	101
230	95.1	45	53	61	69	77	85	92	98	105	113	122	113	100
240	99.0	44	52	60	68	76	83	90	96	102	110	118	110	100
250	103.0	44	51	59	67	74	81	87	93	100	107	114	108	100
260	106.9	44	51	58	65	72	79	85	91	97	103	111	106	101
270	110.8	44	51	57	64	71	77	83	88	94	100	107	104	101
280	114.8	44	50	56	63	69	75	80	86	92	97	103	102	102
290	118.8	44	50	56	61	67	73	78	83	89	94	100	100	102
300	122.8	44	49	55	60	65	71	76	81	87	91	97	98	101
310	126.8	44	49	54	59	64	69	74	79	85	89	94	97	100
320	130.9	44	48	53	58	62	67	72	77	83	87	92	95	99
330	135.0	43	48	52	57	61	65	70	76	81	85	91	94	97
340	139.0	43	47	51	55	60	64	69	74	79	84	90	92	95
350	143.1	43	47	51	54	58	63	67	73	78	83	89	91	93
360	147.3	42	46	50	53	57	61	66	71	77	82	88	90	90
370	151.4	41	45	49	52	56	60	65	70	76	81	88	88	87
380	155.5	41	44	48	51	55	59	64	69	75	80	87	87	84
390	159.7	40	43	47	50	54	57	62	68	74	79	87	86	81
400	163.8	39	43	46	49	52	56	61	67	73	79	87	85	78

Se/ SiO2/Si/A

Table VI: Recoil Distribution Parameters

Ion: Se Material: SiO2 density = 2.0 Recoil atom: Si Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	83	84	87	88	87	82	77	73	69	66	62	59	57
110	48.5	95	95	95	94	91	87	82	78	75	72	67	64	61
120	52.4	106	104	102	100	96	91	86	83	80	77	73	69	65
130	56.2	116	112	109	105	100	95	91	88	85	83	78	73	69
140	60.0	124	119	115	110	104	100	96	93	91	88	83	78	73
150	63.9	128	123	119	113	109	104	101	99	97	94	88	82	77
160	67.8	129	125	121	117	113	110	107	105	103	100	92	86	81
170	71.7	127	124	122	119	117	115	113	111	109	105	97	90	84
180	75.6	124	124	123	122	121	120	119	118	115	111	101	93	87
190	79.5	123	124	124	125	126	126	125	124	121	116	105	97	91
200	83.4	124	126	127	129	130	131	131	130	127	122	109	101	94
210	87.3	129	130	132	133	135	136	137	136	133	127	113	104	97
220	91.2	138	138	138	139	140	141	142	141	138	131	117	108	101
230	95.1	149	148	146	145	145	146	147	146	142	136	121	112	104
240	99.0	163	159	155	152	150	151	152	151	147	140	125	116	108
250	103.0	178	173	166	160	156	156	156	156	151	144	130	120	111
260	106.9	195	187	177	168	162	161	161	160	156	148	134	124	115
270	110.8	212	201	188	176	168	166	166	165	160	153	138	128	118
280	114.8	229	216	200	185	175	171	170	169	164	157	143	132	122
290	118.8	246	230	212	194	182	177	175	174	169	161	147	137	125
300	122.8	261	243	223	203	189	183	181	179	173	166	152	141	129
310	126.8	275	255	233	212	197	189	186	184	178	171	157	145	132
320	130.9	286	266	243	221	204	196	192	189	183	176	162	149	135
330	135.0	297	276	253	230	213	203	198	194	188	181	167	154	138
340	139.0	306	285	262	239	221	210	205	200	194	186	172	158	142
350	143.1	314	293	270	247	229	218	211	206	199	192	178	162	145
360	147.3	321	300	278	256	238	226	218	212	205	197	183	166	148
370	151.4	327	307	286	265	247	234	225	218	211	203	189	171	150
380	155.5	332	314	294	274	256	242	232	224	217	209	194	175	153
390	159.7	338	320	302	282	265	250	239	230	222	215	200	179	156
400	163.8	343	326	309	291	274	258	246	236	228	221	205	183	159

Se/ SiO2/Si/a

Table VI: Recoil Distribution Parameters

Ion: Se Material: SiO2 density = 2.0 Recoil atom: O Exponents n

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	1.37	1.34	1.31	1.28	1.25	1.23	1.22	1.21	1.20	1.20	1.20	1.20	1.20
110	48.5	1.36	1.33	1.30	1.27	1.24	1.22	1.21	1.20	1.19	1.19	1.19	1.18	1.18
120	52.4	1.35	1.32	1.29	1.26	1.23	1.21	1.20	1.19	1.18	1.18	1.17	1.17	1.17
130	56.2	1.34	1.31	1.28	1.25	1.22	1.20	1.19	1.18	1.17	1.17	1.17	1.16	1.16
140	60.0	1.33	1.30	1.27	1.25	1.22	1.20	1.18	1.17	1.17	1.16	1.16	1.15	1.15
150	63.9	1.32	1.30	1.27	1.24	1.21	1.19	1.18	1.17	1.16	1.16	1.15	1.15	1.15
160	67.8	1.32	1.30	1.27	1.24	1.21	1.19	1.18	1.17	1.16	1.16	1.15	1.15	1.15
170	71.7	1.32	1.30	1.27	1.24	1.21	1.19	1.18	1.17	1.17	1.16	1.15	1.15	1.15
180	75.6	1.33	1.30	1.28	1.24	1.21	1.19	1.18	1.17	1.17	1.16	1.15	1.15	1.15
190	79.5	1.33	1.31	1.28	1.25	1.22	1.19	1.18	1.18	1.17	1.17	1.15	1.15	1.15
200	83.4	1.34	1.31	1.28	1.25	1.22	1.20	1.18	1.18	1.17	1.17	1.15	1.15	1.15
210	87.3	1.34	1.31	1.28	1.25	1.22	1.20	1.19	1.18	1.18	1.17	1.15	1.15	1.15
220	91.2	1.34	1.31	1.28	1.25	1.22	1.20	1.19	1.18	1.17	1.16	1.15	1.15	1.15
230	95.1	1.34	1.31	1.28	1.25	1.22	1.20	1.19	1.18	1.17	1.16	1.14	1.14	1.15
240	99.0	1.34	1.31	1.28	1.24	1.22	1.20	1.19	1.18	1.17	1.15	1.14	1.14	1.15
250	103.0	1.34	1.31	1.28	1.24	1.21	1.20	1.18	1.18	1.16	1.15	1.13	1.14	1.14
260	106.9	1.34	1.31	1.27	1.24	1.21	1.19	1.18	1.17	1.16	1.14	1.12	1.13	1.14
270	110.8	1.34	1.31	1.27	1.24	1.21	1.19	1.18	1.17	1.15	1.13	1.12	1.13	1.14
280	114.8	1.34	1.30	1.27	1.24	1.21	1.19	1.18	1.17	1.15	1.13	1.11	1.13	1.14
290	118.8	1.34	1.31	1.27	1.24	1.21	1.19	1.18	1.16	1.14	1.12	1.11	1.13	1.14
300	122.8	1.34	1.31	1.27	1.24	1.21	1.19	1.18	1.16	1.14	1.12	1.10	1.12	1.13
310	126.8	1.34	1.31	1.27	1.24	1.21	1.19	1.17	1.16	1.13	1.11	1.10	1.13	1.13
320	130.9	1.35	1.31	1.28	1.24	1.21	1.19	1.17	1.16	1.13	1.11	1.11	1.13	1.14
330	135.0	1.35	1.32	1.28	1.24	1.21	1.19	1.17	1.15	1.13	1.11	1.11	1.13	1.14
340	139.0	1.36	1.33	1.29	1.25	1.22	1.19	1.17	1.15	1.13	1.12	1.12	1.13	1.14
350	143.1	1.37	1.33	1.29	1.25	1.22	1.19	1.17	1.15	1.13	1.12	1.12	1.14	1.14
360	147.3	1.38	1.34	1.30	1.26	1.22	1.20	1.17	1.15	1.13	1.12	1.13	1.14	1.15
370	151.4	1.39	1.35	1.31	1.27	1.23	1.20	1.17	1.15	1.14	1.13	1.14	1.15	1.15
380	155.5	1.40	1.36	1.32	1.27	1.23	1.20	1.17	1.15	1.14	1.13	1.15	1.16	1.15
390	159.7	1.41	1.37	1.33	1.28	1.24	1.20	1.17	1.15	1.14	1.14	1.16	1.16	1.16
400	163.8	1.42	1.38	1.34	1.29	1.24	1.20	1.17	1.15	1.14	1.15	1.17	1.17	1.16

Se/ SiO2/O/n

Table VI: Recoil Distribution Parameters

Ion: Se Material: SiO2 density = 2.0 Recoil atom: O Magnitudes A

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	130	155	181	206	229	250	268	284	297	305	305	285	257
110	48.5	126	149	173	195	217	237	255	271	283	291	291	273	247
120	52.4	123	144	165	185	205	224	242	258	270	278	279	262	238
130	56.2	120	139	158	177	195	213	230	246	258	266	267	252	229
140	60.0	118	135	153	170	186	203	220	236	249	257	258	244	223
150	63.9	117	133	149	165	180	196	213	228	241	250	252	239	218
160	67.8	117	132	147	162	177	192	208	224	237	246	250	237	216
170	71.7	119	133	147	161	176	191	206	221	235	245	251	237	215
180	75.6	120	134	148	162	176	191	206	221	234	245	252	238	216
190	79.5	122	136	149	163	177	191	206	220	234	245	254	239	218
200	83.4	123	136	150	164	177	191	206	220	233	244	254	240	220
210	87.3	123	136	150	164	177	191	205	219	231	242	252	239	221
220	91.2	122	135	149	162	176	190	204	216	228	238	248	237	221
230	95.1	120	134	147	161	174	188	201	213	223	232	242	234	220
240	99.0	118	132	145	158	172	186	199	210	218	225	234	229	220
250	103.0	116	129	142	155	169	183	195	206	212	218	226	224	218
260	106.9	114	127	139	152	166	179	192	201	206	210	217	218	217
270	110.8	111	124	136	149	162	176	188	196	200	202	208	213	215
280	114.8	109	121	133	146	159	172	184	192	194	195	200	207	212
290	118.8	107	119	131	142	155	168	180	187	189	188	192	202	210
300	122.8	106	117	128	140	152	164	176	183	184	182	186	198	207
310	126.8	105	116	127	137	149	161	172	179	180	178	182	195	205
320	130.9	105	115	125	135	146	158	168	175	176	175	179	192	202
330	135.0	106	115	124	133	143	154	165	172	173	173	178	191	200
340	139.0	107	115	124	132	141	151	161	168	171	172	179	190	197
350	143.1	108	116	124	131	139	148	158	165	169	172	180	190	195
360	147.3	110	117	124	130	137	145	155	163	168	172	183	190	192
370	151.4	112	118	124	129	135	143	151	160	167	173	186	191	189
380	155.5	114	119	124	128	133	140	148	158	166	175	189	192	187
390	159.7	117	121	125	128	131	137	145	155	166	177	193	193	184
400	163.8	119	122	125	127	130	134	142	153	165	179	198	194	181

Se/ SiO2/O/A

Table VI: Recoil Distribution Parameters

Ion: Se Material: SiO2 density = 2.0 Recoil atom: O Fall-offs a

E	Rp	Thickness/Rp:												
keV	nm	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6
100	44.7	90	91	93	94	93	91	88	85	82	79	74	70	66
110	48.5	104	104	104	103	102	99	95	91	88	85	80	75	69
120	52.4	118	116	114	113	110	107	102	97	93	90	87	81	72
130	56.2	131	128	125	122	119	115	109	104	99	96	93	86	76
140	60.0	143	139	135	131	127	122	116	111	105	102	99	91	79
150	63.9	153	148	144	139	135	130	124	118	112	109	104	96	84
160	67.8	162	157	152	147	142	137	131	125	119	115	109	100	88
170	71.7	169	164	159	154	149	144	139	133	127	122	114	105	94
180	75.6	176	171	165	161	156	151	146	140	134	129	118	109	99
190	79.5	181	177	172	167	163	158	153	148	142	135	123	113	105
200	83.4	187	182	178	174	169	165	160	155	149	141	127	118	110
210	87.3	192	188	184	180	176	172	167	161	155	147	131	122	115
220	91.2	197	194	190	187	183	179	173	167	160	152	135	126	119
230	95.1	203	200	197	194	191	186	180	173	165	156	139	130	123
240	99.0	209	206	204	202	198	192	186	178	170	161	143	134	127
250	103.0	215	213	211	209	206	199	192	183	174	165	148	138	131
260	106.9	223	220	219	217	213	206	197	188	178	168	152	142	134
270	110.8	231	228	227	225	221	213	203	192	182	172	156	146	137
280	114.8	240	237	236	234	229	220	209	197	186	176	160	151	141
290	118.8	251	247	245	243	237	227	215	201	190	180	165	155	144
300	122.8	262	258	255	252	245	234	220	206	194	184	170	159	148
310	126.8	276	270	266	261	253	241	226	211	198	188	174	164	152
320	130.9	290	283	277	271	262	248	232	216	203	193	179	168	156
330	135.0	306	297	290	281	270	255	238	222	208	198	184	173	160
340	139.0	323	312	302	291	278	262	244	227	213	203	189	178	164
350	143.1	341	328	315	302	287	269	250	233	219	208	194	183	169
360	147.3	360	344	329	313	295	276	256	239	224	214	200	187	173
370	151.4	379	361	342	323	303	283	262	244	230	219	205	192	178
380	155.5	399	377	356	334	312	289	269	250	236	225	210	197	183
390	159.7	419	395	371	345	320	296	275	256	242	231	216	202	187
400	163.8	439	412	385	356	329	303	281	262	247	236	221	207	192

Se/ SiO2/O/a

§3. Ion-implantation into Amorphous Materials

To apply range scaling to calculate profiles for implantation through Si_3N_4 and SiO_2 caps, and to determine adequate masking thicknesses, we have made TRIM calculations for 11 ions implanted into Si_3N_4, SiO_2, $WSi_{1.4}$, Au, and photoresist for energies between 10 and 400 keV. The distributions were calculated for about 7 ion energies over this range, using 1000 (Z_{ion}<5) to 2000 (Z_{ion}>5) ion trajectories for each energy, then the moments of the distributions were calculated, and were least-squares fitted to linear or quadratic functions of the log of the ion energy. The peak position was calculated using a Pearson-I function to fit the distributions. The stopped ion position is defined where the concentration of ions is 10^{-4} times the peak concentration. For distributions with γ<-0.3, the Pearson-I function does not predict this position well, so there we assumed that the stopped ion position is the sum of the total ion path length R+ one path length distribution width ΔR. In Table I, we note that this approximation appears to work well for ions in GaAs. The average path length is as far as the ions can possibly travel; for the highly, negatively skewed distributions, many of the ions travel this distance, then the distribution falls off very quicky with increasing depth.

The materials were chosen on the basis of technological significance. Leading GaAs foundries often implant ions through Si_3N_4 and SiO_2 caps. WSi_x is used as a gate material in self-aligned implantation processes, so the masking thickness is an issue. In practice x varies greatly. The corresponding WSi_x density varies as

$$\rho_{WSix} = 16.51 - 3.32x, \qquad (3\text{-}1)$$

We have chosen x=1.4 as a compromise value. Results for WSi at other x values can be estimated by scaling with the density. A generic photoresist with density 1gm/cc and composition $C_8H_{14}O_2$ was chosen. PMMA and AZ111 densities on semiconductor materials are reported to vary around 0.92 g/cc by 0.13 g/cc. We chose to use a density of 1g/cc for easy density scaling. The Rp, ΔRp, peak position, and stopping thicknesses decrease with increasing density.

The moments of the distributions are shown in Fig.1 for Si ions on Si_3N_4. Figure 2 compares moments for different materials. Roughly speaking, Rp varies as the density, but ΔRp depends on both the density and the material atomic number. Higher atomic numbers give higher widths, so the combination for Au and WSi of a higher density (smaller ΔRp) and a higher atomic number (larger ΔRp) than Si_3N_4 gives about the same ΔRp value.

Finally Fig.3 shows stopping thicknesses for all ions in the five materials considered.

§ 3. List of Figures

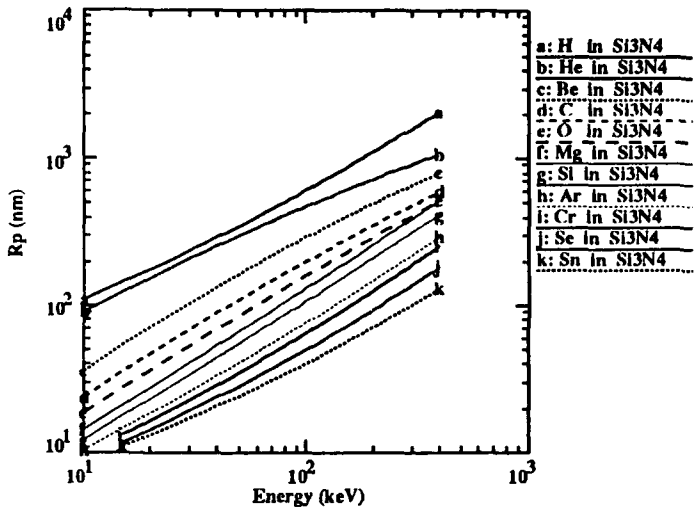


Fig.1a. Rp for implants into Si3N4 layers

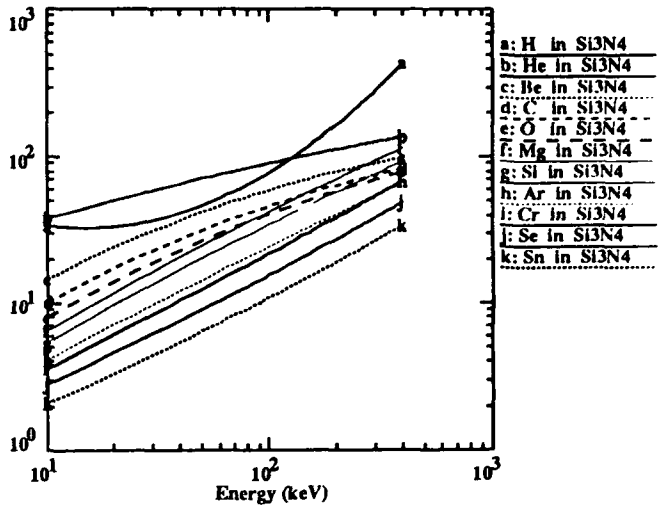


Fig.1b. Delta Rp for implants into SI3N4

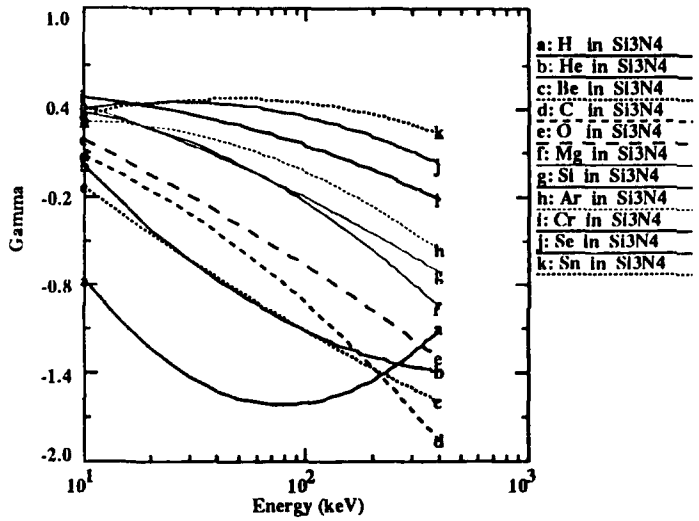


Fig.1c. Gamma values (third moment) for implants into Si3N4

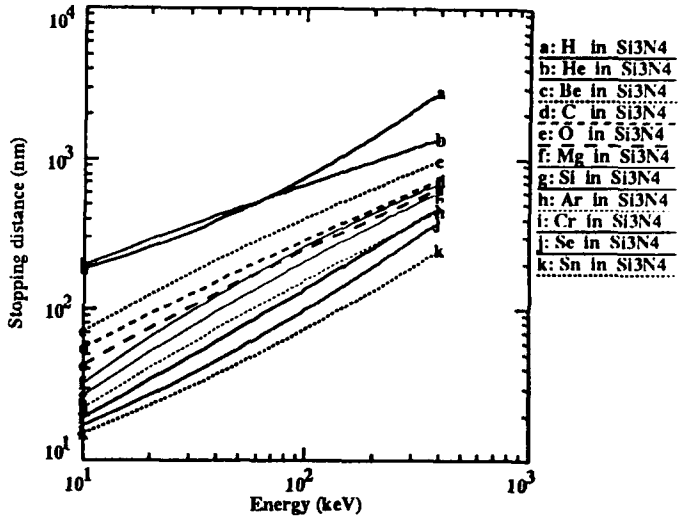


Fig.1d. Stopping distance for implants into Si3N4

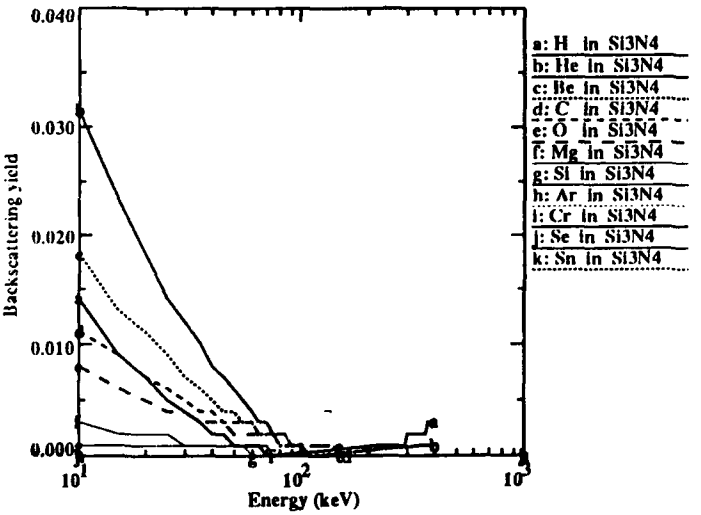


Fig.1e. Backscattering yield for implants into Si3N4

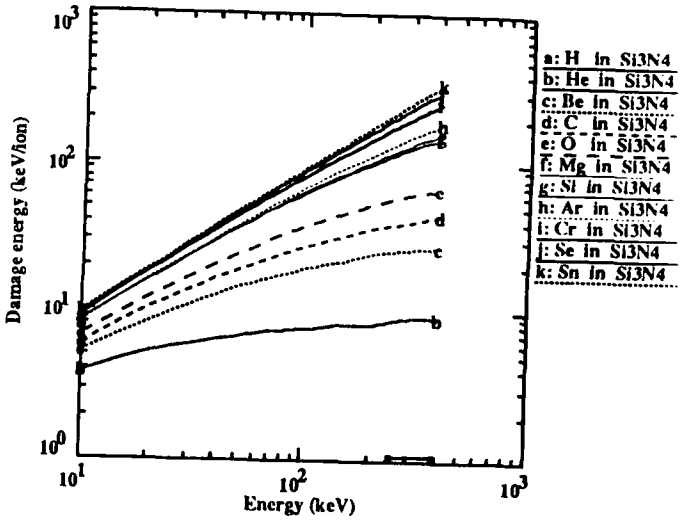


Fig.1f. Damage energy deposited for implants into Si3N4

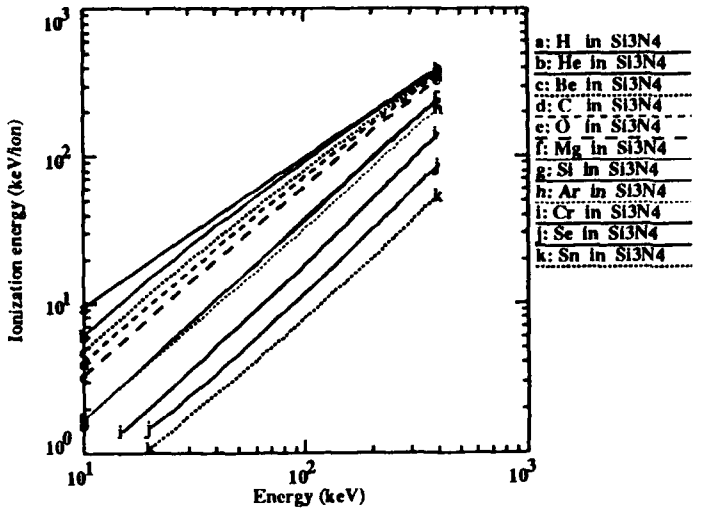


Fig.1g. Ionization energy deposited for implants into Si3N4

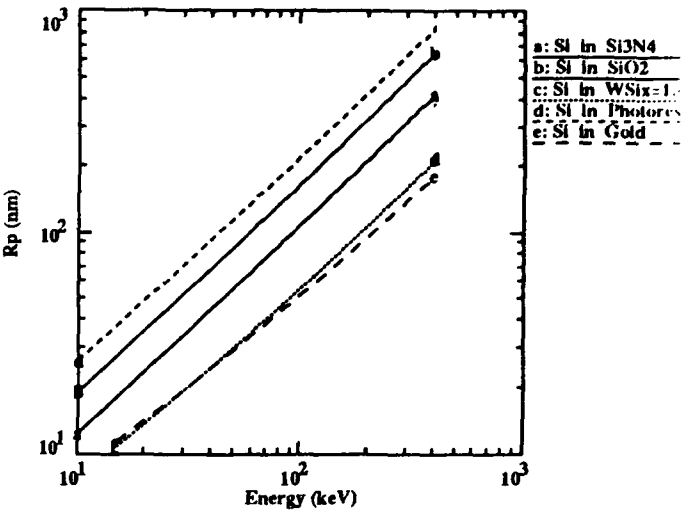


Fig.2a. Rp values for Si implants

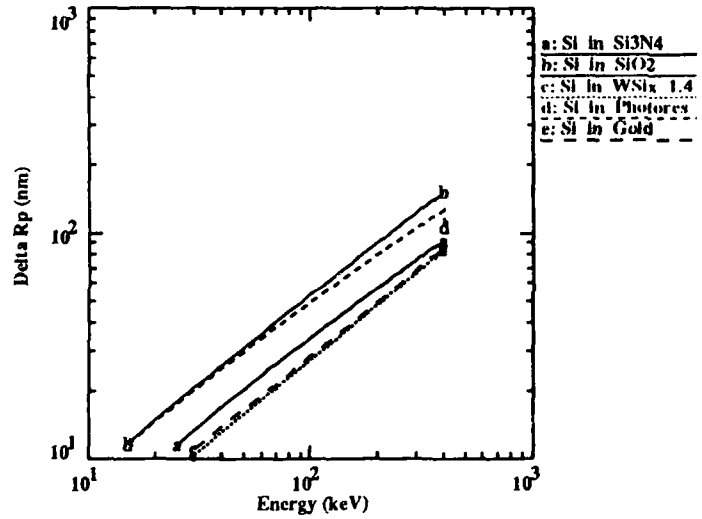


Fig.2b. Delta Rp for Si implants

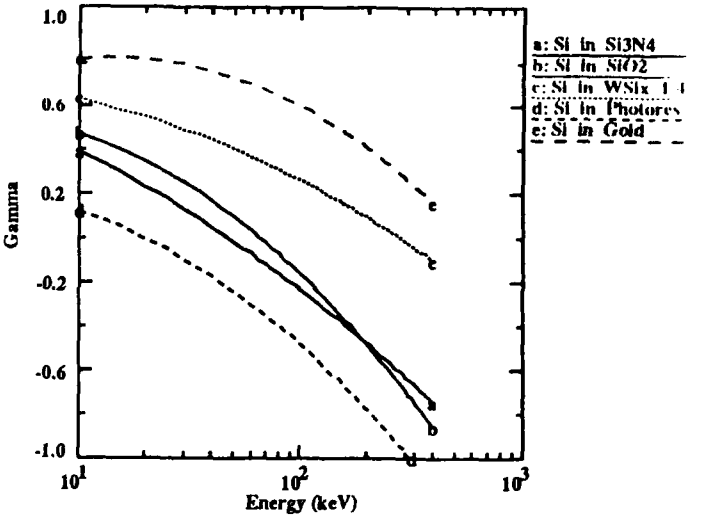


Fig.2c. Gamma values for Si implants

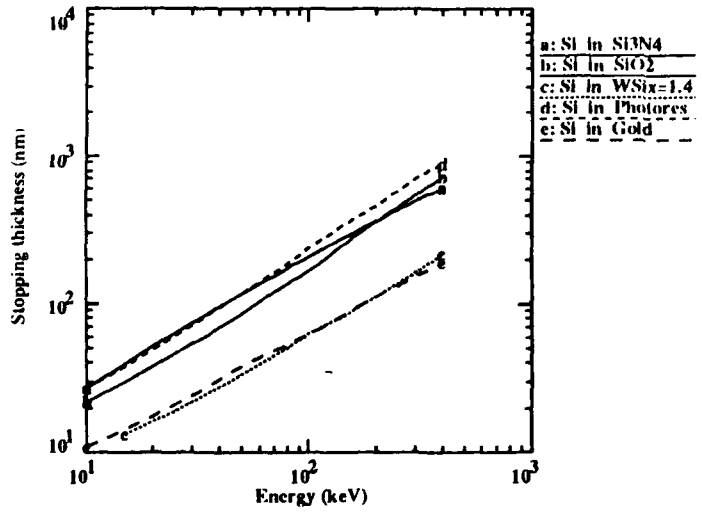


Fig.2d. Stopping thickness for Si implants

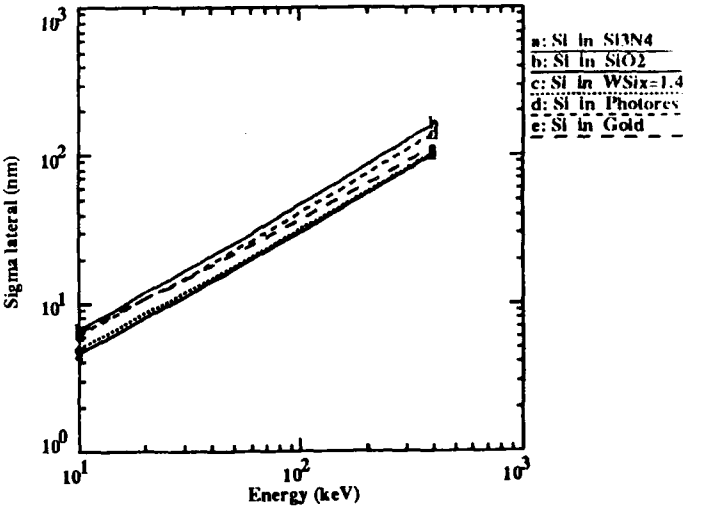


Fig.2e. Lateral straggle for Si implants

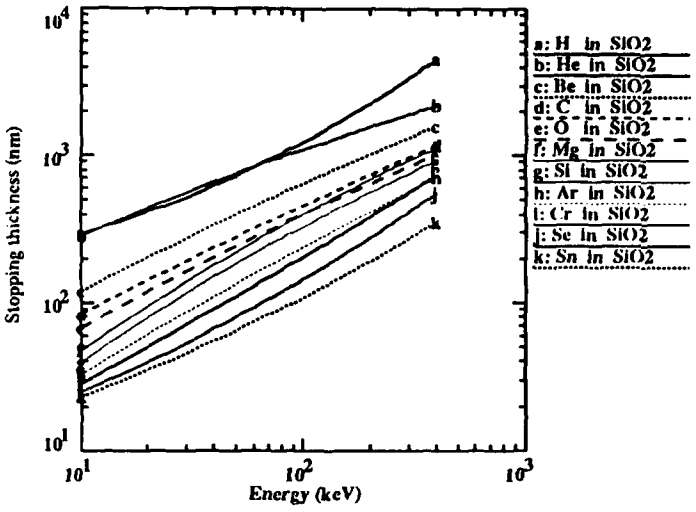


Fig3a. Stopping thickness for implants into SiO2

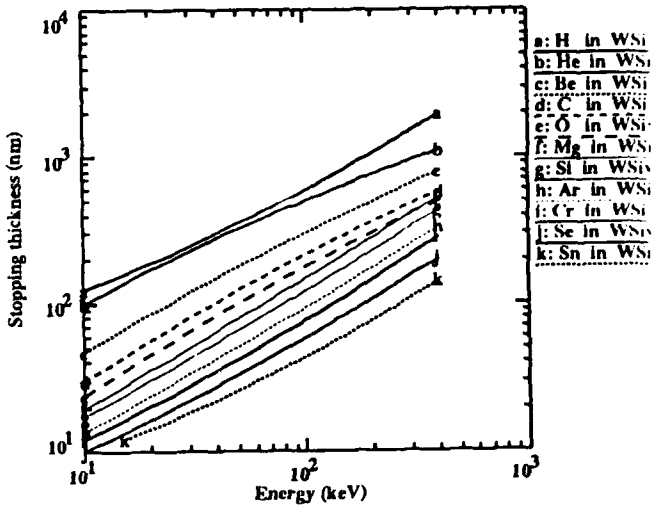


Fig.3b. Stopping thickness for implants into WSix=1.4

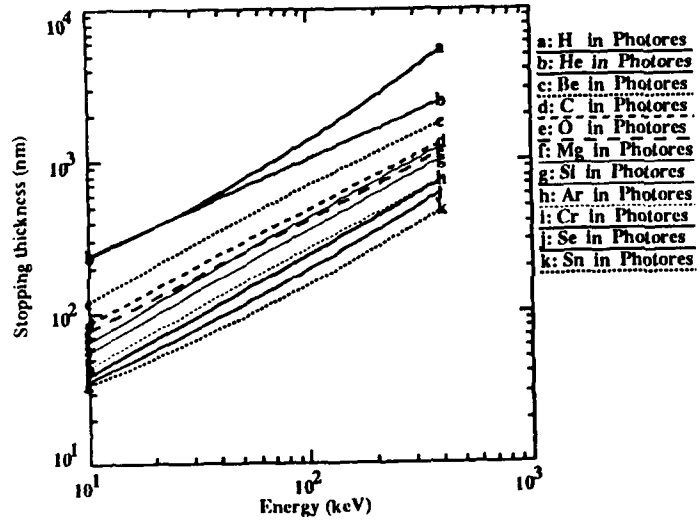


Fig.3c. Stopping thickness for implants into photoresist

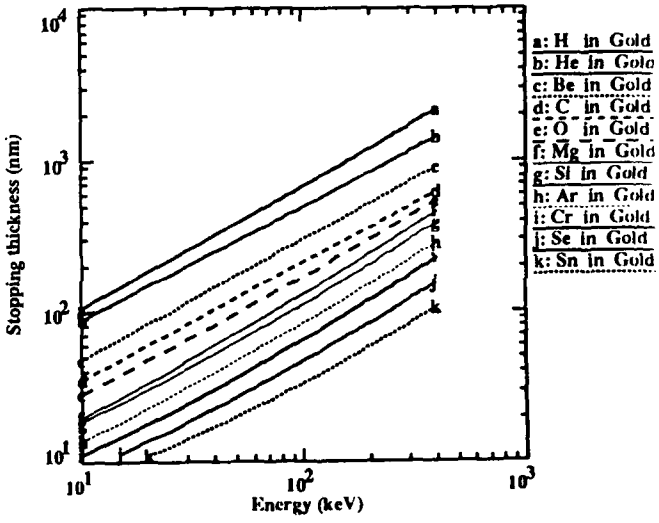


Fig.3d. Stopping thickness for implants into Au

Table VII. Ion Distributions in Amorphous Materials.

Table VII is on following pages: pages 422 through 476.

Table VII. Ion Distributions in Amorphous Materials
Explanation

Item	Units	Definition
E	keV	Ion energy
Rp	nm	Projected first moment of the distribution
Sig.Rp	nm	Width
Gamma		Normalized third moment
Beta		Normalized fourth moment
Sig.Lat	nm	Lateral straggling width
Peak	nm	Position of the peak of the distribution
Stopped	nm	Depth where the ion concentration is 10^{-4} times the peak
Bcksct		Backscattered number of ions per incident ion.
Dmg	keV	Ion energy deposited in nuclear collisions
Ioniz	keV	Ion energy deposited ejecting electrons

Contents of Table VII.

H, He, Be, C, O, Mg, Si, Ar, Cr, Se, Sn, Ion Implanted into Si_3N_4 for Energies from 10 to 400keV.

H in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	109.8	33.6	-0.80	3.20	126.1	183.9	0.014	0.5	9.4
15	144.2	32.5	-1.09	4.55	170.6	220.5	0.009	0.6	14.3
20	176.4	33.2	-1.25	5.31	210.8	255.3	0.007	0.6	19.3
25	207.0	34.8	-1.36	5.80	247.6	289.0	0.005	0.6	24.3
30	236.7	36.7	-1.44	6.12	281.7	321.9	0.004	0.7	29.2
35	265.5	38.9	-1.49	6.35	313.6	354.3	0.003	0.7	34.2
40	293.8	41.3	-1.53	6.51	343.9	386.3	0.002	0.7	39.2
45	321.6	43.9	-1.56	6.63	372.9	418.1	0.002	0.7	44.2
50	349.0	46.6	-1.58	6.71	400.7	449.7	0.001	0.7	49.2
55	376.0	49.3	-1.59	6.76	427.7	481.1	0.001	0.8	54.2
60	402.8	52.2	-1.60	6.80	454.2	512.5	0.001	0.8	59.2
65	429.3	55.2	-1.61	6.82	480.4	543.7	0.001	0.8	64.2
70	455.6	58.2	-1.62	6.82	506.6	575.0	0.000	0.8	69.2
75	481.7	61.4	-1.62	6.82	533.0	606.3	0.000	0.8	74.2
80	507.7	64.6	-1.62	6.81	559.7	637.5	0.000	0.8	79.1
85	533.5	67.9	-1.62	6.79	586.4	668.8	0.000	0.8	84.1
90	559.2	71.3	-1.62	6.77	613.1	700.2	0.000	0.8	89.1
95	584.7	74.8	-1.61	6.74	639.6	731.5	0.000	0.8	94.1
100	610.2	78.3	-1.61	6.71	665.6	763.0	0.000	0.8	99.1
110	660.8	85.6	-1.60	6.64	716.4	826.1	0.000	0.8	109.1
120	711.1	93.3	-1.59	6.56	766.3	889.5	0.000	0.8	119.1
130	761.2	101.2	-1.57	6.48	816.3	953.3	0.000	0.9	129.1
140	811.0	109.5	-1.56	6.39	867.1	1017.5	0.000	0.9	139.1
150	860.6	118.0	-1.54	6.30	919.3	1082.1	0.000	0.9	149.1
160	910.1	126.9	-1.53	6.20	973.2	1147.1	0.000	0.9	159.0
170	959.5	136.1	-1.51	6.11	1028.7	1212.5	0.000	0.9	169.0
180	1008.7	145.6	-1.49	6.01	1085.4	1278.4	0.000	1.0	179.0
190	1057.8	155.4	-1.48	5.91	1143.0	1344.8	0.000	1.0	188.9
200	1106.9	165.5	-1.46	5.81	1201.4	1411.6	0.000	1.0	198.9
210	1155.9	176.0	-1.44	5.72	1260.3	1478.9	0.000	1.0	208.9
220	1204.8	186.8	-1.42	5.62	1320.1	1546.6	0.001	1.0	218.9
230	1253.7	197.9	-1.41	5.52	1380.8	1614.8	0.001	1.0	228.9
240	1302.5	209.3	-1.39	5.43	1442.9	1683.5	0.001	1.0	238.9
250	1351.3	221.1	-1.37	5.33	1506.5	1752.7	0.001	1.1	248.9
260	1400.1	233.2	-1.35	5.24	1571.8	1822.4	0.001	1.1	258.9
270	1448.9	245.7	-1.34	5.14	1639.0	1892.5	0.001	1.1	268.9
280	1497.6	258.5	-1.32	5.05	1708.3	1963.1	0.001	1.1	278.9
290	1546.4	271.6	-1.30	4.96	1779.9	2034.2	0.001	1.1	288.9
300	1595.1	285.1	-1.28	4.87	1853.9	2105.8	0.002	1.1	298.9
310	1643.8	298.9	-1.27	4.78	1930.5	2177.8	0.002	1.1	308.9
320	1692.6	313.1	-1.25	4.69	2009.5	2250.4	0.002	1.1	318.9
330	1741.3	327.6	-1.24	4.60	2090.7	2323.4	0.002	1.1	328.8
340	1790.1	342.5	-1.22	4.51	2173.9	2396.8	0.002	1.1	338.8
350	1838.8	357.8	-1.20	4.43	2259.0	2470.8	0.002	1.1	348.8
360	1887.6	373.4	-1.19	4.34	2345.8	2545.2	0.002	1.1	358.7
370	1936.4	389.4	-1.17	4.26	2434.1	2620.1	0.003	1.1	368.7
380	1985.3	405.8	-1.16	4.17	2523.7	2695.4	0.003	1.1	378.7
390	2034.1	422.5	-1.14	4.09	2614.5	2771.2	0.003	1.1	388.6
400	2083.0	439.6	-1.12	4.01	2706.3	2847.5	0.003	1.1	398.6

He in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	90.7	38.0	-0.04	2.15	93.3	194.6	0.031	3.8	6.1
15	124.8	44.9	-0.29	2.69	132.6	244.6	0.023	4.6	10.2
20	155.4	50.4	-0.46	3.05	169.3	287.0	0.018	5.2	14.7
25	183.4	54.9	-0.57	3.32	203.6	324.6	0.014	5.6	19.3
30	209.4	58.9	-0.67	3.53	235.6	358.7	0.012	5.9	24.1
35	233.9	62.4	-0.74	3.71	265.3	390.1	0.010	6.1	28.8
40	257.0	65.5	-0.80	3.86	292.7	419.3	0.008	6.3	33.6
45	279.0	68.4	-0.85	3.99	318.0	446.7	0.007	6.5	38.5
50	300.0	71.1	-0.89	4.10	341.1	472.7	0.006	6.6	43.3
55	320.2	73.5	-0.93	4.20	362.3	497.4	0.005	6.8	48.1
60	339.6	75.8	-0.96	4.29	382.3	521.0	0.004	7.0	53.0
65	358.3	77.9	-0.99	4.38	401.7	543.6	0.003	7.1	57.8
70	376.3	79.9	-1.02	4.45	420.7	565.3	0.003	7.2	62.7
75	393.8	81.8	-1.04	4.52	439.9	586.2	0.002	7.3	67.6
80	410.8	83.6	-1.07	4.58	459.2	606.5	0.002	7.3	72.6
85	427.3	85.4	-1.09	4.64	478.6	626.1	0.002	7.4	77.5
90	443.4	87.0	-1.10	4.70	497.6	645.1	0.001	7.4	82.5
95	459.0	88.6	-1.12	4.75	516.0	663.6	0.001	7.5	87.5
100	474.3	90.1	-1.14	4.80	533.5	681.6	0.001	7.5	92.5
110	503.7	92.9	-1.16	4.89	565.9	716.2	0.000	7.6	102.4
120	531.9	95.6	-1.19	4.97	595.4	749.2	0.000	7.7	112.3
130	559.0	98.1	-1.21	5.04	622.9	780.8	0.000	7.9	122.1
140	585.0	100.4	-1.23	5.10	649.1	811.2	0.000	8.0	132.0
150	610.1	102.6	-1.25	5.16	674.4	840.4	0.000	8.0	142.0
160	634.4	104.7	-1.26	5.22	699.3	868.7	-0.001	8.0	151.9
170	657.9	106.7	-1.27	5.27	723.6	896.0	-0.001	8.0	161.9
180	680.7	108.5	-1.29	5.32	747.2	922.5	-0.001	8.1	171.9
190	702.8	110.3	-1.30	5.36	770.2	948.2	-0.001	8.1	181.9
200	724.3	112.1	-1.31	5.40	792.4	973.2	-0.001	8.1	191.9
210	745.3	113.7	-1.32	5.44	813.8	997.5	-0.001	8.2	201.8
220	765.7	115.3	-1.32	5.48	834.6	1021.2	-0.001	8.3	211.7
230	785.6	116.8	-1.33	5.51	854.9	1044.4	-0.001	8.4	221.6
240	805.1	118.3	-1.34	5.55	874.9	1067.0	0.000	8.5	231.5
250	824.1	119.7	-1.35	5.58	894.5	1089.1	0.000	8.6	241.4
260	842.7	121.1	-1.35	5.61	914.0	1110.8	0.000	8.7	251.3
270	860.9	122.4	-1.36	5.64	933.4	1132.0	0.000	8.8	261.2
280	878.7	123.7	-1.36	5.66	952.8	1152.7	0.000	8.9	271.1
290	896.1	124.9	-1.37	5.69	972.1	1173.1	0.000	8.9	281.1
300	913.3	126.2	-1.37	5.72	991.6	1193.1	0.000	9.0	291.0
310	930.0	127.3	-1.38	5.74	1011.1	1212.8	0.000	9.0	300.9
320	946.5	128.5	-1.38	5.76	1030.7	1232.1	0.000	9.0	310.9
330	962.7	129.6	-1.38	5.78	1050.3	1251.1	0.000	9.0	320.9
340	978.6	130.7	-1.39	5.81	1070.0	1269.7	0.001	9.0	330.9
350	994.3	131.7	-1.39	5.83	1089.6	1288.1	0.001	9.0	340.9
360	1009.7	132.8	-1.39	5.85	1109.1	1306.2	0.001	9.0	350.9
370	1024.8	133.8	-1.40	5.87	1128.6	1324.0	0.001	9.0	360.9
380	1039.7	134.8	-1.40	5.88	1147.9	1341.6	0.001	9.0	371.0
390	1054.4	135.7	-1.40	5.90	1167.1	1358.9	0.001	8.9	381.0
400	1068.8	136.7	-1.40	5.92	1186.1	1375.9	0.001	8.9	391.1

Be in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	35.5	14.6	-0.18	2.34	38.8	70.7	0.018	5.2	4.8
15	53.6	19.7	-0.37	2.66	58.5	98.4	0.013	6.8	8.1
20	71.0	24.0	-0.49	2.91	77.9	123.7	0.011	8.2	11.7
25	87.9	27.7	-0.59	3.12	97.0	147.2	0.009	9.5	15.5
30	104.1	31.1	-0.67	3.31	115.8	169.3	0.007	10.6	19.4
35	119.9	34.1	-0.73	3.47	134.2	190.3	0.006	11.6	23.4
40	135.2	36.9	-0.78	3.61	152.1	210.2	0.005	12.5	27.5
45	150.1	39.5	-0.83	3.74	169.7	229.4	0.004	13.4	31.6
50	164.6	41.9	-0.87	3.86	186.8	247.8	0.004	14.1	35.9
55	178.7	44.1	-0.91	3.98	203.4	265.5	0.003	14.7	40.2
60	192.5	46.2	-0.95	4.08	219.7	282.7	0.003	15.3	44.6
65	206.0	48.1	-0.98	4.18	235.4	299.4	0.002	15.9	49.1
70	219.2	50.0	-1.00	4.27	250.7	315.6	0.002	16.4	53.5
75	232.2	51.7	-1.03	4.36	265.5	331.4	0.002	16.9	58.1
80	244.9	53.4	-1.05	4.44	279.7	346.8	0.001	17.3	62.6
85	257.3	55.0	-1.08	4.52	293.6	361.8	0.001	17.8	67.2
90	269.5	56.5	-1.10	4.60	307.4	376.5	0.001	18.2	71.7
95	281.5	57.9	-1.12	4.67	321.0	390.8	0.001	18.6	76.4
100	293.3	59.3	-1.14	4.74	334.7	404.9	0.001	19.0	81.0
110	316.3	61.9	-1.17	4.87	362.1	432.2	0.000	19.6	90.4
120	338.7	64.4	-1.20	4.99	389.1	458.5	0.000	20.2	99.8
130	360.3	66.6	-1.23	5.10	414.7	483.9	0.000	20.7	109.3
140	381.4	68.7	-1.26	5.21	438.4	508.5	0.000	21.2	118.8
150	401.9	70.7	-1.28	5.31	459.6	532.4	0.000	21.7	128.3
160	421.9	72.5	-1.30	5.40	478.4	555.5	0.000	22.3	137.7
170	441.4	74.3	-1.33	5.49	495.6	578.1	0.000	22.8	147.2
180	460.5	75.9	-1.35	5.58	512.2	600.1	0.000	23.4	156.6
190	479.1	77.5	-1.36	5.66	529.1	621.5	0.000	23.8	166.1
200	497.3	79.0	-1.38	5.74	546.9	642.5	0.000	24.3	175.7
210	515.2	80.4	-1.40	5.81	565.9	663.0	0.000	24.6	185.4
220	532.7	81.7	-1.41	5.88	586.0	683.0	0.000	24.9	195.1
230	549.9	83.0	-1.43	5.95	606.7	702.7	0.000	25.1	204.8
240	566.7	84.2	-1.44	6.02	627.7	721.9	0.000	25.2	214.7
250	583.3	85.4	-1.46	6.09	648.6	740.8	0.000	25.4	224.5
260	599.5	86.6	-1.47	6.15	669.2	759.3	0.000	25.5	234.4
270	615.5	87.6	-1.48	6.21	689.3	777.5	0.000	25.6	244.3
280	631.2	88.7	-1.49	6.27	708.6	795.4	0.000	25.7	254.2
290	646.6	89.7	-1.50	6.33	727.1	813.0	0.000	25.8	264.2
300	661.8	90.7	-1.51	6.38	744.4	830.3	0.000	25.9	274.1
310	676.8	91.6	-1.52	6.44	760.5	847.3	0.000	26.0	284.0
320	691.5	92.5	-1.53	6.49	775.5	864.1	0.000	26.1	293.9
330	706.1	93.4	-1.54	6.54	789.5	880.6	0.000	26.2	303.8
340	720.4	94.2	-1.55	6.59	802.8	896.9	0.000	26.2	313.7
350	734.5	95.0	-1.56	6.64	815.4	912.9	0.000	26.3	323.6
360	748.4	95.8	-1.57	6.69	827.4	928.8	0.001	26.4	333.5
370	762.1	96.5	-1.58	6.73	839.0	944.4	0.001	26.5	343.4
380	775.7	97.3	-1.59	6.78	850.2	959.8	0.001	26.6	353.4
390	789.0	98.0	-1.60	6.82	861.1	975.0	0.001	26.7	363.3
400	802.2	98.7	-1.60	6.87	871.8	990.0	0.001	26.7	373.2

O in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	18.6	8.1	0.13	2.69	19.7	42.9	0.008	6.7	3.3
15	27.6	11.2	0.00	2.58	28.8	59.4	0.006	9.4	5.5
20	36.4	14.0	-0.10	2.57	37.8	74.5	0.005	12.0	8.0
25	45.0	16.6	-0.17	2.59	46.7	88.6	0.004	14.3	10.7
30	53.4	18.9	-0.24	2.64	55.5	102.0	0.004	16.4	13.6
35	61.7	21.0	-0.29	2.69	64.5	114.7	0.003	18.4	16.6
40	69.8	23.0	-0.34	2.75	73.4	126.9	0.003	20.2	19.7
45	77.8	24.9	-0.39	2.81	82.4	138.6	0.003	22.0	23.0
50	85.7	26.7	-0.43	2.87	91.5	150.0	0.002	23.7	26.3
55	93.5	28.4	-0.46	2.93	100.6	161.0	0.002	25.3	29.6
60	101.2	30.0	-0.50	2.99	109.8	171.7	0.002	26.9	33.1
65	108.8	31.5	-0.53	3.05	118.9	182.1	0.002	28.4	36.6
70	116.3	33.0	-0.56	3.11	128.1	192.3	0.002	29.9	40.1
75	123.7	34.3	-0.59	3.17	137.2	202.2	0.002	31.2	43.8
80	131.1	35.7	-0.61	3.22	146.2	211.9	0.001	32.5	47.5
85	138.4	37.0	-0.64	3.28	155.1	221.5	0.001	33.7	51.3
90	145.6	38.2	-0.66	3.34	163.9	230.8	0.001	34.8	55.2
95	152.8	39.4	-0.68	3.39	172.3	240.0	0.001	35.9	59.1
100	159.9	40.6	-0.70	3.44	180.5	249.0	0.001	36.9	63.1
110	173.9	42.8	-0.74	3.54	196.0	266.5	0.001	38.9	71.1
120	187.7	44.9	-0.78	3.64	210.6	283.6	0.001	40.8	79.2
130	201.4	46.8	-0.81	3.74	225.0	300.1	0.001	42.5	87.5
140	214.8	48.7	-0.85	3.83	239.3	316.2	0.001	44.2	95.8
150	228.1	50.5	-0.88	3.92	253.9	331.9	0.000	45.7	104.3
160	241.2	52.2	-0.90	4.00	268.9	347.3	0.000	47.1	112.8
170	254.2	53.8	-0.93	4.08	284.3	362.2	0.000	48.5	121.5
180	267.0	55.3	-0.95	4.16	299.7	376.9	0.000	49.7	130.2
190	279.7	56.8	-0.98	4.24	315.2	391.3	0.000	51.0	139.0
200	292.3	58.2	-1.00	4.32	330.4	405.4	0.000	52.1	147.8
210	304.7	59.6	-1.02	4.39	345.3	419.3	0.000	53.3	156.7
220	317.1	60.9	-1.04	4.46	359.9	432.9	0.000	54.4	165.6
230	329.3	62.2	-1.06	4.53	374.1	446.3	0.000	55.5	174.6
240	341.4	63.4	-1.08	4.60	388.0	459.4	0.000	56.5	183.6
250	353.4	64.6	-1.10	4.66	401.5	472.4	0.000	57.5	192.6
260	365.3	65.7	-1.12	4.72	414.6	485.1	0.000	58.4	201.7
270	377.2	66.8	-1.14	4.79	427.4	497.7	0.000	59.3	210.8
280	388.9	67.9	-1.15	4.85	439.8	510.1	0.000	60.1	219.9
290	400.5	69.0	-1.17	4.91	451.8	522.3	0.000	60.9	229.2
300	412.1	70.0	-1.19	4.97	463.5	534.4	0.000	61.6	238.4
310	423.6	71.0	-1.20	5.02	474.8	546.3	0.000	62.2	247.7
320	435.0	71.9	-1.22	5.08	485.7	558.1	0.000	62.8	257.1
330	446.3	72.9	-1.23	5.13	496.4	569.7	0.000	63.3	266.5
340	457.6	73.8	-1.24	5.19	506.8	581.2	0.000	63.8	276.0
350	468.7	74.7	-1.26	5.24	517.0	592.6	0.000	64.3	285.5
360	479.8	75.5	-1.27	5.29	527.0	603.8	0.000	64.7	295.0
370	490.9	76.4	-1.28	5.34	536.9	614.9	0.000	65.1	304.6
380	501.9	77.2	-1.30	5.39	546.6	625.9	0.000	65.5	314.3
390	512.8	78.0	-1.31	5.44	556.2	636.8	0.000	65.9	324.0
400	523.6	78.8	-1.32	5.49	565.6	647.6	0.000	66.3	333.7

C in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	23.6	10.1	0.03	2.70	24.3	55.3	0.011	5.9	4.0
15	35.4	13.9	-0.10	2.50	36.2	74.6	0.009	8.2	6.8
20	46.9	17.2	-0.20	2.47	48.3	92.1	0.007	10.2	9.8
25	58.0	20.1	-0.28	2.52	60.7	108.3	0.006	12.0	13.0
30	68.9	22.8	-0.36	2.60	73.7	123.5	0.005	13.5	16.4
35	79.5	25.2	-0.42	2.70	86.6	137.9	0.004	14.9	20.0
40	89.8	27.4	-0.48	2.81	99.3	151.7	0.004	16.2	23.7
45	100.0	29.5	-0.54	2.93	111.5	165.0	0.003	17.4	27.6
50	109.9	31.4	-0.59	3.04	123.0	177.8	0.003	18.5	31.4
55	119.6	33.3	-0.63	3.16	133.7	190.2	0.003	19.6	35.4
60	129.2	35.0	-0.68	3.28	143.9	202.2	0.003	20.6	39.4
65	138.6	36.6	-0.72	3.39	153.9	213.9	0.002	21.5	43.5
70	147.9	38.2	-0.76	3.50	163.9	225.4	0.002	22.4	47.6
75	157.0	39.7	-0.79	3.61	174.2	236.5	0.002	23.2	51.7
80	165.9	41.1	-0.83	3.72	184.7	247.4	0.002	24.0	55.9
85	174.8	42.4	-0.86	3.83	195.4	258.1	0.002	24.8	60.2
90	183.5	43.7	-0.89	3.94	206.1	268.5	0.001	25.5	64.5
95	192.1	45.0	-0.92	4.04	216.7	278.8	0.001	26.2	68.8
100	200.6	46.2	-0.95	4.14	227.0	288.9	0.001	26.8	73.2
110	217.3	48.5	-1.01	4.33	246.8	308.6	0.001	28.0	82.0
120	233.5	50.6	-1.06	4.52	265.6	327.7	0.001	29.0	90.9
130	249.5	52.6	-1.10	4.70	283.8	346.2	0.001	30.0	99.9
140	265.1	54.5	-1.15	4.88	301.6	364.3	0.001	31.0	109.0
150	280.3	56.2	-1.19	5.05	319.3	381.9	0.001	31.9	118.1
160	295.3	57.9	-1.23	5.21	336.9	399.1	0.000	32.8	127.2
170	310.1	59.5	-1.27	5.36	354.4	416.0	0.000	33.7	136.3
180	324.5	61.0	-1.31	5.52	371.6	432.5	0.000	34.5	145.5
190	338.8	62.5	-1.34	5.66	388.5	448.6	0.000	35.3	154.7
200	352.8	63.9	-1.38	5.81	404.9	464.5	0.000	35.9	164.0
210	366.6	65.2	-1.41	5.95	420.8	480.1	0.000	36.5	173.4
220	380.1	66.4	-1.44	6.08	436.2	495.5	0.000	37.0	182.9
230	393.5	67.7	-1.47	6.21	451.1	510.5	0.000	37.4	192.5
240	406.7	68.8	-1.50	6.34	465.6	525.4	0.000	37.8	202.1
250	419.7	70.0	-1.52	6.47	479.8	540.0	0.000	38.2	211.7
260	432.6	71.0	-1.55	6.59	493.6	554.5	0.000	38.5	221.4
270	445.3	72.1	-1.58	6.71	507.2	568.7	0.000	38.9	231.0
280	457.8	73.1	-1.60	6.82	520.5	582.7	0.000	39.2	240.7
290	470.2	74.1	-1.63	6.94	533.5	596.6	0.000	39.6	250.4
300	482.4	75.0	-1.65	7.05	546.4	610.3	0.000	40.0	260.0
310	494.5	75.9	-1.67	7.16	559.1	623.8	0.000	40.3	269.7
320	506.5	76.8	-1.70	7.26	571.6	637.2	0.000	40.7	279.3
330	518.3	77.7	-1.72	7.37	583.9	650.4	0.000	41.1	288.8
340	530.0	78.5	-1.74	7.47	596.1	663.4	0.000	41.5	298.4
350	541.6	79.3	-1.76	7.57	608.2	676.4	0.000	42.0	308.0
360	553.1	80.1	-1.78	7.67	620.1	689.1	0.000	42.4	317.6
370	564.4	80.8	-1.80	7.77	631.9	701.8	0.000	42.8	327.2
380	575.6	81.6	-1.82	7.86	643.6	714.3	0.000	43.2	336.7
390	586.8	82.3	-1.84	7.95	655.2	726.7	0.000	43.6	346.3
400	597.8	83.0	-1.86	8.05	666.7	739.0	0.000	44.0	355.9

Mg in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	14.5	6.5	0.31	2.97	16.2	32.6	0.003	8.3	1.7
15	21.1	9.2	0.26	2.74	22.5	49.0	0.002	12.1	2.9
20	27.7	11.7	0.21	2.63	28.6	64.6	0.002	15.8	4.2
25	34.2	14.1	0.16	2.58	34.7	79.7	0.002	19.3	5.7
30	40.7	16.4	0.12	2.56	41.0	94.2	0.001	22.7	7.3
35	47.2	18.6	0.08	2.55	47.3	108.2	0.001	26.0	9.0
40	53.7	20.7	0.04	2.56	53.7	121.8	0.001	29.2	10.8
45	60.1	22.8	0.01	2.57	60.1	135.0	0.001	32.3	12.7
50	66.6	24.7	-0.03	2.59	66.6	147.8	0.001	35.4	14.6
55	73.0	26.7	-0.06	2.61	73.0	160.3	0.001	38.4	16.6
60	79.5	28.6	-0.09	2.63	79.6	172.5	0.001	41.4	18.6
65	85.9	30.4	-0.11	2.66	86.4	184.4	0.001	44.3	20.7
70	92.3	32.2	-0.14	2.69	93.5	196.0	0.001	47.0	23.0
75	98.8	34.0	-0.17	2.71	100.9	207.4	0.000	49.7	25.3
80	105.2	35.7	-0.19	2.74	108.8	218.5	0.000	52.2	27.8
85	111.6	37.4	-0.22	2.77	117.0	229.5	0.000	54.6	30.4
90	118.1	39.1	-0.24	2.80	125.2	240.2	0.000	56.9	33.0
95	124.5	40.7	-0.26	2.83	133.5	250.7	0.000	59.3	35.7
100	131.0	42.3	-0.28	2.86	141.6	261.0	0.000	61.6	38.4
110	143.9	45.5	-0.32	2.91	156.9	281.2	0.000	66.2	43.8
120	156.8	48.5	-0.36	2.97	171.5	300.7	0.000	70.8	49.3
130	169.7	51.5	-0.39	3.02	185.6	319.6	0.000	75.2	54.9
140	182.7	54.4	-0.43	3.08	199.5	337.9	0.000	79.5	60.6
150	195.6	57.3	-0.46	3.13	213.6	355.8	0.000	83.5	66.5
160	208.6	60.0	-0.49	3.18	228.0	373.2	0.000	87.2	72.7
170	221.6	62.8	-0.52	3.23	242.7	390.2	0.000	90.7	79.2
180	234.6	65.4	-0.55	3.28	257.6	406.7	0.000	94.1	85.8
190	247.7	68.0	-0.57	3.33	272.7	422.9	0.000	97.4	92.5
200	260.7	70.6	-0.60	3.38	288.0	438.8	0.000	100.6	99.4
210	273.8	73.1	-0.63	3.43	303.4	454.2	0.000	103.8	106.2
220	286.9	75.6	-0.65	3.47	318.9	469.4	0.000	107.0	113.1
230	300.0	78.0	-0.67	3.52	334.4	484.3	0.000	110.1	120.0
240	313.1	80.4	-0.70	3.56	350.0	498.9	0.000	113.2	127.0
250	326.2	82.8	-0.72	3.60	365.4	513.2	0.000	116.2	134.1
260	339.4	85.1	-0.74	3.64	380.8	527.2	0.000	119.0	141.2
270	352.5	87.4	-0.76	3.69	396.1	541.0	0.000	121.8	148.3
280	365.7	89.7	-0.78	3.73	411.2	554.6	0.000	124.5	155.6
290	378.9	91.9	-0.80	3.77	426.2	567.9	0.000	127.1	162.9
300	392.1	94.2	-0.82	3.80	440.9	581.1	0.000	129.6	170.4
310	405.4	96.3	-0.84	3.84	455.4	594.0	0.000	132.0	177.9
320	418.6	98.5	-0.85	3.88	469.8	606.7	0.000	134.3	185.6
330	431.9	100.6	-0.87	3.92	483.9	619.2	0.000	136.4	193.3
340	445.2	102.7	-0.89	3.95	497.9	631.6	0.000	138.6	201.1
350	458.5	104.8	-0.91	3.99	511.8	643.7	0.000	140.6	209.1
360	471.8	106.9	-0.92	4.02	525.5	655.7	0.000	142.6	217.1
370	485.1	108.9	-0.94	4.06	539.2	667.5	0.000	144.5	225.2
380	498.4	110.9	-0.95	4.09	552.7	679.2	0.000	146.4	233.3
390	511.8	112.9	-0.97	4.13	566.3	690.7	0.000	148.3	241.6
400	525.1	114.9	-0.99	4.16	579.7	702.0	0.000	150.1	249.9

Si in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	12.4	5.4	0.35	2.86	13.8	27.2	0.001	8.3	1.7
15	17.9	7.6	0.27	2.71	18.9	39.8	0.001	12.1	2.9
20	23.3	9.7	0.20	2.64	23.8	51.8	0.001	15.8	4.1
25	28.7	11.6	0.15	2.60	28.9	63.4	0.001	19.4	5.6
30	34.0	13.5	0.10	2.59	34.1	74.6	0.001	22.9	7.1
35	39.3	15.3	0.06	2.58	39.5	85.5	0.001	26.2	8.8
40	44.5	17.0	0.02	2.58	44.9	96.1	0.001	29.5	10.5
45	49.8	18.6	-0.01	2.59	50.3	106.4	0.001	32.6	12.3
50	55.0	20.2	-0.04	2.60	55.6	116.6	0.001	35.8	14.2
55	60.3	21.8	-0.07	2.61	60.8	126.5	0.001	38.8	16.2
60	65.5	23.3	-0.09	2.63	66.0	136.2	0.000	41.8	18.2
65	70.7	24.8	-0.12	2.64	71.3	145.7	0.000	44.7	20.3
70	75.9	26.3	-0.14	2.66	77.0	155.1	0.000	47.6	22.4
75	81.1	27.7	-0.16	2.68	82.9	164.3	0.000	50.5	24.5
80	86.3	29.1	-0.18	2.69	89.3	173.4	0.000	53.2	26.7
85	91.5	30.4	-0.20	2.71	95.8	182.3	0.000	56.0	29.0
90	96.7	31.8	-0.22	2.73	102.5	191.1	0.000	58.7	31.3
95	101.9	33.1	-0.23	2.75	109.1	199.8	0.000	61.3	33.7
100	107.1	34.4	-0.25	2.77	115.4	208.4	0.000	63.8	36.2
110	117.5	37.0	-0.28	2.80	127.2	225.2	0.000	68.6	41.4
120	128.0	39.4	-0.31	2.84	138.1	241.7	0.000	73.1	46.8
130	138.4	41.8	-0.34	2.87	148.8	257.8	0.000	77.5	52.5
140	148.8	44.2	-0.36	2.91	159.7	273.5	0.000	81.7	58.3
150	159.2	46.5	-0.38	2.94	171.1	289.0	0.000	85.8	64.2
160	169.7	48.7	-0.41	2.97	183.4	304.1	0.000	89.8	70.2
170	180.1	50.9	-0.43	3.01	196.3	319.0	0.000	93.7	76.3
180	190.6	53.1	-0.45	3.04	209.4	333.7	0.000	97.6	82.4
190	201.0	55.2	-0.47	3.07	222.5	348.1	0.000	101.3	88.7
200	211.5	57.2	-0.49	3.10	235.3	362.3	0.000	105.0	95.0
210	222.0	59.3	-0.50	3.13	247.6	376.3	0.000	108.5	101.5
220	232.5	61.3	-0.52	3.16	259.5	390.1	0.000	111.9	108.0
230	243.0	63.3	-0.54	3.19	270.9	403.7	0.000	115.3	114.7
240	253.5	65.2	-0.55	3.22	282.1	417.1	0.000	118.5	121.5
250	264.1	67.1	-0.57	3.24	293.0	430.4	0.000	121.7	128.3
260	274.6	69.0	-0.58	3.27	303.8	443.5	0.000	124.8	135.2
270	285.2	70.9	-0.60	3.30	314.4	456.4	0.000	127.8	142.2
280	295.7	72.7	-0.61	3.32	324.9	469.2	0.000	130.7	149.3
290	306.3	74.5	-0.62	3.35	335.4	481.8	0.000	133.6	156.4
300	316.9	76.3	-0.64	3.37	346.0	494.4	0.000	136.5	163.5
310	327.5	78.1	-0.65	3.40	356.6	506.7	0.000	139.2	170.7
320	338.1	79.8	-0.66	3.42	367.2	519.0	0.000	142.0	178.0
330	348.7	81.5	-0.67	3.44	377.9	531.1	0.000	144.7	185.2
340	359.4	83.3	-0.68	3.47	388.6	543.1	0.000	147.3	192.6
350	370.0	84.9	-0.70	3.49	399.4	555.0	0.000	149.9	199.9
360	380.7	86.6	-0.71	3.51	410.2	566.7	0.000	152.5	207.3
370	391.3	38.3	-0.72	3.54	420.9	578.4	0.000	155.0	214.8
380	402.0	89 9	-0.73	3.56	431.7	589.9	0.000	157.5	222.3
390	412.7	91.5	-0.74	3.58	442.5	601.4	0.000	160.0	229.9
400	423.4	93.1	-0.75	3.60	453.3	612.7	0.000	162.5	237.5

Ar in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	10.5	4.1	0.25	2.84	11.2	22.4	0.000	8.2	1.7
15	14.6	5.7	0.24	2.74	15.3	32.0	0.000	12.2	2.8
20	18.5	7.1	0.22	2.69	19.2	41.0	0.000	16.0	4.0
25	22.3	8.4	0.20	2.66	23.1	49.6	0.000	19.7	5.3
30	26.0	9.7	0.17	2.65	27.0	57.9	0.000	23.3	6.7
35	29.7	10.9	0.15	2.64	30.9	65.9	0.000	26.8	8.2
40	33.4	12.1	0.13	2.64	34.7	73.7	0.000	30.2	9.7
45	37.1	13.2	0.11	2.65	38.4	81.3	0.000	33.6	11.4
50	40.7	14.3	0.09	2.65	41.8	88.7	0.000	37.0	13.0
55	44.3	15.4	0.07	2.66	45.1	95.9	0.000	40.3	14.7
60	47.9	16.5	0.05	2.66	48.4	103.0	0.000	43.6	16.4
65	51.5	17.5	0.03	2.67	51.7	109.9	0.000	46.8	18.2
70	55.1	18.5	0.02	2.68	55.1	116.8	0.000	49.9	20.1
75	58.7	19.5	0.00	2.69	58.7	123.5	0.000	53.0	22.0
80	62.3	20.5	-0.02	2.70	62.6	130.1	0.000	56.0	24.0
85	65.8	21.4	-0.03	2.71	66.6	136.7	0.000	58.9	26.0
90	69.4	22.4	-0.05	2.72	70.7	143.1	0.000	61.8	28.1
95	73.0	23.3	-0.06	2.73	74.7	149.4	0.000	64.7	30.3
100	76.6	24.2	-0.08	2.74	78.7	155.7	0.000	67.5	32.5
110	83.7	26.0	-0.11	2.76	86.3	168.0	0.000	73.1	36.9
120	90.9	27.8	-0.13	2.78	93.5	180.1	0.000	78.6	41.5
130	98.0	29.5	-0.16	2.80	100.8	191.8	0.000	83.9	46.1
140	105.2	31.1	-0.18	2.82	108.2	203.4	0.000	89.0	51.0
150	112.4	32.8	-0.21	2.84	116.1	214.8	0.000	93.9	56.1
160	119.5	34.4	-0.23	2.86	124.4	225.9	0.000	98.6	61.4
170	126.7	35.9	-0.25	2.87	133.1	236.9	0.000	103.0	66.9
180	134.0	37.5	-0.27	2.89	142.0	247.7	0.000	107.3	72.6
190	141.2	39.0	-0.29	2.91	150.8	258.3	0.000	111.6	78.4
200	148.4	40.5	-0.31	2.93	159.4	268.8	0.000	115.8	84.2
210	155.7	42.0	-0.33	2.94	167.8	279.2	0.000	119.9	90.1
220	162.9	43.5	-0.35	2.96	175.9	289.4	0.000	124.1	96.0
230	170.2	44.9	-0.36	2.98	183.7	299.5	0.000	128.2	101.9
240	177.5	46.3	-0.38	2.99	191.4	309.4	0.000	132.3	107.8
250	184.8	47.7	-0.40	3.01	199.0	319.3	0.000	136.3	113.8
260	192.1	49.1	-0.41	3.03	206.5	329.1	0.000	140.3	119.9
270	199.5	50.5	-0.43	3.04	214.0	338.7	0.000	144.1	126.0
280	206.8	51.9	-0.44	3.06	221.4	348.2	0.000	147.9	132.2
290	214.2	53.2	-0.46	3.07	229.0	357.7	0.000	151.6	138.4
300	221.6	54.5	-0.47	3.09	236.6	367.0	0.000	155.2	144.8
310	229.0	55.9	-0.49	3.10	244.3	376.3	0.000	158.7	151.2
320	236.4	57.2	-0.50	3.11	252.1	385.5	0.000	162.1	157.8
330	243.8	58.5	-0.51	3.13	260.0	394.6	0.000	165.4	164.4
340	251.3	59.7	-0.53	3.14	267.9	403.6	0.000	168.7	171.1
350	258.7	61.0	-0.54	3.15	275.9	412.5	0.000	171.8	177.9
360	266.2	62.3	-0.55	3.17	284.0	421.4	0.000	175.0	184.8
370	273.7	63.5	-0.56	3.18	292.1	430.2	0.000	178.0	191.7
380	281.2	64.8	-0.58	3.19	300.3	438.9	0.000	181.1	198.7
390	288.8	66.0	-0.59	3.21	308.4	447.6	0.000	184.1	205.8
400	296.3	67.2	-0.60	3.22	316.6	456.2	0.000	187.0	213.0

Cr in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	9.8	3.6	0.41	2.95	10.8	19.3	0.000	9.1	0.9
15	13.2	4.9	0.38	2.90	14.2	26.8	0.000	13.6	1.4
20	16.5	6.1	0.35	2.86	17.5	34.1	0.000	18.0	2.0
25	19.7	7.3	0.33	2.84	20.8	41.1	0.000	22.3	2.7
30	22.8	8.4	0.30	2.83	24.2	47.9	0.000	26.5	3.5
35	25.9	9.4	0.28	2.82	27.6	54.6	0.000	30.7	4.3
40	28.9	10.5	0.26	2.81	31.0	61.2	0.000	34.8	5.2
45	32.0	11.5	0.24	2.80	34.3	67.7	0.000	38.9	6.1
50	35.0	12.5	0.23	2.79	37.5	74.2	0.000	43.0	7.0
55	38.0	13.5	0.21	2.79	40.5	80.6	0.000	47.0	8.0
60	41.0	14.4	0.19	2.78	43.5	86.9	0.000	51.0	9.0
65	44.0	15.4	0.18	2.78	46.4	93.2	0.000	55.0	10.0
70	47.0	16.3	0.17	2.78	49.2	99.4	0.000	58.9	11.1
75	50.0	17.3	0.15	2.77	52.0	105.6	0.000	62.8	12.2
80	53.0	18.2	0.14	2.77	54.8	111.8	0.000	66.6	13.3
85	56.0	19.1	0.13	2.77	57.6	117.9	0.000	70.4	14.6
90	59.0	20.0	0.12	2.77	60.4	124.0	0.000	74.2	15.8
95	62.0	20.9	0.11	2.77	63.3	130.1	0.000	77.9	17.1
100	65.1	21.8	0.09	2.76	66.1	136.2	0.000	81.5	18.4
110	71.1	23.5	0.07	2.76	71.8	148.2	0.000	88.8	21.2
120	77.2	25.3	0.06	2.76	77.6	160.2	0.000	96.0	24.0
130	83.2	27.0	0.04	2.76	83.6	172.1	0.000	103.0	27.0
140	89.3	28.7	0.02	2.76	89.9	183.9	0.000	109.9	30.1
150	95.5	30.3	0.00	2.76	96.4	195.7	0.000	116.7	33.3
160	101.6	32.0	-0.01	2.76	103.2	207.5	0.000	123.4	36.6
170	107.8	33.6	-0.03	2.76	110.3	219.2	0.000	129.9	40.1
180	114.0	35.3	-0.04	2.76	117.4	230.8	0.000	136.3	43.6
190	120.2	36.9	-0.05	2.76	124.5	242.5	0.000	142.7	47.3
200	126.5	38.5	-0.07	2.76	131.6	254.0	0.000	148.9	51.1
210	132.8	40.1	-0.08	2.76	138.5	265.6	0.000	155.0	55.0
220	139.1	41.7	-0.09	2.76	145.3	277.1	0.000	161.0	59.0
230	145.4	43.3	-0.10	2.76	151.9	288.7	0.000	167.0	63.1
240	151.8	44.8	-0.11	2.76	158.5	300.1	0.000	172.8	67.2
250	158.1	46.4	-0.13	2.76	165.0	311.6	0.000	178.6	71.4
260	164.5	47.9	-0.14	2.76	171.4	323.1	0.000	184.3	75.8
270	171.0	49.5	-0.15	2.77	177.8	334.5	0.000	189.9	80.1
280	177.5	51.0	-0.16	2.77	184.3	345.9	0.000	195.4	84.6
290	183.9	52.5	-0.17	2.77	190.7	357.3	0.000	200.9	89.1
300	190.5	54.1	-0.18	2.77	197.2	368.7	0.000	206.3	93.7
310	197.0	55.6	-0.19	2.77	203.7	380.0	0.000	211.6	98.4
320	203.6	57.1	-0.19	2.77	210.2	391.4	0.000	216.8	103.1
330	210.2	58.6	-0.20	2.77	216.8	402.7	0.000	222.0	107.8
340	216.8	60.1	-0.21	2.77	223.4	414.0	0.000	227.2	112.7
350	223.4	61.6	-0.22	2.77	230.0	425.3	0.000	232.3	117.6
360	230.1	63.1	-0.23	2.77	236.7	436.6	0.000	237.3	122.5
370	236.8	64.5	-0.24	2.78	243.3	447.9	0.000	242.3	127.5
380	243.5	66 0	-0.25	2.78	250.0	459.2	0.000	247.3	132.6
390	250.2	67.5	-0.25	2.78	256.7	470.5	0.000	252.2	137.7
400	257.0	69.0	-0.26	2.78	263.4	481.7	0.000	257.1	142.9

Se in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	9.2	2.8	0.34	2.94	9.6	17.3	0.000	9.3	0.6
15	11.9	3.7	0.37	2.95	13.0	22.4	0.000	13.9	1.0
20	14.4	4.6	0.38	2.96	16.0	27.3	0.000	18.5	1.5
25	16.9	5.4	0.39	2.97	18.6	32.0	0.000	23.0	1.9
30	19.2	6.2	0.38	2.97	21.0	36.6	0.000	27.6	2.4
35	21.6	6.9	0.38	2.97	23.2	41.2	0.000	32.1	2.9
40	23.9	7.6	0.37	2.97	25.3	45.7	0.000	36.6	3.4
45	26.1	8.4	0.37	2.97	27.5	50.2	0.000	41.0	4.0
50	28.4	9.1	0.36	2.96	29.8	54.6	0.000	45.4	4.5
55	30.6	9.7	0.35	2.96	32.2	59.1	0.000	49.8	5.2
60	32.8	10.4	0.35	2.96	34.7	63.5	0.000	54.1	5.8
65	35.0	11.1	0.34	2.96	37.1	67.9	0.000	58.4	6.5
70	37.2	11.7	0.33	2.96	39.5	72.4	0.000	62.7	7.2
75	39.4	12.4	0.32	2.96	41.8	76.8	0.000	67.0	8.0
80	41.6	13.0	0.31	2.95	44.0	81.2	0.000	71.3	8.7
85	43.8	13.7	0.31	2.95	46.2	85.7	0.000	75.6	9.4
90	45.9	14.3	0.30	2.95	48.3	90.1	0.000	79.9	10.1
95	48.1	14.9	0.29	2.95	50.4	94.6	0.000	84.1	10.9
100	50.3	15.6	0.28	2.95	52.5	99.0	0.000	88.3	11.6
110	54.6	16.8	0.27	2.94	57.1	108.0	0.000	96.7	13.3
120	58.9	18.0	0.25	2.94	61.7	117.0	0.000	104.9	15.1
130	63.3	19.2	0.24	2.93	66.3	126.0	0.000	113.0	16.9
140	67.6	20.4	0.23	2.93	70.9	135.1	0.000	121.1	18.9
150	71.9	21.6	0.21	2.93	75.3	144.2	0.000	129.1	20.9
160	76.3	22.8	0.20	2.92	79.4	153.4	0.000	137.0	23.0
170	80.6	24.0	0.19	2.92	83.4	162.7	0.000	145.0	25.0
180	85.0	25.1	0.18	2.92	87.3	171.9	0.000	152.8	27.2
190	89.3	26.3	0.17	2.91	91.2	181.3	0.000	160.6	29.4
200	93.7	27.4	0.15	2.91	95.2	190.7	0.000	168.3	31.7
210	98.1	28.5	0.14	2.91	99.2	200.1	0.000	176.0	34.0
220	102.5	29.7	0.13	2.90	103.3	209.6	0.000	183.5	36.4
230	106.9	30.8	0.12	2.90	107.4	219.2	0.000	191.1	38.9
240	111.3	31.9	0.11	2.90	111.7	228.8	0.000	198.5	41.5
250	115.8	33.0	0.10	2.89	116.0	238.5	0.000	205.9	44.1
260	120.2	34.1	0.09	2.89	120.3	248.2	0.000	213.2	46.7
270	124.7	35.2	0.08	2.89	124.7	258.0	0.000	220.5	49.4
280	129.1	36.3	0.07	2.88	129.2	267.8	0.000	227.8	52.2
290	133.6	37.4	0.06	2.88	133.7	277.7	0.000	235.0	55.0
300	138.1	38.5	0.05	2.88	138.2	287.6	0.000	242.1	57.8
310	142.6	39.6	0.05	2.88	142.7	297.6	0.000	249.3	60.7
320	147.2	40.7	0.04	2.87	147.3	307.7	0.000	256.4	63.6
330	151.7	41.8	0.03	2.87	151.9	317.8	0.000	263.4	66.5
340	156.2	42.9	0.02	2.87	156.5	327.9	0.000	270.4	69.5
350	160.8	44.0	0.01	2.87	161.1	338.1	0.000	277.4	72.5
360	165.4	45.0	0.00	2.86	165.8	348.4	0.000	284.4	75.5
370	170.0	46.1	0.00	2.86	170.5	358.7	0.000	291.3	78.6
380	174.6	47.2	-0.01	2.86	175.1	369.0	0.000	298.2	81.7
390	179.2	48.3	-0.02	2.86	179.8	379.4	0.000	305.1	84.8
400	183.8	49.3	-0.03	2.85	184.5	389.9	0.000	312.0	88.0

Sn in Si3N4 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	8.9	2.1	0.29	2.89	9.3	15.2	0.000	9.5	0.5
15	11.2	2.7	0.35	2.99	11.9	19.4	0.000	14.2	0.8
20	13.3	3.3	0.37	3.04	14.2	23.2	0.000	18.9	1.1
25	15.3	3.9	0.39	3.07	16.3	26.9	0.000	23.5	1.4
30	17.2	4.4	0.40	3.09	18.4	30.4	0.000	28.2	1.8
35	19.0	4.9	0.40	3.10	20.4	33.8	0.000	32.8	2.2
40	20.8	5.4	0.41	3.11	22.3	37.1	0.000	37.4	2.5
45	22.6	5.9	0.41	3.12	24.1	40.4	0.000	42.1	2.9
50	24.3	6.4	0.41	3.12	25.8	43.6	0.000	46.7	3.3
55	26.0	6.9	0.41	3.12	27.5	46.8	0.000	51.2	3.7
60	27.7	7.3	0.41	3.12	29.1	49.9	0.000	55.8	4.1
65	29.4	7.8	0.40	3.12	30.8	53.0	0.000	60.4	4.6
70	31.0	8.3	0.40	3.12	32.4	56.1	0.000	65.0	5.0
75	32.6	8.7	0.40	3.11	34.1	59.1	0.000	69.5	5.5
80	34.2	9.1	0.39	3.11	35.9	62.1	0.000	74.0	5.9
85	35.8	9.6	0.39	3.11	37.6	65.2	0.000	78.5	6.4
90	37.4	10.0	0.39	3.10	39.4	68.2	0.000	83.0	7.0
95	39.0	10.5	0.38	3.10	41.2	71.1	0.000	87.5	7.5
100	40.6	10.9	0.38	3.09	42.9	74.1	0.000	92.0	8.0
110	43.7	11.7	0.37	3.08	46.3	80.0	0.000	100.9	9.1
120	46.8	12.6	0.36	3.07	49.6	85.9	0.000	109.7	10.2
130	49.9	13.4	0.36	3.06	52.7	91.7	0.000	118.6	11.4
140	53.0	14.2	0.35	3.05	55.8	97.5	0.000	127.4	12.6
150	56.1	15.0	0.34	3.04	58.7	103.3	0.000	136.2	13.8
160	59.1	15.8	0.33	3.03	61.7	109.1	0.000	145.0	15.0
170	62.1	16.6	0.32	3.02	64.6	114.8	0.000	153.8	16.2
180	65.2	17.4	0.32	3.01	67.6	120.6	0.000	162.5	17.5
190	68.2	18.2	0.31	3.00	70.5	126.3	0.000	171.2	18.8
200	71.2	19.0	0.30	2.99	73.6	132.1	0.000	179.9	20.1
210	74.2	19.8	0.29	2.98	76.7	137.8	0.000	188.4	21.5
220	77.2	20.6	0.29	2.97	79.8	143.5	0.000	197.0	23.0
230	80.2	21.4	0.28	2.96	83.0	149.2	0.000	205.5	24.5
240	83.2	22.1	0.27	2.95	86.2	155.0	0.000	213.9	26.1
250	86.2	22.9	0.27	2.94	89.4	160.7	0.000	222.3	27.7
260	89.2	23.7	0.26	2.94	92.7	166.4	0.000	230.6	29.3
270	92.2	24.4	0.25	2.93	95.9	172.1	0.000	239.0	31.0
280	95.2	25.2	0.25	2.92	99.1	177.8	0.000	247.2	32.7
290	98.2	26.0	0.24	2.91	102.2	183.6	0.000	255.5	34.5
300	101.2	26.7	0.23	2.90	105.3	189.3	0.000	263.8	36.2
310	104.2	27.5	0.23	2.89	108.4	195.0	0.000	272.0	38.0
320	107.2	28.2	0.22	2.88	111.4	200.7	0.000	280.2	39.8
330	110.2	29.0	0.22	2.87	114.4	206.5	0.000	288.4	41.6
340	113.2	29.7	0.21	2.87	117.4	212.2	0.000	296.6	43.4
350	116.2	30.5	0.20	2.86	120.3	217.9	0.000	304.7	45.2
360	119.2	31.2	0.20	2.85	123.2	223.7	0.000	312.8	47.1
370	122.2	32.0	0.19	2.84	126.1	229.4	0.000	321.0	49.0
380	125.2	32.7	0.19	2.83	128.9	235.2	0.000	329.1	50.9
390	128.2	33.5	0.18	2.82	131.8	241.0	0.000	337.2	52.8
400	131.2	34.2	0.18	2.82	134.6	246.7	0.000	345.3	54.7

H in SiO2 Density= 3.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	172.0	53.0	-0.71	3.15	69.4	192.4	294.7	0.009	0.5	**9.4**
15	224.8	52.6	-1.01	4.45	78.8	266.8	354.0	0.006	0.6	14.3
20	274.1	54.9	-1.19	5.18	89.1	332.0	410.4	0.005	0.7	19.3
25	321.2	58.2	-1.30	5.64	99.9	387.8	464.9	0.004	0.7	24.2
30	366.8	62.2	-1.38	5.94	110.9	435.6	518.1	0.003	0.7	29.2
35	411.3	66.6	-1.43	6.14	122.3	479.6	570.4	0.003	0.8	34.2
40	454.8	71.3	-1.47	6.29	133.9	522.8	622.2	0.002	0.8	39.2
45	497.7	76.2	-1.50	6.38	145.7	567.3	673.4	0.002	0.8	44.2
50	540.0	81.4	-1.52	6.44	157.8	614.2	724.3	0.002	0.8	49.1
55	581.8	86.7	-1.53	6.48	170.1	663.9	775.0	0.001	0.8	54.1
60	623.2	92.3	-1.54	6.50	182.7	715.1	825.6	0.001	0.8	59.1
65	664.2	98.0	-1.54	6.51	195.4	765.9	876.0	0.001	0.9	64.1
70	705.0	103.9	-1.55	6.50	208.5	815.2	926.3	0.001	0.9	69.1
75	745.5	110.0	-1.55	6.48	221.8	862.0	976.7	0.001	0.9	74.1
80	785.8	116.2	-1.55	6.46	235.3	905.5	1027.0	0.001	0.9	79.1
85	825.9	122.6	-1.54	6.43	249.0	946.4	1077.4	0.001	0.9	84.1
90	865.8	129.1	-1.54	6.40	263.0	985.2	1127.8	0.001	0.9	89.1
95	905.5	135.8	-1.54	6.36	277.2	1022.4	1178.3	0.001	0.9	94.1
100	945.1	142.7	-1.53	6.32	291.7	1058.5	1228.9	0.001	0.9	99.1
110	1024.0	156.9	-1.52	6.23	321.3	1129.2	1330.3	0.001	0.9	109.1
120	1102.4	171.7	-1.50	6.13	351.9	1200.2	1432.3	0.001	0.9	119.0
130	1180.6	187.2	-1.48	6.03	383.4	1274.0	1534.7	0.001	0.9	129.0
140	1258.5	203.3	-1.46	5.93	415.9	1352.6	1637.8	0.001	1.0	139.0
150	1336.1	220.0	-1.44	5.82	449.4	1437.3	1741.4	0.001	1.0	149.0
160	1413.6	237.4	-1.42	5.71	483.8	1529.0	1845.8	0.001	1.0	159.0
170	1491.0	255.5	-1.40	5.60	519.1	1625.2	1950.7	0.001	1.0	168.9
180	1568.3	274.2	-1.38	5.49	555.4	1723.6	2056.4	0.001	1.0	178.9
190	1645.5	293.6	-1.36	5.38	592.7	1821.8	2162.8	0.001	1.0	188.9
200	1722.6	313.6	-1.34	5.27	630.9	1917.8	2269.9	0.001	1.0	198.8
210	1799.7	334.4	-1.32	5.16	670.0	2010.2	2377.7	0.001	1.1	208.8
220	1876.7	355.8	-1.30	5.05	710.2	2100.6	2486.2	0.001	1.1	218.8
230	1953.8	377.9	-1.28	4.95	751.2	2190.5	2595.4	0.001	1.1	228.8
240	2030.8	400.6	-1.26	4.84	793.2	2281.8	2705.4	0.001	1.1	238.8
250	2107.9	424.1	-1.24	4.74	836.2	2375.7	2816.1	0.001	1.1	248.8
260	2184.9	448.3	-1.22	4.63	880.2	2473.7	2927.6	0.002	1.2	258.7
270	2262.1	473.2	-1.20	4.53	925.1	2577.1	3039.8	0.002	1.2	268.7
280	2339.2	498.8	-1.18	4.43	970.9	2687.1	3152.7	0.002	1.2	278.7
290	2416.4	525.2	-1.16	4.33	1017.7	2804.7	3266.4	0.002	1.2	288.7
300	2493.6	552.3	-1.14	4.23	1065.5	2931.3	3380.8	0.002	1.2	298.7
310	2570.9	580.1	-1.12	4.13	1114.2	3067.6	3495.9	0.002	1.2	308.7
320	2648.2	608.6	-1.10	4.03	1164.0	3213.3	3611.8	0.002	1.2	318.7
330	2725.6	637.9	-1.08	3.94	1214.6	3367.7	3728.4	0.002	1.2	328.7
340	2803.0	668.0	-1.06	3.84	1266.3	3530.2	3845.7	0.002	1.2	338.7
350	2880.6	698.8	-1.04	3.75	1318.9	3700.2	3963.8	0.002	1.2	348.6
360	2958.1	730.5	-1.02	3.65	1372.5	3877.0	4082.6	0.002	1.2	358.6
370	3035.8	762.8	-1.01	3.56	1427.0	4060.1	4202.1	0.002	1.2	368.6
380	3113.6	796.0	-0.99	3.47	1482.6	4248.7	4322.3	0.003	1.2	378.6
390	3191.4	830.0	-0.97	3.38	1539.1	4442.3	4443.3	0.003	1.1	388.6
400	3269.3	864.7	-0.95	3.29	1596.6	4640.3	4565.0	0.003	1.1	398.6

He in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	140.8	60.2	-0.11	2.14	75.0	148.7	283.2	0.036	3.9	6.0
15	194.1	71.0	-0.34	2.61	90.5	214.0	366.1	0.027	4.7	10.1
20	241.9	79.7	-0.48	2.92	103.8	274.7	437.1	0.021	5.4	14.5
25	285.6	87.1	-0.59	3.16	115.9	330.6	500.2	0.017	5.9	19.1
30	326.3	93.6	-0.67	3.35	127.0	381.6	557.4	0.013	6.2	23.7
35	364.5	99.5	-0.73	3.50	137.3	428.1	610.1	0.011	6.5	28.4
40	400.6	104.9	-0.79	3.63	147.1	470.5	659.2	0.009	6.8	33.2
45	434.9	109.9	-0.83	3.75	156.4	509.1	705.3	0.008	6.9	38.0
50	467.6	114.5	-0.87	3.85	165.4	544.3	748.8	0.007	7.1	42.8
55	499.0	118.8	-0.90	3.94	174.0	576.4	790.1	0.006	7.2	47.7
60	529.2	122.9	-0.93	4.02	182.3	606.4	829.5	0.005	7.3	52.6
65	558.3	126.8	-0.96	4.09	190.4	635.3	867.2	0.004	7.4	57.5
70	586.3	130.5	-0.98	4.16	198.2	663.6	903.3	0.003	7.5	62.4
75	613.5	134.0	-1.00	4.22	205.8	691.8	938.1	0.003	7.6	67.4
80	639.9	137.4	-1.02	4.28	213.3	720.2	971.7	0.002	7.7	72.3
85	665.5	140.7	-1.03	4.34	220.5	748.4	1004.2	0.002	7.8	77.1
90	690.4	143.8	-1.05	4.38	227.7	776.1	1035.6	0.001	7.9	82.0
95	714.7	146.8	-1.06	4.43	234.6	803.0	1066.0	0.001	8.0	86.9
100	738.4	149.8	-1.08	4.48	241.5	828.9	1095.6	0.001	8.1	91.9
110	784.0	155.3	-1.10	4.56	254.9	877.1	1152.4	0.000	8.2	101.7
120	827.6	160.6	-1.12	4.63	267.8	921.4	1206.4	0.000	8.3	111.7
130	869.5	165.6	-1.13	4.70	280.4	962.7	1257.9	0.000	8.3	121.6
140	909.7	170.3	-1.15	4.76	292.6	1001.6	1307.1	0.000	8.4	131.5
150	948.5	174.8	-1.16	4.81	304.6	1038.8	1354.4	-0.001	8.5	141.5
160	985.9	179.2	-1.17	4.86	316.3	1074.6	1399.9	-0.001	8.6	151.4
170	1022.2	183.3	-1.19	4.91	327.7	1109.8	1443.7	-0.001	8.6	161.3
180	1057.3	187.4	-1.19	4.95	339.0	1145.0	1486.1	-0.001	8.7	171.3
190	1091.4	191.2	-1.20	5.00	350.0	1180.7	1527.1	-0.001	8.8	181.2
200	1124.5	195.0	-1.21	5.04	360.8	1217.2	1566.8	-0.001	8.8	191.1
210	1156.7	198.6	-1.22	5.07	371.5	1254.9	1605.4	-0.001	8.9	201.1
220	1188.1	202.1	-1.22	5.11	382.0	1293.2	1642.9	-0.001	8.9	211.1
230	1218.6	205.5	-1.23	5.14	392.3	1331.8	1679.3	0.000	8.9	221.0
240	1248.5	208.8	-1.23	5.17	402.5	1370.2	1714.9	0.000	8.9	231.0
250	1277.6	212.0	-1.24	5.20	412.6	1408.1	1749.5	0.000	8.9	241.0
260	1306.1	215.2	-1.24	5.23	422.6	1445.3	1783.3	0.000	8.9	251.0
270	1334.0	218.2	-1.25	5.26	432.4	1481.3	1816.3	0.000	8.9	261.0
280	1361.3	221.2	-1.25	5.28	442.1	1516.1	1848.6	0.000	9.0	271.0
290	1388.0	224.1	-1.25	5.31	451.7	1549.4	1880.2	0.000	9.0	281.0
300	1414.2	227.0	-1.26	5.33	461.2	1581.1	1911.1	0.000	9.0	291.0
310	1439.9	229.8	-1.26	5.36	470.6	1611.1	1941.4	0.001	9.1	300.9
320	1465.1	232.5	-1.26	5.38	479.9	1639.5	1971.0	0.001	9.1	310.9
330	1489.9	235.2	-1.26	5.40	489.2	1666.6	2000.1	0.001	9.2	320.8
340	1514.2	237.8	-1.27	5.42	498.3	1692.4	2028.7	0.001	9.2	330.7
350	1538.0	240.4	-1.27	5.44	507.4	1717.3	2056.7	0.001	9.3	340.7
360	1561.5	242.9	-1.27	5.46	516.4	1741.4	2084.3	0.001	9.4	350.6
370	1584.6	245.4	-1.27	5.48	525.3	1764.7	2111.3	0.002	9.4	360.6
380	1607.3	247.8	-1 27	5.50	534.1	1787.5	2137.9	0.002	9.5	370.5
390	1629.6	250.2	-1.27	5.51	542.9	1809.7	2164.1	0.002	9.5	380.4
400	1651.6	252.6	-1.27	5.53	551.6	1831.6	2189.9	0.002	9.6	390.4

Be in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	55.0	23.4	0.03	2.25	24.6	55.8	118.1	0.013	5.4	4.5
15	83.2	31.2	-0.17	2.47	34.1	87.6	162.0	0.011	7.2	7.7
20	110.5	37.8	-0.31	2.67	42.7	119.1	201.7	0.009	8.7	11.2
25	136.8	43.6	-0.42	2.84	50.7	149.3	238.5	0.008	10.0	14.9
30	162.2	48.8	-0.51	3.00	58.2	177.8	273.1	0.007	11.2	18.7
35	186.9	53.6	-0.58	3.15	65.3	204.8	305.8	0.007	12.3	22.7
40	210.8	58.0	-0.64	3.28	72.1	230.9	337.1	0.006	13.3	26.7
45	234.1	62.1	-0.69	3.40	78.6	256.2	367.0	0.005	14.2	30.8
50	256.8	65.9	-0.74	3.52	84.9	281.1	395.8	0.005	15.0	35.0
55	278.9	69.5	-0.78	3.63	90.9	305.8	423.6	0.005	15.7	39.2
60	300.5	72.8	-0.82	3.73	96.8	330.3	450.6	0.004	16.3	43.6
65	321.6	76.1	-0.86	3.82	102.5	354.7	476.7	0.004	16.9	48.0
70	342.3	79.1	-0.89	3.92	108.0	379.1	502.2	0.004	17.5	52.4
75	362.6	82.0	-0.92	4.00	113.3	403.6	526.9	0.004	18.0	56.9
80	382.4	84.8	-0.95	4.09	118.6	428.2	551.1	0.003	18.6	61.4
85	401.9	87.4	-0.97	4.17	123.7	452.6	574.7	0.003	19.0	65.9
90	421.0	90.0	-1.00	4.24	128.7	476.8	597.8	0.003	19.5	70.5
95	439.8	92.4	-1.02	4.32	133.6	500.4	620.4	0.003	19.9	75.1
100	458.3	94.8	-1.04	4.39	138.4	523.5	642.6	0.003	20.3	79.7
110	494.3	99.3	-1.08	4.52	147.7	567.5	685.7	0.002	20.9	89.1
120	529.2	103.5	-1.12	4.65	156.7	608.8	727.4	0.002	21.4	98.5
130	563.1	107.4	-1.15	4.77	165.3	647.8	767.6	0.002	21.9	108.0
140	596.0	111.2	-1.18	4.88	173.7	684.6	806.7	0.002	22.4	117.6
150	628.1	114.7	-1.21	4.99	181.9	719.5	844.7	0.001	22.8	127.1
160	659.4	118.0	-1.24	5.09	189.8	752.7	881.6	0.001	23.3	136.6
170	689.9	121.2	-1.26	5.18	197.5	784.7	917.7	0.001	23.8	146.1
180	719.7	124.3	-1.28	5.28	205.1	815.9	952.9	0.001	24.3	155.6
190	748.8	127.2	-1.30	5.37	212.4	846.6	987.2	0.001	24.8	165.2
200	777.3	130.0	-1.32	5.45	219.6	877.2	1020.9	0.001	25.2	174.8
210	805.3	132.6	-1.34	5.53	226.6	907.8	1053.8	0.001	25.6	184.4
220	832.6	135.2	-1.36	5.61	233.5	938.3	1086.1	0.001	25.9	194.1
230	859.4	137.7	-1.38	5.69	240.3	968.5	1117.8	0.001	26.2	203.8
240	885.8	140.1	-1.40	5.76	246.9	998.3	1148.9	0.001	26.4	213.5
250	911.6	142.4	-1.41	5.83	253.4	1027.4	1179.4	0.000	26.6	223.3
260	937.0	144.6	-1.43	5.90	259.8	1055.7	1209.5	0.000	26.8	233.1
270	961.9	146.7	-1.44	5.97	266.0	1083.2	1239.0	0.000	27.0	242.9
280	986.5	148.8	-1.45	6.04	272.2	1109.8	1268.1	0.000	27.2	252.8
290	1010.6	150.8	-1.47	6.10	278.2	1135.3	1296.7	0.000	27.4	262.6
300	1034.3	152.8	-1.48	6.16	284.2	1159.8	1324.9	0.000	27.6	272.4
310	1057.7	154.7	-1.49	6.22	290.1	1183.1	1352.7	0.000	27.7	282.2
320	1080.7	156.5	-1.51	6.28	295.9	1205.5	1380.1	0.000	27.9	292.1
330	1103.4	158.3	-1.52	6.34	301.6	1226.9	1407.1	0.000	28.1	301.9
340	1125.7	160.1	-1.53	6.40	307.2	1247.6	1433.8	0.000	28.2	311.7
350	1147.7	161.8	-1.54	6.45	312.7	1267.6	1460.1	0.000	28.4	321.5
360	1169.4	163.4	-1.55	6.51	318.2	1287.1	1486.1	0.000	28.5	331.4
370	1190.8	165.0	-1.56	6.56	323.6	1306.0	1511.7	0.000	28.7	341.2
380	1212.0	166.6	-1.57	6.61	328.9	1324.6	1537.1	0.000	28.8	351.1
390	1232.8	168.2	-1.58	6.66	334.2	1342.8	1562.1	0.000	29.0	361.0
400	1253.4	169.7	-1.59	6.71	339.4	1360.8	1586.9	0.000	29.1	370.9

C in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	36.5	15.8	0.02	2.44	15.6	37.3	83.8	0.007	6.2	3.8
15	54.9	21.9	-0.13	2.49	21.9	57.3	114.2	0.006	8.5	6.5
20	72.8	27.1	-0.24	2.58	27.7	77.3	141.9	0.006	10.5	9.4
25	90.3	31.9	-0.33	2.67	33.1	96.8	167.7	0.005	12.4	12.6
30	107.2	36.1	-0.40	2.77	38.2	115.7	192.0	0.005	14.1	15.9
35	123.8	40.0	-0.46	2.87	43.0	134.2	215.0	0.005	15.7	19.3
40	140.0	43.6	-0.51	2.97	47.6	152.2	237.1	0.004	17.2	22.8
45	155.9	46.9	-0.56	3.06	52.0	169.9	258.3	0.004	18.5	26.5
50	171.4	50.1	-0.60	3.14	56.2	187.3	278.8	0.004	19.7	30.3
55	186.7	53.0	-0.64	3.23	60.3	204.5	298.7	0.004	20.8	34.2
60	201.7	55.8	-0.67	3.31	64.3	221.6	317.9	0.003	21.8	38.2
65	216.4	58.4	-0.71	3.39	68.1	238.6	336.7	0.003	22.7	42.2
70	230.9	60.8	-0.74	3.46	71.8	255.6	355.0	0.003	23.6	46.3
75	245.2	63.2	-0.76	3.54	75.4	272.7	372.8	0.003	24.5	50.5
80	259.2	65.5	-0.79	3.61	78.9	289.8	390.3	0.003	25.4	54.6
85	273.1	67.6	-0.81	3.67	82.3	306.9	407.4	0.003	26.2	58.8
90	286.8	69.7	-0.84	3.74	85.7	324.0	424.2	0.003	26.9	63.0
95	300.2	71.6	-0.86	3.80	89.0	341.1	440.7	0.003	27.6	67.3
100	313.6	73.5	-0.88	3.87	92.2	358.1	456.8	0.002	28.3	71.6
110	339.7	77.1	-0.92	3.99	98.4	391.6	488.4	0.002	29.5	80.4
120	365.2	80.5	-0.96	4.10	104.3	424.3	518.9	0.002	30.5	89.3
130	390.2	83.6	-0.99	4.21	110.1	455.8	548.6	0.002	31.5	98.3
140	414.7	86.5	-1.02	4.31	115.6	485.7	577.6	0.002	32.5	107.4
150	438.6	89.3	-1.05	4.41	121.0	513.9	605.7	0.002	33.5	116.4
160	462.2	91.9	-1.07	4.50	126.3	540.4	633.3	0.002	34.6	125.4
170	485.3	94.3	-1.10	4.59	131.3	565.4	660.2	0.001	35.6	134.4
180	508.0	96.7	-1.12	4.68	136.3	589.2	686.6	0.001	36.6	143.4
190	530.3	98.9	-1.15	4.76	141.1	612.1	712.4	0.001	37.5	152.5
200	552.3	101.0	-1.17	4.84	145.8	634.3	737.8	0.001	38.3	161.7
210	573.9	103.0	-1.19	4.92	150.4	656.1	762.7	0.001	38.9	171.0
220	595.2	104.9	-1.21	5.00	154.8	677.5	787.1	0.001	39.5	180.4
230	616.2	106.8	-1.23	5.07	159.2	698.5	811.2	0.001	39.9	190.0
240	636.9	108.6	-1.24	5.14	163.5	719.1	834.9	0.001	40.2	199.6
250	657.4	110.3	-1.26	5.21	167.7	739.3	858.2	0.001	40.6	209.3
260	677.5	111.9	-1.28	5.28	171.8	759.2	881.2	0.001	40.9	219.0
270	697.5	113.5	-1.29	5.34	175.9	778.9	903.8	0.000	41.2	228.7
280	717.1	115.0	-1.31	5.41	179.8	798.2	926.1	0.000	41.5	238.4
290	736.5	116.4	-1.32	5.47	183.7	817.2	948.2	0.000	41.8	248.1
300	755.7	117.8	-1.34	5.53	187.6	836.0	969.9	0.000	42.1	257.8
310	774.7	119.2	-1.35	5.59	191.3	854.5	991.4	0.000	42.5	267.5
320	793.5	120.5	-1.37	5.65	195.0	872.8	1012.7	0.000	42.9	277.1
330	812.0	121.8	-1.38	5.71	198.7	890.8	1033.6	0.000	43.3	286.7
340	830.4	123.0	-1.39	5.76	202.2	908.7	1054.4	0.000	43.7	296.3
350	848.6	124.2	-1.41	5.82	205.8	926.3	1074.9	0.000	44.1	305.9
360	866.5	125.4	-1.42	5.87	209.2	943.8	1095.2	0.000	44.6	315.4
370	884.4	126.5	-1.43	5.92	212.7	961.1	1115.2	0.000	45.0	325.0
380	902.0	127.6	-1.44	5.97	216.0	978.2	1135.1	0.000	45.4	334.5
390	919.4	128.6	-1.45	6.02	219.4	995.1	1154.8	0.000	45.9	344.1
400	936.7	129.7	-1.46	6.07	222.7	1011.9	1174.2	0.000	46.3	353.7

O in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	28.3	12.6	0.20	2.65	11.6	30.5	67.6	0.004	6.9	3.0
15	42.2	17.6	0.07	2.55	16.2	42.1	94.6	0.003	10.0	5.0
20	55.9	22.0	-0.02	2.54	20.4	54.1	119.3	0.002	12.7	7.3
25	69.3	26.0	-0.10	2.57	24.4	67.2	142.4	0.002	15.1	9.8
30	82.4	29.8	-0.17	2.61	28.2	81.6	164.1	0.002	17.3	12.6
35	95.3	33.2	-0.23	2.67	31.8	97.0	184.8	0.002	19.2	15.7
40	108.0	36.5	-0.28	2.73	35.3	112.5	204.6	0.001	21.1	18.8
45	120.5	39.5	-0.33	2.79	38.7	128.0	223.6	0.001	22.8	22.1
50	132.8	42.4	-0.37	2.85	42.0	142.9	242.0	0.001	24.6	25.4
55	145.0	45.2	-0.41	2.91	45.2	157.1	259.7	0.001	26.3	28.7
60	157.0	47.8	-0.45	2.98	48.4	170.9	276.9	0.001	27.9	32.1
65	168.9	50.3	-0.48	3.04	51.4	184.5	293.6	0.001	29.6	35.5
70	180.7	52.7	-0.51	3.10	54.4	198.1	309.9	0.001	31.1	38.9
75	192.3	55.0	-0.54	3.16	57.3	212.1	325.7	0.001	32.5	42.4
80	203.8	57.2	-0.57	3.22	60.2	226.4	341.2	0.001	33.9	46.1
85	215.2	59.4	-0.60	3.28	63.1	241.0	356.3	0.001	35.1	49.8
90	226.5	61.4	-0.62	3.33	65.8	255.5	371.1	0.001	36.4	53.6
95	237.7	63.4	-0.65	3.39	68.6	269.9	385.6	0.001	37.5	57.4
100	248.8	65.4	-0.67	3.44	71.3	284.0	399.8	0.001	38.7	61.3
110	270.7	69.1	-0.71	3.55	76.6	310.8	427.5	0.001	41.0	69.1
120	292.3	72.6	-0.75	3.65	81.7	336.0	454.2	0.001	43.1	76.9
130	313.6	75.9	-0.79	3.74	86.7	359.9	480.0	0.001	45.1	84.9
140	334.6	79.1	-0.83	3.84	91.6	382.9	505.0	0.001	47.0	93.0
150	355.3	82.1	-0.86	3.93	96.5	405.1	529.4	0.001	48.8	101.2
160	375.8	85.0	-0.89	4.01	101.2	426.8	553.1	0.001	50.4	109.6
170	396.0	87.8	-0.92	4.10	105.8	448.2	576.2	0.001	51.8	118.1
180	416.0	90.5	-0.95	4.18	110.3	469.5	598.7	0.001	53.2	126.8
190	435.8	93.0	-0.97	4.26	114.8	490.9	620.8	0.001	54.5	135.5
200	455.4	95.5	-1.00	4.34	119.2	512.6	642.3	0.001	55.7	144.3
210	474.8	97.9	-1.03	4.41	123.5	534.5	663.4	0.001	56.9	153.1
220	494.0	100.1	-1.05	4.48	127.7	556.6	684.1	0.001	58.1	162.0
230	513.0	102.4	-1.07	4.55	131.9	578.7	704.3	0.001	59.2	170.9
240	531.8	104.5	-1.09	4.62	136.1	600.8	724.2	0.001	60.2	179.9
250	550.5	106.6	-1.11	4.69	140.1	622.5	743.7	0.001	61.2	188.9
260	569.0	108.6	-1.13	4.75	144.2	644.0	762.9	0.001	62.1	197.9
270	587.4	110.6	-1.15	4.82	148.1	664.9	781.8	0.001	63.0	207.1
280	605.6	112.5	-1.17	4.88	152.1	685.4	800.3	0.001	63.8	216.2
290	623.7	114.4	-1.19	4.94	156.0	705.2	818.6	0.001	64.6	225.4
300	641.6	116.2	-1.21	5.00	159.8	724.3	836.6	0.001	65.3	234.7
310	659.4	117.9	-1.23	5.06	163.6	742.6	854.3	0.001	65.9	244.0
320	677.1	119.7	-1.24	5.12	167.4	760.3	871.7	0.001	66.5	253.4
330	694.7	121.3	-1.26	5.17	171.1	777.4	888.9	0.001	67.0	262.8
340	712.1	123.0	-1.28	5.23	174.8	794.0	905.9	0.001	67.5	272.2
350	729.4	124.6	-1.29	5.28	178.4	810.1	922.6	0.001	67.9	281.8
360	746.6	126.1	-1.31	5.33	182.1	825.8	939.1	0.001	68.4	291.3
370	763.7	127.6	-1.32	5.39	185.6	841.3	955.4	0.001	68.8	300.9
380	780.7	129.1	-1.34	5.44	189.2	856.4	971.6	0.001	69.2	310.6
390	797.6	130.6	-1.35	5.49	192.7	871.4	987.5	0.001	69.6	320.3
400	814.4	132.0	-1.36	5.54	196.2	886.2	1003.2	0.001	69.9	330.0

Mg in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	21.8	10.0	0.35	2.89	8.2	25.0	47.3	0.000	8.4	1.5
15	31.9	14.1	0.28	2.69	11.6	34.3	71.3	0.000	12.4	2.6
20	41.9	17.9	0.22	2.59	14.9	43.3	94.5	0.000	16.2	3.8
25	51.9	21.5	0.17	2.55	18.0	52.6	117.0	0.000	19.8	5.1
30	61.8	24.9	0.13	2.52	21.1	62.3	138.8	0.000	23.3	6.6
35	71.8	28.3	0.09	2.52	24.2	72.1	160.0	0.000	26.7	8.3
40	81.7	31.5	0.05	2.52	27.2	82.1	180.6	0.000	29.9	10.0
45	91.6	34.6	0.02	2.53	30.2	92.0	200.8	0.000	33.2	11.8
50	101.5	37.6	-0.02	2.55	33.1	101.9	220.5	0.000	36.3	13.7
55	111.4	40.6	-0.05	2.57	36.0	111.7	239.7	0.000	39.5	15.5
60	121.4	43.5	-0.07	2.59	38.9	121.6	258.6	0.000	42.6	17.5
65	131.3	46.3	-0.10	2.61	41.8	131.9	277.1	0.000	45.6	19.5
70	141.2	49.1	-0.13	2.63	44.6	142.6	295.2	0.000	48.5	21.5
75	151.2	51.8	-0.15	2.65	47.4	154.1	313.0	0.000	51.3	23.7
80	161.1	54.5	-0.17	2.68	50.2	166.3	330.5	0.000	53.9	26.0
85	171.1	57.1	-0.19	2.70	53.0	179.1	347.7	0.000	56.5	28.5
90	181.1	59.7	-0.21	2.73	55.7	192.2	364.6	0.000	59.0	31.0
95	191.0	62.3	-0.23	2.75	58.5	205.5	381.3	0.000	61.4	33.5
100	201.0	64.8	-0.25	2.78	61.2	218.5	397.7	0.000	63.8	36.2
110	221.0	69.8	-0.29	2.83	66.7	243.7	429.8	0.000	68.5	41.5
120	241.1	74.6	-0.32	2.87	72.1	267.7	461.1	0.000	73.1	46.9
130	261.2	79.3	-0.36	2.92	77.4	290.5	491.5	0.000	77.6	52.3
140	281.3	83.9	-0.39	2.97	82.7	312.2	521.3	0.000	82.1	57.9
150	301.5	88.5	-0.42	3.01	88.0	333.1	550.3	0.000	86.4	63.6
160	321.7	92.9	-0.44	3.06	93.3	353.2	578.7	0.000	90.7	69.3
170	342.0	97.3	-0.47	3.10	98.5	373.0	606.5	0.000	94.8	75.2
180	362.3	101.6	-0.49	3.15	103.7	393.0	633.7	0.000	98.8	81.2
190	382.6	105.8	-0.52	3.19	108.8	413.5	660.4	0.000	102.6	87.4
200	403.0	110.0	-0.54	3.23	114.0	435.0	686.6	0.000	106.2	93.8
210	423.4	114.1	-0.56	3.27	119.1	457.5	712.3	0.000	109.6	100.4
220	443.9	118.1	-0.58	3.31	124.2	481.0	737.5	0.000	112.8	107.1
230	464.4	122.1	-0.60	3.35	129.3	505.3	762.4	0.000	115.9	114.1
240	484.9	126.1	-0.62	3.39	134.4	530.0	786.8	0.000	118.8	121.1
250	505.5	130.0	-0.64	3.42	139.4	555.1	810.8	0.000	121.6	128.3
260	526.1	133.8	-0.66	3.46	144.5	580.4	834.5	0.000	124.3	135.6
270	546.7	137.6	-0.68	3.50	149.5	605.6	857.8	0.000	126.9	143.0
280	567.4	141.4	-0.70	3.53	154.5	630.6	880.8	0.000	129.5	150.5
290	588.1	145.1	-0.71	3.57	159.5	655.3	903.5	0.000	132.0	158.0
300	608.9	148.8	-0.73	3.60	164.5	679.6	925.8	0.000	134.4	165.6
310	629.6	152.5	-0.75	3.63	169.5	703.2	947.8	0.000	136.8	173.2
320	650.4	156.1	-0.76	3.67	174.4	726.3	969.6	0.000	139.1	180.8
330	671.3	159.7	-0.78	3.70	179.3	748.9	991.0	0.000	141.4	188.5
340	692.1	163.2	-0.79	3.73	184.3	771.1	1012.2	0.000	143.7	196.2
350	713.0	166.7	-0.81	3.76	189.2	793.0	1033.2	0.000	145.9	203.9
360	734.0	170.2	-0.82	3.79	194.1	814.5	1053.8	0.000	148.1	211.7
370	754.9	173.6	-0.83	3.82	199.0	835.9	1074.3	0.000	150.3	219.5
380	775.9	177.1	-0.85	3.85	203.9	857.0	1094.5	0.000	152.4	227.4
390	797.0	180.5	-0.86	3.88	208.8	878.0	1114.4	0.000	154.6	235.3
400	818.0	183.8	-0.87	3.91	213.7	899.0	1134.2	0.000	156.7	243.3

Si in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	18.9	8.4	0.43	3.04	6.7	21.7	39.7	0.000	8.4	1.6
15	27.4	11.8	0.37	2.82	9.3	30.1	59.8	0.001	12.4	2.6
20	35.7	14.9	0.31	2.70	11.8	38.1	79.3	0.001	16.2	3.8
25	43.9	17.9	0.26	2.64	14.1	45.8	98.1	0.001	19.9	5.1
30	52.0	20.7	0.22	2.60	16.5	53.6	116.2	0.001	23.5	6.5
35	60.1	23.4	0.18	2.58	18.7	61.4	133.9	0.001	26.9	8.1
40	68.2	26.0	0.14	2.57	21.0	69.3	151.0	0.001	30.3	9.7
45	76.3	28.6	0.10	2.58	23.2	77.5	167.7	0.001	33.5	11.5
50	84.3	31.0	0.07	2.58	25.4	85.9	184.0	0.001	36.7	13.3
55	92.3	33.5	0.04	2.59	27.5	94.6	199.9	0.001	39.9	15.1
60	100.3	35.8	0.01	2.60	29.7	103.4	215.4	0.001	43.0	17.0
65	108.3	38.1	-0.02	2.62	31.8	112.2	230.6	0.001	46.0	18.9
70	116.3	40.4	-0.04	2.63	33.9	120.7	245.4	0.001	49.0	20.9
75	124.3	42.7	-0.07	2.65	36.0	129.0	260.0	0.001	52.0	23.0
80	132.3	44.9	-0.09	2.67	38.1	136.8	274.3	0.001	54.9	25.1
85	140.3	47.0	-0.12	2.69	40.2	144.4	288.4	0.001	57.7	27.2
90	148.3	49.1	-0.14	2.71	42.3	152.1	302.2	0.001	60.5	29.5
95	156.3	51.2	-0.16	2.73	44.3	159.9	315.8	0.001	63.2	31.8
100	164.3	53.3	-0.18	2.75	46.4	168.0	329.1	0.001	65.8	34.1
110	180.3	57.4	-0.22	2.79	50.4	185.4	355.2	0.001	70.8	39.1
120	196.3	61.3	-0.26	2.83	54.5	204.0	380.5	0.001	75.5	44.4
130	212.3	65.2	-0.29	2.87	58.5	223.4	405.1	0.001	80.1	49.9
140	228.3	69.0	-0.32	2.91	62.5	243.1	429.1	0.001	84.4	55.5
150	244.4	72.8	-0.36	2.94	66.5	262.8	452.4	0.000	88.7	61.3
160	260.4	76.4	-0.39	2.98	70.5	282.2	475.2	0.000	92.9	67.1
170	276.5	80.0	-0.41	3.02	74.4	301.2	497.5	0.000	97.1	72.9
180	292.6	83.6	-0.44	3.06	78.3	320.0	519.3	0.000	101.2	78.8
190	308.7	87.1	-0.47	3.09	82.3	338.6	540.6	0.000	105.2	84.8
200	324.9	90.5	-0.49	3.13	86.2	357.2	561.5	0.000	109.2	90.8
210	341.0	93.9	-0.52	3.17	90.1	375.6	581.9	0.000	113.1	96.9
220	357.2	97.2	-0.54	3.20	94.0	394.0	602.0	0.000	116.9	103.1
230	373.4	100.5	-0.56	3.23	97.9	412.4	621.7	0.000	120.7	109.4
240	389.6	103.8	-0.58	3.27	101.8	430.8	641.1	0.000	124.4	115.7
250	405.9	107.0	-0.60	3.30	105.6	449.2	660.1	0.000	127.9	122.2
260	422.1	110.2	-0.62	3.33	109.5	467.5	678.8	0.000	131.4	128.7
270	438.4	113.4	-0.64	3.37	113.4	485.9	697.2	0.000	134.7	135.4
280	454.7	116.5	-0.66	3.40	117.2	504.3	715.3	0.000	137.9	142.1
290	471.0	119.6	-0.68	3.43	121.1	522.7	733.1	0.000	141.0	149.0
300	487.4	122.6	-0.70	3.46	124.9	541.1	750.7	0.000	144.0	156.0
310	503.7	125.7	-0.72	3.49	128.7	559.6	768.0	0.000	146.9	163.0
320	520.1	128.7	-0.73	3.52	132.6	578.1	785.0	0.000	149.6	170.2
330	536.5	131.6	-0.75	3.55	136.4	596.7	801.8	0.000	152.2	177.5
340	552.9	134.6	-0.77	3.57	140.2	615.3	818.4	0.000	154.8	184.9
350	569.3	137.5	-0.78	3.60	144.0	633.9	834.7	0.000	157.3	192.4
360	585.8	140.4	-0.80	3.63	147.9	652.5	850.8	0.000	159.7	199.9
370	602.3	143.3	-0.82	3.66	151.7	671.2	866.8	0.000	162.1	207.6
380	618.8	146.1	-0.83	3.68	155.5	689.8	882.5	0.000	164.4	215.4
390	635.3	149.0	-0.85	3.71	159.3	708.5	898.0	0.000	166.7	223.2
400	651.8	151.8	-0.86	3.73	163.1	727.2	913.4	0.000	168.9	231.1

Ar in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	15.7	6.4	0.44	3.11	4.9	17.6	32.5	0.000	8.4	1.6
15	21.9	8.7	0.37	2.91	6.7	23.9	46.9	0.000	12.4	2.6
20	27.9	10.9	0.32	2.80	8.4	29.8	60.6	0.000	16.3	3.7
25	33.8	13.0	0.28	2.73	10.0	35.6	73.7	0.000	20.1	4.8
30	39.6	15.0	0.24	2.69	11.5	41.3	86.4	0.000	23.9	6.1
35	45.3	16.9	0.20	2.66	13.0	47.0	98.6	0.000	27.5	7.5
40	51.0	18.7	0.17	2.64	14.4	52.5	110.6	0.000	31.0	8.9
45	56.6	20.4	0.14	2.63	15.8	57.9	122.3	0.000	34.6	10.4
50	62.3	22.2	0.11	2.63	17.2	63.1	133.7	0.000	38.0	12.0
55	67.9	23.8	0.09	2.63	18.6	68.2	144.9	0.000	41.4	13.6
60	73.5	25.5	0.06	2.63	19.9	73.4	155.9	0.000	44.8	15.2
65	79.0	27.1	0.04	2.63	21.3	78.6	166.7	0.000	48.1	16.9
70	84.6	28.7	0.02	2.63	22.6	84.0	177.3	0.000	51.3	18.7
75	90.2	30.2	0.00	2.64	23.9	89.8	187.8	0.000	54.4	20.6
80	95.7	31.7	-0.02	2.65	25.2	95.8	198.1	0.000	57.5	22.5
85	101.3	33.2	-0.04	2.65	26.5	102.2	208.3	0.000	60.4	24.5
90	106.8	34.7	-0.05	2.66	27.7	108.6	218.3	0.000	63.3	26.6
95	112.4	36.1	-0.07	2.67	29.0	115.1	228.2	0.000	66.2	28.8
100	117.9	37.6	-0.08	2.68	30.2	121.6	238.0	0.000	69.0	30.9
110	129.0	40.4	-0.11	2.70	32.7	134.1	257.3	0.000	74.6	35.4
120	140.1	43.1	-0.14	2.72	35.2	146.3	276.1	0.000	80.1	39.9
130	151.2	45.8	-0.17	2.74	37.6	158.3	294.6	0.000	85.4	44.6
140	162.3	48.4	-0.19	2.76	40.0	170.3	312.7	0.000	90.7	49.3
150	173.5	51.0	-0.22	2.78	42.3	182.2	330.5	0.000	95.9	54.1
160	184.6	53.5	-0.24	2.81	44.7	194.3	348.0	0.000	101.0	59.0
170	195.8	56.0	-0.26	2.83	47.0	206.5	365.3	0.000	105.9	64.1
180	207.0	58.4	-0.28	2.85	49.4	218.8	382.3	0.000	110.8	69.2
190	218.2	60.9	-0.30	2.87	51.7	231.2	399.0	0.000	115.5	74.5
200	229.4	63.2	-0.32	2.89	53.9	243.7	415.6	0.000	120.1	79.9
210	240.7	65.6	-0.33	2.91	56.2	256.2	431.9	0.000	124.5	85.5
220	251.9	67.9	-0.35	2.93	58.5	268.8	448.0	0.000	128.8	91.2
230	263.2	70.2	-0.37	2.95	60.7	281.5	463.9	0.000	132.9	97.0
240	274.5	72.4	-0.38	2.97	63.0	294.1	479.6	0.000	137.0	103.0
250	285.9	74.7	-0.40	2.99	65.2	306.8	495.2	0.000	140.9	109.1
260	297.2	76.9	-0.41	3.01	67.4	319.4	510.6	0.000	144.8	115.2
270	308.6	79.1	-0.43	3.03	69.7	331.9	525.8	0.000	148.5	121.5
280	320.0	81.2	-0.44	3.05	71.9	344.4	540.9	0.000	152.2	127.8
290	331.4	83.4	-0.45	3.07	74.1	356.8	555.8	0.000	155.9	134.1
300	342.9	85.5	-0.47	3.08	76.2	369.2	570.6	0.000	159.5	140.5
310	354.4	87.6	-0.48	3.10	78.4	381.4	585.3	0.000	163.0	146.9
320	365.9	89.7	-0.49	3.12	80.6	393.5	599.8	0.000	166.5	153.4
330	377.4	91.7	-0.50	3.14	82.8	405.6	614.2	0.000	170.0	159.9
340	388.9	93.8	-0.52	3.16	84.9	417.6	628.4	0.000	173.4	166.5
350	400.5	95.8	-0.53	3.17	87.1	429.5	642.6	0.000	176.8	173.1
360	412.0	97.8	-0.54	3.19	89.2	441.3	656.6	0.000	180.1	179.7
370	423.7	99.8	-0.55	3.21	91.4	453.2	670.6	0.000	183.4	186.4
380	435.3	101.8	-0.56	3.22	93.5	465.0	684.4	0.000	186.7	193.1
390	446.9	103.8	-0.57	3.24	95.7	476.7	698.1	0.000	190.0	199.9
400	458.6	105.7	-0.58	3.25	97.8	488.5	711.7	0.000	193.2	206.8

Se in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	13.5	4.1	0.38	2.97	3.2	14.4	24.9	0.000	9.4	0.6
15	17.5	5.5	0.39	2.95	4.2	18.9	32.5	0.000	14.0	0.9
20	21.3	6.7	0.39	2.94	5.1	23.0	39.6	0.000	18.6	1.3
25	25.0	7.9	0.39	2.93	5.9	27.0	46.6	0.000	23.2	1.8
30	28.5	9.1	0.39	2.92	6.7	31.0	53.3	0.000	27.8	2.2
35	32.0	10.2	0.38	2.91	7.5	34.9	60.0	0.000	32.3	2.7
40	35.5	11.3	0.37	2.90	8.3	38.7	66.6	0.000	36.8	3.2
45	38.9	12.4	0.36	2.89	9.0	42.3	73.1	0.000	41.3	3.7
50	42.2	13.4	0.35	2.89	9.8	45.6	79.7	0.000	45.7	4.2
55	45.6	14.5	0.35	2.88	10.5	48.8	86.1	0.000	50.2	4.8
60	48.9	15.5	0.34	2.87	11.2	51.9	92.6	0.000	54.6	5.4
65	52.2	16.5	0.33	2.87	11.9	54.9	99.1	0.000	59.0	6.0
70	55.5	17.5	0.32	2.86	12.6	58.1	105.5	0.000	63.4	6.6
75	58.8	18.5	0.31	2.86	13.3	61.4	111.9	0.000	67.7	7.2
80	62.1	19.5	0.30	2.85	14.0	64.8	118.4	0.000	72.0	7.9
85	65.4	20.5	0.30	2.85	14.7	68.4	124.8	0.000	76.3	8.6
90	68.6	21.5	0.29	2.84	15.4	72.0	131.3	0.000	80.6	9.4
95	71.9	22.4	0.28	2.84	16.1	75.6	137.7	0.000	84.8	10.1
100	75.2	23.4	0.27	2.83	16.8	79.2	144.2	0.000	89.0	10.9
110	81.7	25.3	0.26	2.83	18.1	86.1	157.1	0.000	97.4	12.6
120	88.2	27.2	0.25	2.82	19.4	92.9	170.1	0.000	105.8	14.2
130	94.7	29.1	0.23	2.81	20.8	99.5	183.2	0.000	114.0	16.0
140	101.3	30.9	0.22	2.80	22.1	106.2	196.2	0.000	122.2	17.8
150	107.8	32.8	0.21	2.80	23.4	113.0	209.4	0.000	130.3	19.7
160	114.3	34.6	0.20	2.79	24.7	119.8	222.6	0.000	138.3	21.6
170	120.9	36.4	0.19	2.79	26.0	126.7	235.9	0.000	146.3	23.6
180	127.5	38.2	0.17	2.78	27.2	133.6	249.2	0.000	154.3	25.7
190	134.1	40.0	0.16	2.78	28.5	140.4	262.6	0.000	162.2	27.8
200	140.7	41.8	0.15	2.77	29.8	147.0	276.1	0.000	170.1	29.9
210	147.3	43.6	0.14	2.77	31.1	153.4	289.6	0.000	177.9	32.1
220	153.9	45.4	0.13	2.76	32.3	159.7	303.2	0.000	185.8	34.3
230	160.6	47.2	0.12	2.76	33.6	165.8	316.9	0.000	193.6	36.5
240	167.3	48.9	0.11	2.75	34.9	171.8	330.6	0.000	201.4	38.7
250	174.0	50.7	0.11	2.75	36.1	177.8	344.4	0.000	209.1	41.0
260	180.7	52.5	0.10	2.74	37.4	183.8	358.2	0.000	216.8	43.3
270	187.4	54.2	0.09	2.74	38.6	189.8	372.2	0.000	224.4	45.7
280	194.2	56.0	0.08	2.74	39.9	195.9	386.1	0.000	231.9	48.1
290	201.0	57.7	0.07	2.73	41.1	202.0	400.2	0.000	239.4	50.6
300	207.8	59.5	0.06	2.73	42.4	208.2	414.3	0.000	246.8	53.2
310	214.6	61.2	0.06	2.73	43.6	214.6	428.5	0.000	254.1	55.8
320	221.4	63.0	0.05	2.72	44.9	221.0	442.8	0.000	261.4	58.5
330	228.3	64.7	0.04	2.72	46.1	227.6	457.1	0.000	268.6	61.3
340	235.1	66.4	0.03	2.71	47.4	234.2	471.5	0.000	275.7	64.2
350	242.0	68.2	0.03	2.71	48.6	240.9	485.9	0.000	282.8	67.1
360	249.0	69.9	0.02	2.71	49.9	247.6	500.4	0.000	289.8	70.0
370	255.9	71.6	0.01	2.71	51.1	254.4	515.0	0.000	296.8	73.0
380	262.9	73.3	0.00	2.70	52.4	261.2	529.7	0.000	303.8	76.1
390	269.8	75.0	0.00	2.70	53.6	268.0	544.4	0.000	310.7	79.2
400	276.8	76.8	-0.01	2.70	54.8	274.8	559.1	0.000	317.6	82.4

Cr in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	14.6	5.6	0.47	2.99	4.2	16.3	28.3	0.000	9.2	0.8
15	19.7	7.5	0.43	2.95	5.6	21.6	39.5	0.000	13.7	1.3
20	24.6	9.3	0.39	2.92	6.8	26.7	50.3	0.000	18.1	1.9
25	29.4	10.9	0.36	2.90	8.1	31.7	60.8	0.000	22.4	2.5
30	34.1	12.6	0.34	2.89	9.3	36.8	71.0	0.000	26.7	3.3
35	38.7	14.1	0.32	2.88	10.4	41.8	81.1	0.000	30.9	4.0
40	43.3	15.7	0.29	2.86	11.6	46.7	91.0	0.000	35.1	4.9
45	47.9	17.2	0.28	2.86	12.7	51.4	100.9	0.000	39.3	5.7
50	52.5	18.6	0.26	2.85	13.8	55.9	110.6	0.000	43.4	6.6
55	57.0	20.1	0.24	2.84	14.9	60.2	120.2	0.000	47.4	7.5
60	61.6	21.5	0.23	2.83	16.0	64.5	129.8	0.000	51.5	8.5
65	66.1	22.9	0.21	2.83	17.1	68.7	139.3	0.000	55.5	9.5
70	70.7	24.3	0.20	2.82	18.2	72.9	148.7	0.000	59.5	10.5
75	75.2	25.7	0.19	2.81	19.3	77.4	158.1	0.000	63.4	11.6
80	79.8	27.0	0.17	2.81	20.4	82.0	167.5	0.000	67.3	12.7
85	84.3	28.4	0.16	2.80	21.4	86.7	176.8	0.000	71.1	13.9
90	88.9	29.7	0.15	2.80	22.5	91.4	186.1	0.000	74.9	15.1
95	93.5	31.1	0.14	2.80	23.6	96.2	195.3	0.000	78.7	16.3
100	98.0	32.4	0.13	2.79	24.6	100.9	204.5	0.000	82.4	17.6
110	107.2	35.0	0.11	2.78	26.7	110.0	222.9	0.000	89.8	20.2
120	116.4	37.6	0.09	2.78	28.8	118.9	241.1	0.000	97.0	23.0
130	125.6	40.2	0.07	2.77	30.9	127.9	259.3	0.000	104.0	25.9
140	134.9	42.7	0.06	2.77	33.0	137.0	277.3	0.000	111.0	29.0
150	144.2	45.2	0.04	2.76	35.1	146.3	295.3	0.000	117.8	32.2
160	153.5	47.7	0.03	2.76	37.2	156.1	313.3	0.000	124.5	35.5
170	162.9	50.2	0.01	2.75	39.3	166.1	331.2	0.000	131.1	38.9
180	172.3	52.7	0.00	2.75	41.3	176.2	349.1	0.000	137.6	42.4
190	181.8	55.1	-0.01	2.74	43.4	186.5	366.9	0.000	144.0	46.0
200	191.3	57.6	-0.02	2.74	45.5	196.7	384.7	0.000	150.3	49.6
210	200.8	60.0	-0.04	2.74	47.6	206.9	402.4	0.000	156.6	53.4
220	210.4	62.4	-0.05	2.73	49.6	216.9	420.1	0.000	162.8	57.2
230	220.1	64.8	-0.06	2.73	51.7	226.9	437.8	0.000	168.9	61.1
240	229.7	67.2	-0.07	2.73	53.8	236.9	455.5	0.000	175.0	65.0
250	239.5	69.6	-0.08	2.72	55.9	246.8	473.1	0.000	181.0	69.1
260	249.2	72.0	-0.09	2.72	57.9	256.6	490.7	0.000	186.9	73.1
270	259.0	74.3	-0.10	2.72	60.0	266.5	508.3	0.000	192.8	77.3
280	268.9	76.7	-0.11	2.72	62.1	276.3	525.9	0.000	198.6	81.4
290	278.7	79.1	-0.12	2.71	64.2	286.1	543.4	0.000	204.3	85.7
300	288.7	81.4	-0.13	2.71	66.3	295.9	561.0	0.000	210.0	90.0
310	298.6	83.7	-0.13	2.71	68.4	305.8	578.5	0.000	215.6	94.4
320	308.6	86.1	-0.14	2.71	70.4	315.6	596.0	0.000	221.1	98.8
330	318.7	88.4	-0.15	2.70	72.5	325.5	613.5	0.000	226.6	103.2
340	328.7	90.7	-0.16	2.70	74.6	335.3	631.0	0.000	232.1	107.8
350	338.9	93.0	-0.17	2.70	76.7	345.2	648.5	0.000	237.5	112.4
360	349.0	95.3	-0.17	2.70	78.8	355.0	665.9	0.000	242.9	117.0
370	359.2	97.6	-0.18	2.70	80.9	364.9	683.4	0.000	248.2	121.7
380	369.5	99.9	-0.19	2.70	83.0	374.8	700.8	0.000	253.5	126.4
390	379.7	102.2	-0.20	2.69	85.1	384.7	718.3	0.000	258.7	131.2
400	390.0	104.5	-0.20	2.69	87.2	394.5	735.7	0.000	263.9	136.1

Sn in SiO2 Density= 2.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	13.1	3.2	0.31	2.98	2.7	13.6	23.3	0.000	9.5	0.5
15	16.5	4.2	0.34	3.01	3.4	17.5	29.4	0.000	14.2	0.7
20	19.7	5.1	0.36	3.03	4.0	21.1	35.0	0.000	18.9	1.0
25	22.6	5.9	0.37	3.03	4.6	24.3	40.4	0.000	23.6	1.3
30	25.5	6.7	0.38	3.03	5.1	27.4	45.5	0.000	28.3	1.7
35	28.3	7.5	0.38	3.03	5.7	30.3	50.5	0.000	33.0	2.0
40	30.9	8.2	0.38	3.03	6.2	33.1	55.3	0.000	37.6	2.4
45	33.6	9.0	0.38	3.03	6.7	35.9	60.0	0.000	42.3	2.7
50	36.2	9.7	0.38	3.03	7.2	38.7	64.7	0.000	46.9	3.1
55	38.7	10.4	0.38	3.02	7.6	41.4	69.3	0.000	51.5	3.5
60	41.3	11.1	0.38	3.02	8.1	44.0	73.9	0.000	56.1	3.9
65	43.8	11.8	0.38	3.01	8.6	46.6	78.4	0.000	60.7	4.3
70	46.2	12.4	0.37	3.01	9.0	49.0	82.8	0.000	65.3	4.7
75	48.7	13.1	0.37	3.01	9.5	51.4	87.2	0.000	69.9	5.1
80	51.1	13.8	0.37	3.00	9.9	53.6	91.6	0.000	74.5	5.5
85	53.5	14.4	0.37	3.00	10.4	55.8	96.0	0.000	79.0	5.9
90	55.9	15.1	0.36	2.99	10.8	58.0	100.3	0.000	83.6	6.4
95	58.3	15.7	0.36	2.99	11.2	60.2	104.6	0.000	88.1	6.8
100	60.7	16.3	0.36	2.98	11.7	62.5	108.9	0.000	92.7	7.3
110	65.4	17.6	0.35	2.97	12.5	67.4	117.4	0.000	101.7	8.3
120	70.0	18.8	0.35	2.97	13.3	72.6	125.8	0.000	110.6	9.4
130	74.7	20.1	0.34	2.96	14.2	77.9	134.2	0.000	119.5	10.5
140	79.3	21.3	0.33	2.95	15.0	83.2	142.6	0.000	128.4	11.6
150	83.9	22.5	0.33	2.94	15.8	88.4	150.9	0.000	137.2	12.8
160	88.5	23.7	0.32	2.93	16.6	93.3	159.2	0.000	146.0	14.0
170	93.0	24.9	0.32	2.93	17.4	98.1	167.5	0.000	154.7	15.3
180	97.6	26.1	0.31	2.92	18.2	102.8	175.7	0.000	163.5	16.5
190	102.1	27.2	0.31	2.91	19.0	107.4	184.0	0.000	172.2	17.8
200	106.6	28.4	0.30	2.90	19.8	112.0	192.2	0.000	180.9	19.1
210	111.1	29.6	0.30	2.90	20.5	116.6	200.4	0.000	189.5	20.5
220	115.7	30.7	0.29	2.89	21.3	121.1	208.6	0.000	198.1	21.8
230	120.2	31.9	0.29	2.88	22.1	125.7	216.7	0.000	206.8	23.2
240	124.7	33.0	0.28	2.88	22.9	130.2	224.9	0.000	215.3	24.7
250	129.2	34.1	0.28	2.87	23.6	134.8	233.1	0.000	223.9	26.1
260	133.6	35.3	0.27	2.86	24.4	139.3	241.3	0.000	232.4	27.6
270	138.1	36.4	0.27	2.86	25.2	143.9	249.4	0.000	240.9	29.1
280	142.6	37.5	0.26	2.85	25.9	148.5	257.6	0.000	249.4	30.6
290	147.1	38.6	0.26	2.84	26.7	153.1	265.7	0.000	257.8	32.2
300	151.6	39.8	0.25	2.84	27.4	157.7	273.9	0.000	266.2	33.8
310	156.1	40.9	0.25	2.83	28.2	162.3	282.1	0.000	274.6	35.4
320	160.6	42.0	0.24	2.83	28.9	167.0	290.3	0.000	283.0	37.0
330	165.1	43.1	0.24	2.82	29.7	171.6	298.4	0.000	291.3	38.7
340	169.6	44.2	0.23	2.82	30.4	176.3	306.6	0.000	299.6	40.3
350	174.0	45.3	0.23	2.81	31.2	180.9	314.8	0.000	307.9	42.1
360	178.5	46.4	0.23	2.81	31.9	185.6	323.0	0.000	316.1	43.8
370	183.0	47.5	0.22	2.80	32.7	190.3	331.2	0.000	324.4	45.6
380	187.5	48.6	0.22	2.80	33.4	194.9	339.3	0.000	332.6	47.3
390	192.0	49.7	0.21	2.79	34.2	199.6	347.5	0.000	340.8	49.1
400	196.5	50.8	0.21	2.79	34.9	204.2	355.8	0.000	349.0	51.0

H in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	191.0	32.6	-2.19	9.95	44.8	214.0	239.8	0.006	0.5	9.5
15	259.9	32.7	-2.26	10.51	56.6	290.2	309.9	0.004	0.5	14.4
20	324.6	34.8	-2.29	10.72	68.6	361.2	376.8	0.002	0.6	19.4
25	386.4	37.7	-2.29	10.78	80.9	429.5	441.8	0.002	0.6	24.3
30	446.2	41.2	-2.28	10.76	93.6	496.0	505.6	0.001	0.7	29.3
35	504.3	45.0	-2.27	10.70	106.7	560.4	568.7	0.001	0.7	34.3
40	561.2	49.1	-2.25	10.61	120.1	622.5	631.2	0.000	0.7	39.2
45	617.0	53.5	-2.24	10.50	133.8	682.1	693.4	0.000	0.8	44.2
50	671.8	58.2	-2.22	10.39	147.9	739.2	755.4	0.000	0.8	49.2
55	725.9	63.1	-2.19	10.26	162.4	793.8	817.4	0.000	0.8	54.2
60	779.2	68.2	-2.17	10.14	177.3	846.9	879.2	0.000	0.8	59.2
65	832.0	73.6	-2.15	10.01	192.5	899.0	941.1	0.000	0.8	64.2
70	884.2	79.3	-2.13	9.88	208.1	950.7	1003.0	0.000	0.8	69.2
75	935.9	85.2	-2.11	9.75	224.1	1002.5	1065.0	0.000	0.8	74.1
80	987.1	91.3	-2.09	9.62	240.4	1054.7	1127.1	0.000	0.8	79.1
85	1038.0	97.6	-2.07	9.49	257.1	1107.1	1189.4	0.000	0.9	84.1
90	1088.4	104.3	-2.05	9.37	274.1	1159.7	1251.8	0.000	0.9	89.1
95	1138.5	111.1	-2.03	9.24	291.6	1212.4	1314.3	0.000	0.9	94.1
100	1188.3	118.2	-2.01	9.12	309.3	1265.0	1377.0	0.000	0.9	99.1
110	1286.9	133.2	-1.97	8.87	346.0	1370.1	1503.0	0.000	0.9	109.1
120	1384.5	149.2	-1.93	8.64	384.1	1475.7	1629.8	0.000	0.9	119.1
130	1481.1	166.2	-1.89	8.41	423.6	1582.5	1757.4	0.000	0.9	129.1
140	1577.0	184.3	-1.86	8.18	464.5	1691.3	1885.9	0.000	0.9	139.1
150	1672.0	203.5	-1.82	7.97	506.9	1802.5	2015.3	0.000	0.9	149.1
160	1766.4	223.9	-1.79	7.76	550.7	1916.5	2145.5	0.000	0.9	159.0
170	1860.1	245.3	-1.76	7.55	595.9	2033.2	2276.7	0.000	0.9	169.0
180	1953.3	268.0	-1.73	7.35	642.5	2152.4	2408.8	0.000	1.0	179.0
190	2045.9	291.9	-1.70	7.16	690.6	2273.9	2541.8	0.001	1.0	189.0
200	2138.1	316.9	-1.67	6.97	740.0	2397.4	2675.7	0.001	1.0	199.0
210	2229.8	343.3	-1.64	6.79	790.9	2523.0	2810.5	0.001	1.0	209.0
220	2321.0	370.9	-1.61	6.61	843.1	2650.7	2946.3	0.001	1.0	218.9
230	2411.9	399.9	-1.58	6.43	896.8	2780.6	3083.0	0.001	1.1	228.9
240	2502.4	430.1	-1.55	6.26	951.9	2912.7	3220.6	0.001	1.1	238.9
250	2592.6	461.8	-1.53	6.09	1008.4	3047.1	3359.0	0.001	1.1	248.9
260	2682.4	494.8	-1.50	5.93	1066.3	3184.0	3498.4	0.001	1.1	258.9
270	2771.9	529.3	-1.48	5.77	1125.6	3323.3	3638.7	0.002	1.2	268.8
280	2861.2	565.2	-1.45	5.61	1186.3	3465.2	3779.9	0.002	1.2	278.8
290	2950.1	602.6	-1.43	5.46	1248.4	3609.7	3922.0	0.002	1.2	288.8
300	3038.8	641.6	-1.40	5.31	1311.9	3756.8	4065.0	0.002	1.2	298.7
310	3127.2	682.0	-1.38	5.16	1376.9	3906.7	4208.8	0.002	1.2	308.7
320	3215.4	724.1	-1.36	5.02	1443.2	4059.1	4353.5	0.002	1.2	318.6
330	3303.4	767.7	-1.34	4.87	1511.0	4213.8	4499.1	0.002	1.3	328.6
340	3391.2	813.0	-1.32	4.73	1580.2	4370.6	4645.6	0.003	1.3	338.5
350	3478.7	859.9	-1.29	4.60	1650.8	4529.5	4792.9	0.003	1.3	348.4
360	3566.1	908.5	-1.27	4.46	1722.8	4690.2	4941.1	0.003	1.3	358.4
370	3653.2	958.9	-1.25	4.33	1796.3	4852.5	5090.1	0.003	1.3	368.3
380	3740.2	1011.0	-1.23	4.20	1871.1	5016.3	5239.9	0.003	1.3	378.2
390	3827.0	1064.9	-1.21	4.07	1947.4	5181.5	5390.6	0.003	1.3	388.2
400	3913.6	1120.6	-1.19	3.95	2025.2	5347.8	5542.1	0.003	1.3	398.1

He in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	157.3	43.2	-0.76	3.64	49.3	173.6	244.4	0.004	3.4	6.6
15	218.0	47.4	-1.00	4.50	59.6	245.7	315.4	0.003	4.0	10.8
20	273.1	51.1	-1.15	5.03	69.0	311.2	377.8	0.002	4.5	15.4
25	324.1	54.6	-1.25	5.39	77.8	369.8	434.7	0.001	4.9	20.1
30	372.0	57.8	-1.32	5.67	86.2	422.1	487.6	0.001	5.2	24.9
35	417.3	60.9	-1.38	5.88	94.3	469.8	537.2	0.001	5.4	29.6
40	460.4	63.8	-1.43	6.05	102.1	514.4	584.3	0.000	5.6	34.4
45	501.7	66.6	-1.46	6.19	109.8	556.8	629.2	0.000	5.7	39.2
50	541.3	69.3	-1.49	6.30	117.3	597.7	672.3	0.000	5.9	44.1
55	579.5	71.9	-1.52	6.40	124.7	637.5	713.9	0.000	6.0	48.9
60	616.5	74.4	-1.54	6.48	131.9	676.1	754.0	0.000	6.2	53.8
65	652.3	76.9	-1.56	6.55	139.1	713.5	793.0	0.000	6.3	58.7
70	687.1	79.3	-1.57	6.61	146.1	749.7	830.9	0.000	6.4	63.6
75	720.9	81.7	-1.59	6.66	153.1	784.5	867.7	0.000	6.5	68.5
80	753.8	84.0	-1.60	6.71	160.1	818.1	903.7	0.000	6.5	73.4
85	785.9	86.2	-1.61	6.75	166.9	850.8	938.9	0.000	6.6	78.4
90	817.3	88.4	-1.62	6.79	173.8	883.0	973.3	0.000	6.6	83.3
95	847.9	90.6	-1.63	6.82	180.5	914.9	1007.0	0.000	6.7	88.3
100	877.9	92.8	-1.63	6.85	187.3	946.8	1040.0	0.000	6.7	93.3
110	936.1	97.0	-1.64	6.89	200.6	1010.7	1104.3	0.000	6.8	103.2
120	992.2	101.1	-1.65	6.93	213.8	1073.6	1166.5	0.000	6.9	113.1
130	1046.2	105.1	-1.66	6.96	226.9	1134.1	1226.9	0.000	7.0	123.0
140	1098.5	109.0	-1.66	6.98	239.9	1191.1	1285.5	0.000	7.1	132.9
150	1149.2	112.8	-1.67	7.00	252.8	1244.0	1342.6	0.000	7.2	142.8
160	1198.4	116.6	-1.67	7.01	265.7	1292.5	1398.3	0.000	7.2	152.8
170	1246.3	120.3	-1.67	7.02	278.5	1338.1	1452.7	0.000	7.3	162.7
180	1292.9	124.0	-1.67	7.03	291.2	1382.3	1506.0	0.000	7.3	172.7
190	1338.3	127.6	-1.67	7.03	303.9	1426.2	1558.2	0.000	7.4	182.6
200	1382.7	131.1	-1.67	7.03	316.6	1471.0	1609.4	0.000	7.4	192.6
210	1426.0	134.6	-1.67	7.03	329.2	1517.2	1659.6	0.000	7.5	202.5
220	1468.4	138.1	-1.66	7.03	341.8	1564.5	1709.0	0.000	7.6	212.4
230	1509.9	141.5	-1.66	7.02	354.4	1612.3	1757.5	0.000	7.6	222.4
240	1550.6	144.9	-1.66	7.02	366.9	1660.4	1805.3	0.000	7.7	232.3
250	1590.4	148.2	-1.66	7.01	379.5	1708.2	1852.4	0.000	7.8	242.2
260	1629.5	151.5	-1.65	7.01	392.0	1755.5	1898.7	0.000	7.9	252.1
270	1667.9	154.8	-1.65	7.00	404.5	1802.0	1944.4	0.000	7.9	262.1
280	1705.6	158.1	-1.65	6.99	417.0	1847.5	1989.5	0.000	8.0	272.0
290	1742.7	161.3	-1.64	6.98	429.5	1891.7	2034.0	0.000	8.1	281.9
300	1779.1	164.5	-1.64	6.97	441.9	1934.5	2078.0	0.000	8.1	291.9
310	1814.9	167.7	-1.63	6.96	454.4	1975.8	2121.4	0.000	8.2	301.8
320	1850.2	170.9	-1.63	6.95	466.9	2015.7	2164.2	0.000	8.2	311.7
330	1885.0	174.0	-1.63	6.94	479.4	2054.2	2206.6	0.000	8.2	321.7
340	1919.2	177.1	-1.62	6.93	491.8	2091.7	2248.6	0.000	8.3	331.7
350	1952.9	180.2	-1.62	6.92	504.3	2128.3	2290.0	0.000	8.3	341.6
360	1986.1	183.3	-1.61	6.90	516.8	2164.0	2331.1	0.000	8.3	351.6
370	2018.9	186.4	-1.61	6.89	529.2	2198.9	2371.7	0.000	8.3	361.6
380	2051.2	189.4	-1.60	6.88	541.7	2233.3	2411.9	0.000	8.4	371.6
390	2083.1	192.5	-1.60	6.87	554.2	2267.1	2451.7	0.000	8.4	381.6
400	2114.6	195.5	-1.59	6.85	566.7	2300.5	2491.2	0.001	8.4	391.6

Be in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	71.8	22.0	-0.32	1.81	21.2	80.8	118.2	0.000	5.5	4.5
15	107.3	28.7	-0.72	3.44	28.1	117.9	164.5	0.000	7.2	7.7
20	141.5	34.4	-0.96	4.47	34.5	155.0	206.9	0.000	8.7	11.2
25	174.4	39.3	-1.14	5.19	40.5	193.0	246.6	0.000	10.0	15.0
30	206.1	43.6	-1.27	5.74	46.1	231.8	284.1	0.000	11.1	18.9
35	236.9	47.4	-1.37	6.17	51.5	270.4	319.9	0.000	12.0	23.0
40	266.7	50.9	-1.45	6.51	56.7	307.5	354.2	0.000	12.8	27.2
45	295.6	54.1	-1.52	6.80	61.8	342.3	387.3	0.000	13.5	31.5
50	323.9	57.1	-1.57	7.04	66.7	374.4	419.2	0.000	14.2	35.8
55	351.4	59.8	-1.62	7.25	71.5	403.5	450.1	0.000	14.8	40.2
60	378.3	62.4	-1.66	7.43	76.2	430.7	480.2	0.000	15.4	44.6
65	404.6	64.8	-1.70	7.58	80.8	457.0	509.4	0.000	15.9	49.1
70	430.3	67.1	-1.73	7.72	85.3	483.0	538.0	0.000	16.4	53.6
75	455.5	69.2	-1.76	7.84	89.7	509.3	565.9	0.000	16.8	58.1
80	480.2	71.3	-1.78	7.95	94.1	536.4	593.1	0.000	17.2	62.8
85	504.5	73.2	-1.80	8.05	98.4	563.7	619.8	0.000	17.6	67.4
90	528.3	75.1	-1.82	8.13	102.7	590.9	646.0	0.000	17.9	72.1
95	551.7	76.8	-1.84	8.21	106.8	617.6	671.7	0.000	18.2	76.8
100	574.8	78.5	-1.85	8.28	111.0	643.5	696.9	0.000	18.5	81.5
110	619.7	81.6	-1.88	8.40	119.1	692.0	746.1	0.000	19.0	91.0
120	663.4	84.5	-1.90	8.51	127.1	737.2	793.7	0.000	19.5	100.4
130	705.8	87.2	-1.92	8.59	134.9	780.1	839.9	0.000	20.0	109.9
140	747.0	89.8	-1.94	8.66	142.6	821.4	884.8	0.000	20.6	119.4
150	787.2	92.1	-1.95	8.72	150.1	861.7	928.6	0.000	21.1	128.9
160	826.4	94.3	-1.96	8.77	157.5	901.6	971.4	0.000	21.6	138.4
170	864.8	96.4	-1.97	8.82	164.9	940.9	1013.1	0.000	22.1	147.9
180	902.2	98.4	-1.97	8.85	172.1	979.5	1054.0	0.000	22.6	157.4
190	938.9	100.2	-1.98	8.88	179.2	1017.5	1094.0	0.000	23.0	166.9
200	974.8	102.0	-1.98	8.91	186.3	1054.6	1133.2	0.000	23.4	176.6
210	1010.0	103.7	-1.99	8.93	193.3	1091.0	1171.7	0.000	23.7	186.2
220	1044.5	105.3	-1.99	8.95	200.2	1126.6	1209.5	0.000	24.0	196.0
230	1078.4	106.8	-1.99	8.96	207.0	1161.6	1246.6	0.000	24.2	205.7
240	1111.7	108.3	-1.99	8.97	213.8	1195.9	1283.1	0.000	24.4	215.5
250	1144.4	109.7	-1.99	8.98	220.5	1229.7	1319.0	0.000	24.6	225.4
260	1176.6	111.0	-1.99	8.98	227.2	1263.0	1354.3	0.000	24.7	235.2
270	1208.2	112.3	-1.99	8.99	233.8	1295.9	1389.1	0.000	24.8	245.1
280	1239.3	113.5	-1.99	8.99	240.3	1328.4	1423.4	0.000	25.0	255.0
290	1270.0	114.7	-1.99	8.99	246.8	1360.5	1457.2	0.000	25.1	264.9
300	1300.1	115.9	-1.99	8.99	253.3	1392.3	1490.6	0.000	25.3	274.7
310	1329.9	117.0	-1.98	8.99	259.7	1423.8	1523.5	0.000	25.4	284.6
320	1359.2	118.0	-1.98	8.98	266.1	1455.0	1556.0	0.000	25.5	294.4
330	1388.1	119.0	-1.98	8.98	272.4	1485.9	1588.1	0.000	25.7	304.3
340	1416.6	120.0	-1.98	8.97	278.7	1516.6	1619.7	0.000	25.9	314.1
350	1444.7	121.0	-1.97	8.97	284.9	1547.0	1651.0	0.000	26.0	323.9
360	1472.4	121.9	-1.97	8.96	291.1	1577.1	1682.0	0.000	26.2	333.8
370	1499.8	122.8	-1.97	8.95	297.3	1607.0	1712.5	0.000	26.3	343.6
380	1526.8	123.7	-1.97	8.94	303.4	1636.6	1742.8	0.000	26.5	353.5
390	1553.5	124.5	-1.96	8.93	309.5	1666.0	1772.7	0.000	26.6	363.4
400	1579.9	125.3	-1.96	8.92	315.5	1695.2	1802.3	0.000	26.8	373.2

C in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	47.8	14.6	-0.35	2.86	13.0	51.8	86.2	0.000	6.1	3.9
15	71.1	20.0	-0.53	3.07	17.9	76.9	117.6	0.000	8.4	6.6
20	93.6	24.6	-0.67	3.33	22.3	101.5	146.3	0.000	10.4	9.6
25	115.4	28.6	-0.78	3.59	26.5	125.6	173.2	0.000	12.1	12.9
30	136.6	32.2	-0.87	3.84	30.4	149.1	198.7	0.000	13.6	16.3
35	157.2	35.4	-0.94	4.08	34.2	172.2	223.1	0.000	15.0	20.0
40	177.3	38.4	-1.01	4.31	37.8	195.1	246.6	0.000	16.3	23.7
45	197.0	41.1	-1.07	4.53	41.3	217.9	269.2	0.000	17.5	27.5
50	216.3	43.6	-1.13	4.74	44.7	240.7	291.2	0.000	18.6	31.4
55	235.1	45.9	-1.18	4.93	47.9	263.4	312.6	0.000	19.6	35.3
60	253.7	48.0	-1.22	5.12	51.1	285.8	333.4	0.000	20.7	39.3
65	271.9	50.1	-1.27	5.30	54.2	307.4	353.8	0.000	21.6	43.4
70	289.8	52.0	-1.31	5.48	57.2	328.0	373.7	0.000	22.5	47.4
75	307.4	53.7	-1.35	5.64	60.2	347.3	393.2	0.000	23.4	51.6
80	324.7	55.4	-1.38	5.81	63.1	365.4	412.4	0.000	24.2	55.8
85	341.8	57.0	-1.42	5.96	65.9	382.6	431.2	0.000	24.9	60.1
90	358.7	58.6	-1.45	6.11	68.7	399.6	449.7	0.000	25.6	64.4
95	375.3	60.0	-1.48	6.26	71.4	416.7	468.0	0.000	26.2	68.8
100	391.7	61.4	-1.51	6.40	74.1	434.3	485.9	0.000	26.8	73.2
110	423.9	64.0	-1.56	6.66	79.4	471.8	521.0	0.000	27.8	82.1
120	455.4	66.3	-1.61	6.92	84.5	510.9	555.3	0.000	28.7	91.2
130	486.2	68.5	-1.66	7.16	89.4	549.7	588.7	0.000	29.6	100.4
140	516.3	70.5	-1.70	7.39	94.3	587.1	621.3	0.000	30.3	109.6
150	545.9	72.4	-1.74	7.60	99.0	621.8	653.3	0.000	31.1	118.9
160	574.9	74.2	-1.78	7.81	103.6	653.4	684.7	0.000	31.8	128.2
170	603.3	75.8	-1.82	8.01	108.1	682.5	715.5	0.000	32.5	137.6
180	631.3	77.3	-1.85	8.20	112.6	710.0	745.8	0.000	33.1	146.9
190	658.9	78.8	-1.88	8.39	116.9	736.7	775.5	0.000	33.7	156.3
200	685.9	80.1	-1.92	8.57	121.2	763.2	804.8	0.000	34.2	165.8
210	712.6	81.4	-1.95	8.74	125.4	789.9	833.7	0.000	34.6	175.3
220	738.9	82.6	-1.97	8.91	129.5	816.8	862.2	0.000	35.0	184.9
230	764.8	83.8	-2.00	9.07	133.5	843.7	890.3	0.000	35.4	194.5
240	790.4	84.8	-2.03	9.22	137.5	870.4	918.0	0.000	35.7	204.2
250	815.6	85.9	-2.05	9.38	141.5	896.9	945.3	0.000	36.0	213.9
260	840.5	86.9	-2.08	9.52	145.4	922.9	972.4	0.000	36.4	223.6
270	865.1	87.8	-2.10	9.67	149.2	948.4	999.1	0.000	36.7	233.3
280	889.4	88.7	-2.12	9.81	153.0	973.3	1025.5	0.000	37.0	242.9
290	913.4	89.5	-2.15	9.94	156.7	997.6	1051.7	0.000	37.4	252.6
300	937.2	90.3	-2.17	10.08	160.4	1021.1	1077.6	0.000	37.7	262.3
310	960.6	91.1	-2.19	10.21	164.1	1043.8	1103.2	0.000	38.1	271.9
320	983.8	91.9	-2.21	10.33	167.7	1065.9	1128.5	0.000	38.5	281.5
330	1006.8	92.6	-2.23	10.46	171.2	1087.3	1153.6	0.000	38.9	291.1
340	1029.5	93.3	-2.25	10.58	174.7	1108.1	1178.5	0.000	39.3	300.7
350	1052.0	93.9	-2.27	10.70	178.2	1128.5	1203.2	0.000	39.7	310.2
360	1074.3	94.5	-2.28	10.81	181.7	1148.4	1227.6	0.000	40.2	319.8
370	1096.3	95.1	-2.30	10.93	185.1	1168.0	1251.9	0.000	40.6	329.4
380	1118.2	95.7	-2.32	11.04	188.5	1187.2	1275.9	0.000	41.0	338.9
390	1139.8	96.3	-2.34	11.15	191.8	1206.2	1299.7	0.000	41.4	348.5
400	1161.2	96.8	-2.35	11.25	195.1	1225.0	1323.4	0.000	41.9	358.1

O in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	37.3	11.7	-0.19	3.02	9.8	38.8	76.4	0.000	6.8	3.2
15	55.2	16.3	-0.29	2.76	13.6	58.2	102.8	0.000	9.6	5.4
20	72.7	20.3	-0.38	2.74	17.2	77.2	126.9	0.000	12.1	7.9
25	89.7	23.9	-0.46	2.81	20.5	95.7	149.4	0.000	14.4	10.6
30	106.3	27.2	-0.54	2.93	23.6	113.6	170.8	0.000	16.6	13.4
35	122.6	30.2	-0.60	3.06	26.6	131.3	191.3	0.000	18.6	16.4
40	138.6	32.9	-0.66	3.21	29.5	148.6	211.0	0.000	20.5	19.5
45	154.3	35.5	-0.72	3.37	32.3	165.9	230.1	0.000	22.2	22.8
50	169.8	37.9	-0.77	3.53	35.1	183.2	248.6	0.000	23.9	26.1
55	185.1	40.2	-0.82	3.68	37.7	200.5	266.7	0.000	25.4	29.6
60	200.1	42.4	-0.87	3.84	40.3	217.8	284.3	0.000	26.8	33.2
65	215.0	44.4	-0.91	3.99	42.8	235.0	301.6	0.000	28.1	36.8
70	229.6	46.3	-0.96	4.14	45.3	252.1	318.5	0.000	29.4	40.6
75	244.1	48.2	-1.00	4.29	47.7	269.1	335.1	0.000	30.6	44.4
80	258.5	49.9	-1.03	4.44	50.0	285.9	351.4	0.000	31.8	48.2
85	272.7	51.6	-1.07	4.58	52.4	302.5	367.4	0.000	32.9	52.1
90	286.7	53.3	-1.10	4.72	54.6	319.1	383.2	0.000	33.9	56.1
95	300.6	54.8	-1.14	4.86	56.9	335.5	398.8	0.000	34.9	60.1
100	314.4	56.3	-1.17	4.99	59.1	351.9	414.1	0.000	35.9	64.1
110	341.6	59.1	-1.23	5.25	63.4	384.4	444.2	0.000	37.7	72.3
120	368.4	61.8	-1.29	5.50	67.6	416.4	473.7	0.000	39.4	80.6
130	394.7	64.3	-1.34	5.74	71.7	447.7	502.4	0.000	41.0	89.0
140	420.6	66.6	-1.39	5.98	75.6	477.9	530.7	0.000	42.5	97.5
150	446.2	68.8	-1.44	6.20	79.5	507.0	558.4	0.000	43.9	106.1
160	471.4	70.9	-1.49	6.41	83.3	534.8	585.6	0.000	45.2	114.8
170	496.3	72.8	-1.53	6.62	87.1	561.8	612.4	0.000	46.4	123.6
180	520.9	74.7	-1.57	6.82	90.7	588.1	638.8	0.000	47.6	132.4
190	545.3	76.5	-1.61	7.02	94.3	614.1	664.8	0.000	48.7	141.3
200	569.3	78.2	-1.65	7.21	97.9	640.1	690.4	0.000	49.7	150.3
210	593.1	79.8	-1.69	7.39	101.3	666.1	715.7	0.000	50.6	159.4
220	616.7	81.4	-1.73	7.57	104.8	692.0	740.7	0.000	51.5	168.5
230	640.0	82.9	-1.76	7.75	108.1	717.9	765.4	0.000	52.3	177.7
240	663.1	84.3	-1.79	7.92	111.5	743.4	789.9	0.000	53.1	186.9
250	686.0	85.7	-1.83	8.08	114.7	768.5	814.1	0.000	53.8	196.2
260	708.6	87.0	-1.86	8.25	118.0	793.2	838.0	0.000	54.5	205.5
270	731.1	88.3	-1.89	8.40	121.1	817.2	861.7	0.000	55.2	214.8
280	753.4	89.5	-1.92	8.56	124.3	840.7	885.2	0.000	55.9	224.1
290	775.5	90.7	-1.95	8.71	127.4	863.4	908.4	0.000	56.6	233.4
300	797.4	91.9	-1.97	8.86	130.5	885.4	931.5	0.000	57.2	242.8
310	819.2	93.0	-2.00	9.00	133.5	906.6	954.3	0.000	57.9	252.1
320	840.7	94.1	-2.03	9.14	136.5	927.1	977.0	0.000	58.5	261.4
330	862.2	95.1	-2.05	9.28	139.5	947.0	999.4	0.000	59.2	270.8
340	883.4	96.1	-2.08	9.42	142.4	966.3	1021.7	0.000	59.8	280.1
350	904.6	97.1	-2.10	9.55	145.3	985.1	1043.9	0.000	60.4	289.5
360	925.5	98.1	-2.13	9.68	148.2	1003.5	1065.8	0.000	61.1	298.8
370	946.4	99.0	-2.15	9.81	151.0	1021.6	1087.7	0.000	61.7	308.2
380	967.1	99.9	-2.18	9.93	153.9	1039.4	1109.3	0.000	62.3	317.6
390	987.6	100.8	-2.20	10.06	156.7	1056.9	1130.8	0.000	62.9	327.1
400	1008.0	101.6	-2.22	10.18	159.4	1074.2	1152.2	0.000	63.5	336.5

Mg in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	29.6	9.5	0.00	2.77	7.4	30.2	64.0	0.000	8.3	1.7
15	43.5	13.6	-0.03	2.64	10.3	43.3	90.7	0.000	12.0	3.0
20	57.1	17.4	-0.07	2.61	13.2	56.5	115.8	0.000	15.6	4.3
25	70.6	20.9	-0.12	2.62	15.9	70.1	139.7	0.000	19.1	5.9
30	84.0	24.2	-0.16	2.65	18.6	84.3	162.6	0.000	22.5	7.5
35	97.4	27.4	-0.20	2.70	21.2	98.8	184.8	0.000	25.7	9.3
40	110.7	30.5	-0.23	2.75	23.8	113.5	206.2	0.000	28.8	11.2
45	123.9	33.4	-0.27	2.80	26.4	128.2	227.1	0.000	31.8	13.2
50	137.2	36.3	-0.30	2.85	28.9	142.8	247.4	0.000	34.8	15.2
55	150.4	39.0	-0.33	2.91	31.4	157.2	267.3	0.000	37.7	17.3
60	163.5	41.7	-0.36	2.97	33.8	171.5	286.8	0.000	40.5	19.5
65	176.7	44.3	-0.39	3.02	36.3	185.7	305.9	0.000	43.2	21.8
70	189.8	46.8	-0.42	3.08	38.7	199.9	324.6	0.000	45.9	24.1
75	202.9	49.2	-0.44	3.13	41.1	214.1	343.0	0.000	48.5	26.5
80	216.0	51.6	-0.47	3.18	43.4	228.5	361.1	0.000	51.0	29.0
85	229.1	54.0	-0.49	3.24	45.8	242.9	379.0	0.000	53.5	31.5
90	242.2	56.3	-0.52	3.29	48.2	257.4	396.6	0.000	55.8	34.1
95	255.2	58.5	-0.54	3.34	50.5	271.9	413.9	0.000	58.2	36.8
100	268.3	60.7	-0.56	3.39	52.8	286.4	431.0	0.000	60.4	39.6
110	294.4	65.0	-0.60	3.49	57.4	315.5	464.6	0.000	64.7	45.3
120	320.4	69.1	-0.64	3.58	62.0	344.7	497.4	0.000	68.8	51.2
130	346.4	73.1	-0.68	3.67	66.6	374.2	529.6	0.000	72.6	57.4
140	372.4	77.0	-0.72	3.76	71.1	404.1	561.0	0.000	76.3	63.7
150	398.4	80.8	-0.75	3.84	75.5	434.7	591.9	0.000	79.8	70.2
160	424.4	84.4	-0.78	3.92	80.0	465.8	622.2	0.000	83.1	76.9
170	450.4	88.0	-0.82	4.00	84.4	497.3	652.0	0.000	86.2	83.7
180	476.3	91.5	-0.85	4.08	88.8	528.9	681.4	0.000	89.3	90.7
190	502.3	94.9	-0.88	4.15	93.2	560.2	710.2	0.000	92.3	97.7
200	528.2	98.2	-0.90	4.22	97.5	591.1	738.7	0.000	95.2	104.8
210	554.2	101.4	-0.93	4.29	101.9	621.3	766.8	0.000	98.0	112.0
220	580.1	104.6	-0.96	4.36	106.2	650.9	794.5	0.000	100.7	119.3
230	606.0	107.7	-0.98	4.43	110.5	679.9	821.8	0.000	103.4	126.6
240	632.0	110.8	-1.01	4.49	114.8	708.4	848.9	0.000	106.0	134.0
250	657.9	113.7	-1.03	4.55	119.1	736.3	875.6	0.000	108.6	141.5
260	683.8	116.7	-1.05	4.62	123.3	763.9	901.9	0.000	111.1	149.0
270	709.8	119.6	-1.08	4.68	127.6	791.1	928.0	0.000	113.5	156.6
280	735.7	122.4	-1.10	4.73	131.8	817.9	953.9	0.000	115.9	164.2
290	761.6	125.2	-1.12	4.79	136.0	844.4	979.4	0.000	118.2	171.9
300	787.6	127.9	-1.14	4.85	140.2	870.6	1004.7	0.000	120.4	179.6
310	813.5	130.6	-1.16	4.90	144.4	896.6	1029.8	0.000	122.5	187.4
320	839.4	133.3	-1.18	4.96	148.6	922.4	1054.6	0.000	124.7	195.2
330	865.4	135.9	-1.20	5.01	152.8	948.0	1079.1	0.000	126.7	203.1
340	891.3	138.5	-1.22	5.06	157.0	973.4	1103.5	0.000	128.7	211.1
350	917.3	141.0	-1.24	5.11	161.1	998.6	1127.7	0.000	130.7	219.1
360	943.2	143.5	-1.25	5.16	165.3	1023.6	1151.6	0.000	132.6	227.1
370	969.2	146.0	-1.27	5.21	169.4	1048.6	1175.3	0.000	134.5	235.2
380	995.1	148.4	-1.29	5.26	173.5	1073.4	1198.9	0.000	136.4	243.4
390	1021.1	150.8	-1.31	5.31	177.7	1098.1	1222.3	0.000	138.3	251.6
400	1047.0	153.2	-1.32	5.36	181.8	1122.8	1245.4	0.000	140.1	259.9

Si in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	26.1	8.3	0.09	2.83	6.2	27.0	55.2	0.000	8.2	1.8
15	37.6	11.6	0.03	2.69	8.5	38.2	77.1	0.000	12.0	3.0
20	48.8	14.7	-0.03	2.65	10.7	49.2	97.5	0.000	15.6	4.3
25	59.8	17.5	-0.07	2.65	12.8	60.3	116.9	0.000	19.2	5.8
30	70.7	20.2	-0.12	2.66	14.8	71.5	135.5	0.000	22.6	7.4
35	81.6	22.7	-0.16	2.69	16.8	82.9	153.5	0.000	25.8	9.1
40	92.3	25.2	-0.19	2.72	18.8	94.4	170.9	0.000	29.0	11.0
45	103.0	27.5	-0.23	2.76	20.8	105.7	187.8	0.000	32.1	12.9
50	113.6	29.8	-0.26	2.80	22.7	117.0	204.4	0.000	35.1	14.9
55	124.2	32.0	-0.29	2.84	24.6	128.2	220.5	0.000	38.0	16.9
60	134.8	34.2	-0.32	2.88	26.4	139.4	236.4	0.000	40.9	19.1
65	145.3	36.3	-0.34	2.92	28.3	150.7	252.0	0.000	43.7	21.3
70	155.9	38.3	-0.37	2.96	30.1	162.2	267.2	0.000	46.4	23.6
75	166.4	40.3	-0.39	3.00	32.0	174.0	282.3	0.000	49.1	25.9
80	176.8	42.2	-0.41	3.04	33.8	186.1	297.1	0.000	51.7	28.2
85	187.3	44.1	-0.43	3.08	35.6	198.5	311.7	0.000	54.3	30.7
90	197.7	46.0	-0.45	3.12	37.4	211.1	326.1	0.000	56.8	33.2
95	208.2	47.8	-0.47	3.16	39.1	223.7	340.4	0.000	59.3	35.7
100	218.6	49.6	-0.49	3.20	40.9	236.2	354.4	0.000	61.6	38.4
110	239.4	53.0	-0.53	3.27	44.4	261.0	382.1	0.000	66.0	43.9
120	260.2	56.4	-0.56	3.34	47.9	285.2	409.1	0.000	70.2	49.7
130	280.9	59.6	-0.60	3.41	51.4	308.8	435.6	0.000	74.2	55.7
140	301.6	62.8	-0.63	3.48	54.8	331.6	461.7	0.000	78.1	61.8
150	322.3	65.9	-0.65	3.54	58.3	353.6	487.3	0.000	82.0	68.0
160	343.0	68.9	-0.68	3.61	61.7	374.9	512.5	0.000	85.8	74.2
170	363.7	71.8	-0.71	3.67	65.1	395.8	537.3	0.000	89.6	80.4
180	384.4	74.7	-0.73	3.73	68.4	416.8	561.8	0.000	93.3	86.7
190	405.1	77.5	-0.76	3.79	71.8	438.2	585.9	0.000	97.0	93.0
200	425.8	80.2	-0.78	3.84	75.1	460.3	609.8	0.000	100.5	99.5
210	446.4	82.9	-0.80	3.90	78.5	483.3	633.3	0.000	103.8	106.2
220	467.1	85.6	-0.82	3.95	81.8	507.1	656.6	0.000	107.0	112.9
230	487.8	88.1	-0.84	4.00	85.1	531.4	679.6	0.000	110.1	119.8
240	508.5	90.7	-0.86	4.05	88.4	556.0	702.4	0.000	113.1	126.9
250	529.1	93.2	-0.88	4.10	91.7	580.7	724.9	0.000	116.0	134.0
260	549.8	95.6	-0.90	4.15	95.0	605.2	747.2	0.000	118.7	141.3
270	570.5	98.1	-0.92	4.20	98.2	629.6	769.3	0.000	121.4	148.7
280	591.2	100.4	-0.94	4.24	101.5	653.4	791.2	0.000	123.9	156.1
290	611.9	102.8	-0.95	4.29	104.8	676.7	813.0	0.000	126.4	163.6
300	632.6	105.1	-0.97	4.33	108.0	699.3	834.5	0.000	128.7	171.3
310	653.3	107.4	-0.99	4.38	111.3	721.1	855.8	0.000	131.0	178.9
320	674.0	109.6	-1.00	4.42	114.5	742.1	877.0	0.000	133.2	186.6
330	694.7	111.8	-1.02	4.46	117.8	762.4	898.0	0.000	135.4	194.4
340	715.5	114.0	-1.03	4.50	121.0	782.2	918.8	0.000	137.5	202.3
350	736.2	116.2	-1.05	4.54	124.2	801.5	939.5	0.000	139.5	210.2
360	757.0	118.3	-1.06	4.58	127.5	820.4	960.0	0.000	141.5	218.2
370	777.7	120.4	-1.08	4.62	130.7	838.9	980.4	0.000	143.5	226.3
380	798.5	122.5	-1 09	4.66	133.9	857.2	1000.7	0.000	145.4	234.4
390	819.2	124.5	-1.10	4.70	137.1	875.3	1020.8	0.000	147.3	242.6
400	840.0	126.6	-1.12	4.73	140.3	893.2	1040.8	0.000	149.2	250.8

Ar in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	22.7	6.2	0.05	2.80	4.5	23.3	44.0	0.000	8.1	1.9
15	31.3	8.5	0.04	2.69	6.1	31.7	60.9	0.000	11.9	3.1
20	39.6	10.6	0.02	2.65	7.6	39.7	76.5	0.000	15.6	4.4
25	47.6	12.6	-0.01	2.64	9.0	47.5	91.2	0.000	19.2	5.8
30	55.4	14.4	-0.03	2.64	10.4	55.2	105.3	0.000	22.7	7.3
35	63.2	16.2	-0.06	2.65	11.7	63.0	118.8	0.000	26.1	8.9
40	70.8	17.9	-0.08	2.67	13.0	70.7	131.9	0.000	29.5	10.5
45	78.4	19.6	-0.10	2.69	14.3	78.5	144.6	0.000	32.7	12.3
50	85.9	21.1	-0.13	2.71	15.5	86.4	156.9	0.000	35.9	14.1
55	93.4	22.7	-0.15	2.73	16.7	94.3	168.9	0.000	39.0	15.9
60	100.8	24.2	-0.17	2.76	17.9	102.3	180.6	0.000	42.1	17.9
65	108.2	25.7	-0.19	2.78	19.1	110.3	192.2	0.000	45.1	19.9
70	115.5	27.1	-0.21	2.80	20.3	118.4	203.4	0.000	48.0	22.0
75	122.8	28.5	-0.23	2.83	21.5	126.6	214.5	0.000	50.8	24.2
80	130.1	29.8	-0.25	2.85	22.6	134.9	225.4	0.000	53.5	26.4
85	137.4	31.2	-0.26	2.88	23.8	143.1	236.1	0.000	56.2	28.8
90	144.7	32.5	-0.28	2.90	24.9	151.3	246.7	0.000	58.9	31.1
95	151.9	33.8	-0.30	2.92	26.0	159.5	257.1	0.000	61.5	33.5
100	159.1	35.1	-0.31	2.95	27.1	167.5	267.4	0.000	64.1	35.8
110	173.6	37.5	-0.34	2.99	29.3	183.1	287.5	0.000	69.4	40.6
120	188.0	39.9	-0.37	3.03	31.5	198.3	307.2	0.000	74.6	45.4
130	202.3	42.3	-0.40	3.08	33.7	213.5	326.4	0.000	79.7	50.4
140	216.7	44.6	-0.43	3.12	35.8	228.9	345.2	0.000	84.5	55.5
150	231.0	46.8	-0.45	3.16	38.0	244.7	363.7	0.000	89.1	60.9
160	245.3	49.0	-0.48	3.20	40.1	260.9	381.9	0.000	93.3	66.6
170	259.6	51.1	-0.50	3.24	42.1	277.3	399.7	0.000	97.4	72.5
180	273.9	53.2	-0.52	3.27	44.2	293.9	417.3	0.000	101.3	78.6
190	288.2	55.2	-0.54	3.31	46.3	310.4	434.6	0.000	105.1	84.8
200	302.5	57.2	-0.56	3.34	48.3	326.6	451.7	0.000	109.0	91.0
210	316.8	59.2	-0.58	3.38	50.4	342.4	468.5	0.000	112.8	97.2
220	331.1	61.2	-0.60	3.41	52.4	357.9	485.1	0.000	116.7	103.5
230	345.4	63.1	-0.62	3.44	54.4	373.1	501.5	0.000	120.5	109.7
240	359.7	65.0	-0.64	3.47	56.4	388.1	517.7	0.000	124.3	115.9
250	374.0	66.8	-0.66	3.51	58.4	402.9	533.7	0.000	128.0	122.2
260	388.3	68.6	-0.68	3.54	60.4	417.7	549.6	0.000	131.7	128.6
270	402.7	70.5	-0.69	3.57	62.4	432.3	565.2	0.000	135.2	135.0
280	417.0	72.2	-0.71	3.60	64.4	447.0	580.7	0.000	138.7	141.5
290	431.4	74.0	-0.73	3.62	66.4	461.6	596.1	0.000	142.0	148.1
300	445.7	75.7	-0.74	3.65	68.3	476.3	611.3	0.000	145.2	154.8
310	460.1	77.4	-0.76	3.68	70.3	491.1	626.4	0.000	148.3	161.6
320	474.5	79.1	-0.77	3.71	72.2	506.0	641.3	0.000	151.2	168.6
330	488.9	80.8	-0.79	3.73	74.2	520.9	656.1	0.000	154.1	175.7
340	503.3	82.5	-0.80	3.76	76.1	535.8	670.8	0.000	156.8	182.9
350	517.7	84.1	-0.81	3.78	78.1	550.8	685.3	0.000	159.5	190.1
360	532.1	85.7	-0.83	3.81	80.0	565.8	699.7	0.000	162.1	197.5
370	546.6	87.3	-0.84	3.83	81.9	580.9	714.1	0.000	164.7	205.0
380	561.0	88.9	-0.86	3.86	83.8	595.9	728.3	0.000	167.2	212.6
390	575.5	90.5	-0.87	3.88	85.8	611.0	742.4	0.000	169.6	220.2
400	590.0	92.1	-0.88	3.90	87.7	626.0	756.4	0.000	172.1	227.9

Se in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	20.8	4.4	0.18	2.93	3.5	21.3	36.3	0.000	8.8	1.1
15	26.9	5.8	0.17	2.88	4.4	27.5	47.5	0.000	13.2	1.8
20	32.5	7.1	0.16	2.85	5.3	33.2	57.8	0.000	17.6	2.4
25	37.9	8.3	0.15	2.83	6.1	38.6	67.6	0.000	21.9	3.1
30	43.2	9.4	0.14	2.81	6.9	44.0	77.0	0.000	26.1	3.8
35	48.3	10.6	0.13	2.80	7.6	49.2	86.2	0.000	30.4	4.6
40	53.4	11.6	0.12	2.79	8.4	54.3	95.1	0.000	34.6	5.4
45	58.4	12.7	0.11	2.78	9.1	59.3	103.8	0.000	38.8	6.2
50	63.3	13.7	0.10	2.78	9.8	64.2	112.4	0.000	42.9	7.0
55	68.1	14.7	0.09	2.77	10.5	69.1	120.9	0.000	47.1	7.9
60	73.0	15.7	0.09	2.77	11.2	73.9	129.3	0.000	51.2	8.8
65	77.8	16.7	0.08	2.77	11.9	78.7	137.5	0.000	55.3	9.7
70	82.5	17.7	0.07	2.76	12.6	83.4	145.7	0.000	59.4	10.6
75	87.3	18.7	0.07	2.76	13.2	88.0	153.9	0.000	63.4	11.5
80	92.0	19.6	0.06	2.76	13.9	92.7	161.9	0.000	67.5	12.5
85	96.7	20.6	0.05	2.76	14.6	97.3	169.9	0.000	71.5	13.5
90	101.4	21.5	0.05	2.76	15.2	101.9	177.8	0.000	75.5	14.4
95	106.1	22.4	0.04	2.76	15.9	106.5	185.7	0.000	79.5	15.4
100	110.8	23.3	0.04	2.75	16.5	111.1	193.6	0.000	83.5	16.5
110	120.1	25.1	0.02	2.75	17.8	120.4	209.2	0.000	91.3	18.6
120	129.4	26.9	0.01	2.75	19.1	129.7	224.6	0.000	99.1	20.9
130	138.7	28.7	0.01	2.75	20.4	139.2	239.9	0.000	106.7	23.3
140	147.9	30.5	0.00	2.75	21.7	148.7	255.1	0.000	114.3	25.7
150	157.2	32.2	-0.01	2.75	22.9	158.2	270.3	0.000	121.7	28.2
160	166.5	33.9	-0.02	2.75	24.2	167.8	285.3	0.000	129.1	30.8
170	175.7	35.6	-0.03	2.75	25.4	177.5	300.3	0.000	136.5	33.5
180	185.0	37.3	-0.04	2.75	26.7	187.2	315.2	0.000	143.8	36.2
190	194.3	39.0	-0.04	2.75	27.9	197.0	330.1	0.000	151.0	39.0
200	203.6	40.7	-0.05	2.75	29.2	206.7	344.9	0.000	158.1	41.8
210	212.9	42.3	-0.06	2.76	30.4	216.5	359.7	0.000	165.3	44.7
220	222.2	44.0	-0.06	2.76	31.6	226.3	374.4	0.000	172.3	47.7
230	231.5	45.6	-0.07	2.76	32.9	236.0	389.1	0.000	179.3	50.7
240	240.9	47.3	-0.08	2.76	34.1	245.8	403.8	0.000	186.3	53.7
250	250.2	48.9	-0.08	2.76	35.4	255.5	418.4	0.000	193.2	56.8
260	259.6	50.5	-0.09	2.76	36.6	265.3	433.0	0.000	200.1	60.0
270	269.0	52.1	-0.09	2.76	37.8	275.0	447.6	0.000	206.9	63.1
280	278.4	53.7	-0.10	2.76	39.1	284.7	462.2	0.000	213.6	66.4
290	287.8	55.3	-0.11	2.77	40.3	294.3	476.8	0.000	220.3	69.7
300	297.3	56.9	-0.11	2.77	41.5	304.0	491.3	0.000	227.0	73.0
310	306.7	58.5	-0.12	2.77	42.8	313.6	505.8	0.000	233.5	76.4
320	316.2	60.1	-0.12	2.77	44.0	323.2	520.3	0.000	240.1	79.8
330	325.7	61.7	-0.13	2.77	45.2	332.7	534.8	0.000	246.6	83.3
340	335.2	63.3	-0.13	2.77	46.5	342.3	549.3	0.000	253.1	86.9
350	344.8	64.9	-0.14	2.77	47.7	351.8	563.7	0.000	259.5	90.4
360	354.3	66.4	-0.14	2.77	48.9	361.3	578.2	0.000	265.9	94.0
370	363.9	68.0	-0.14	2.78	50.2	370.7	592.6	0.000	272.2	97.7
380	373.5	69.6	-0.15	2.78	51.4	380.2	607.1	0.000	278.6	101.4
390	383.2	71.1	-0.15	2.78	52.6	389.6	621.5	0.000	284.9	105.1
400	392.8	72.7	-0.16	2.78	53.9	399.1	635.9	0.000	291.1	108.9

Cr in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	21.3	5.3	0.16	2.89	4.0	21.9	39.6	0.000	8.6	1.4
15	28.6	7.2	0.16	2.80	5.3	29.4	54.0	0.000	12.8	2.2
20	35.5	8.9	0.14	2.75	6.5	36.3	67.5	0.000	16.9	3.1
25	42.3	10.6	0.13	2.72	7.6	43.0	80.3	0.000	20.9	4.1
30	48.9	12.2	0.11	2.71	8.7	49.5	92.6	0.000	24.9	5.1
35	55.4	13.7	0.09	2.70	9.8	56.0	104.5	0.000	28.8	6.2
40	61.8	15.2	0.07	2.70	10.8	62.3	116.2	0.000	32.6	7.3
45	68.2	16.6	0.06	2.70	11.9	68.6	127.5	0.000	36.4	8.5
50	74.5	18.1	0.04	2.70	12.9	74.8	138.7	0.000	40.2	9.8
55	80.8	19.4	0.02	2.71	13.9	81.0	149.6	0.000	44.0	11.0
60	87.1	20.8	0.01	2.71	14.9	87.2	160.4	0.000	47.7	12.3
65	93.3	22.1	-0.01	2.72	15.9	93.3	171.0	0.000	51.4	13.6
70	99.6	23.5	-0.03	2.73	16.9	99.5	181.4	0.000	55.0	15.0
75	105.8	24.8	-0.04	2.73	17.9	105.6	191.8	0.000	58.6	16.4
80	112.0	26.1	-0.05	2.74	18.8	111.8	202.0	0.000	62.1	17.9
85	118.2	27.3	-0.07	2.75	19.8	118.0	212.1	0.000	65.6	19.4
90	124.4	28.6	-0.08	2.76	20.8	124.3	222.1	0.000	69.0	21.0
95	130.6	29.8	-0.09	2.77	21.7	130.7	232.0	0.000	72.4	22.6
100	136.8	31.1	-0.11	2.78	22.7	137.2	241.9	0.000	75.8	24.2
110	149.2	33.5	-0.13	2.80	24.6	150.6	261.3	0.000	82.4	27.6
120	161.6	35.9	-0.15	2.82	26.5	164.4	280.4	0.000	89.0	31.0
130	174.0	38.2	-0.18	2.83	28.3	178.5	299.3	0.000	95.4	34.6
140	186.4	40.6	-0.20	2.85	30.2	192.6	317.9	0.000	101.8	38.2
150	198.8	42.9	-0.22	2.87	32.1	206.6	336.4	0.000	108.0	42.0
160	211.3	45.1	-0.24	2.89	33.9	220.6	354.6	0.000	114.1	45.9
170	223.8	47.4	-0.26	2.90	35.7	234.4	372.7	0.000	120.1	49.9
180	236.3	49.6	-0.27	2.92	37.6	248.1	390.6	0.000	126.0	54.0
190	248.9	51.8	-0.29	2.94	39.4	261.7	408.3	0.000	131.8	58.2
200	261.4	54.0	-0.31	2.95	41.3	275.3	425.9	0.000	137.4	62.5
210	274.1	56.1	-0.32	2.97	43.1	288.8	443.4	0.000	143.0	67.0
220	286.7	58.3	-0.34	2.99	44.9	302.4	460.7	0.000	148.6	71.5
230	299.4	60.4	-0.36	3.00	46.7	315.9	477.9	0.000	154.0	76.0
240	312.1	62.5	-0.37	3.02	48.6	329.4	495.0	0.000	159.3	80.7
250	324.9	64.6	-0.39	3.03	50.4	342.9	512.0	0.000	164.6	85.4
260	337.7	66.7	-0.40	3.05	52.2	356.4	528.9	0.000	169.8	90.3
270	350.5	68.7	-0.41	3.06	54.0	369.9	545.8	0.000	174.9	95.1
280	363.3	70.8	-0.43	3.07	55.9	383.4	562.5	0.000	179.9	100.1
290	376.2	72.8	-0.44	3.09	57.7	396.8	579.1	0.000	184.9	105.1
300	389.2	74.9	-0.45	3.10	59.5	410.3	595.7	0.000	189.7	110.2
310	402.1	76.9	-0.46	3.11	61.3	423.8	612.1	0.000	194.5	115.4
320	415.1	78.9	-0.48	3.13	63.1	437.3	628.5	0.000	199.3	120.6
330	428.2	80.9	-0.49	3.14	65.0	450.7	644.8	0.000	203.9	125.9
340	441.2	82.9	-0.50	3.15	66.8	464.2	661.1	0.000	208.6	131.3
350	454.3	84.9	-0.51	3.17	68.6	477.7	677.3	0.000	213.1	136.7
360	467.5	86.8	-0.52	3.18	70.4	491.1	693.4	0.000	217.6	142.2
370	480.6	88.8	-0.53	3.19	72.2	504.6	709.4	0.000	222.1	147.7
380	493.9	90.8	-0.55	3.20	74.1	518.1	725.4	0.000	226.5	153.3
390	507.1	92.7	-0.56	3.21	75.9	531.5	741.4	0.000	230.9	159.0
400	520.4	94.6	-0.57	3.23	77.7	545.0	757.2	0.000	235.3	164.7

Sn in Photoresist Density= 1.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	21.2	3.6	0.20	3.00	3.0	21.5	34.1	0.000	8.9	1.1
15	26.5	4.6	0.20	2.95	3.7	27.0	43.0	0.000	13.4	1.6
20	31.4	5.5	0.19	2.92	4.3	31.9	51.0	0.000	17.8	2.2
25	36.0	6.4	0.18	2.90	4.9	36.7	58.6	0.000	22.2	2.8
30	40.4	7.2	0.17	2.89	5.5	41.3	65.9	0.000	26.6	3.3
35	44.6	8.0	0.17	2.88	6.0	45.8	72.9	0.000	31.0	3.9
40	48.7	8.8	0.16	2.87	6.5	50.1	79.8	0.000	35.4	4.6
45	52.7	9.5	0.16	2.86	7.0	54.2	86.4	0.000	39.8	5.2
50	56.6	10.3	0.15	2.86	7.5	58.0	93.0	0.000	44.1	5.8
55	60.5	11.0	0.15	2.85	8.0	61.7	99.4	0.000	48.5	6.5
60	64.3	11.7	0.14	2.85	8.4	65.2	105.7	0.000	52.8	7.2
65	68.1	12.4	0.14	2.84	8.9	68.6	112.0	0.000	57.1	7.9
70	71.8	13.0	0.13	2.84	9.3	72.1	118.2	0.000	61.4	8.6
75	75.5	13.7	0.13	2.84	9.8	75.7	124.3	0.000	65.7	9.3
80	79.1	14.4	0.13	2.84	10.3	79.4	130.3	0.000	70.0	10.0
85	82.7	15.0	0.12	2.83	10.7	83.1	136.3	0.000	74.2	10.8
90	86.3	15.7	0.12	2.83	11.1	86.9	142.3	0.000	78.4	11.5
95	89.9	16.3	0.12	2.83	11.6	90.7	148.2	0.000	82.7	12.3
100	93.4	16.9	0.11	2.83	12.0	94.4	154.1	0.000	86.9	13.1
110	100.4	18.2	0.11	2.83	12.9	101.6	165.8	0.000	95.3	14.7
120	107.4	19.4	0.10	2.83	13.7	108.5	177.4	0.000	103.6	16.3
130	114.3	20.7	0.10	2.82	14.6	115.4	188.8	0.000	112.0	18.0
140	121.1	21.9	0.09	2.82	15.4	122.1	200.2	0.000	120.3	19.7
150	127.9	23.1	0.09	2.82	16.2	128.9	211.5	0.000	128.5	21.5
160	134.6	24.2	0.08	2.82	17.1	135.7	222.7	0.000	136.7	23.2
170	141.4	25.4	0.08	2.82	17.9	142.5	233.9	0.000	144.9	25.0
180	148.1	26.6	0.07	2.82	18.7	149.2	245.0	0.000	153.1	26.9
190	154.7	27.7	0.07	2.82	19.5	156.0	256.1	0.000	161.2	28.8
200	161.4	28.9	0.07	2.82	20.3	162.8	267.2	0.000	169.2	30.7
210	168.0	30.0	0.06	2.82	21.1	169.5	278.2	0.000	177.2	32.7
220	174.6	31.1	0.06	2.83	22.0	176.2	289.2	0.000	185.2	34.8
230	181.2	32.2	0.06	2.83	22.8	182.8	300.2	0.000	193.1	36.9
240	187.8	33.3	0.05	2.83	23.6	189.5	311.1	0.000	200.9	39.0
250	194.3	34.5	0.05	2.83	24.4	196.1	322.0	0.000	208.8	41.2
260	200.9	35.6	0.05	2.83	25.2	202.6	332.9	0.000	216.5	43.4
270	207.4	36.7	0.04	2.83	26.0	209.2	343.8	0.000	224.3	45.7
280	214.0	37.8	0.04	2.83	26.8	215.7	354.7	0.000	232.0	48.0
290	220.5	38.8	0.04	2.83	27.6	222.3	365.5	0.000	239.7	50.3
300	227.0	39.9	0.03	2.83	28.4	228.8	376.4	0.000	247.3	52.6
310	233.5	41.0	0.03	2.83	29.2	235.2	387.2	0.000	255.0	55.0
320	240.1	42.1	0.03	2.83	29.9	241.7	398.0	0.000	262.6	57.4
330	246.6	43.2	0.03	2.83	30.7	248.2	408.8	0.000	270.2	59.8
340	253.1	44.2	0.02	2.84	31.5	254.6	419.6	0.000	277.7	62.2
350	259.6	45.3	0.02	2.84	32.3	261.0	430.4	0.000	285.3	64.7
360	266.1	46.4	0.02	2.84	33.1	267.4	441.2	0.000	292.8	67.1
370	272.6	47.4	0.02	2.84	33.9	273.8	452.0	0.000	300.4	69.6
380	279.1	48.5	0.02	2.84	34.7	280.2	462.8	0.000	307.9	72.1
390	285.6	49.5	0.01	2.84	35.5	286.5	473.6	0.000	315.3	74.6
400	292.0	50.6	0.01	2.84	36.3	292.8	484.4	0.000	322.8	77.2

H in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	57.2	25.9	-0.02	2.09	35.4	58.6	122.8	0.104	0.3	9.3
15	76.4	30.2	-0.23	2.44	40.8	83.1	156.1	0.078	0.4	14.2
20	94.8	34.3	-0.37	2.68	46.3	106.7	187.0	0.063	0.5	19.1
25	112.7	38.1	-0.47	2.86	51.7	129.9	216.2	0.052	0.5	24.1
30	130.2	41.9	-0.55	3.01	57.2	152.8	244.3	0.043	0.5	29.1
35	147.6	45.5	-0.62	3.13	62.6	175.3	271.6	0.037	0.6	34.1
40	164.7	49.1	-0.67	3.23	68.1	197.3	298.3	0.032	0.6	39.1
45	181.8	52.6	-0.71	3.33	73.5	218.6	324.5	0.028	0.6	44.0
50	198.8	56.0	-0.75	3.41	79.0	239.1	350.2	0.024	0.6	49.0
55	215.8	59.4	-0.79	3.48	84.5	259.0	375.6	0.021	0.6	54.0
60	232.7	62.8	-0.82	3.54	90.1	278.4	400.7	0.019	0.7	58.9
65	249.6	66.1	-0.84	3.60	95.7	297.5	425.5	0.017	0.7	63.9
70	266.5	69.5	-0.87	3.66	101.3	316.5	450.1	0.015	0.7	68.9
75	283.4	72.8	-0.89	3.71	107.0	335.5	474.5	0.013	0.7	73.9
80	300.3	76.1	-0.91	3.76	112.7	354.5	498.8	0.012	0.7	78.9
85	317.2	79.3	-0.93	3.80	118.4	373.5	522.9	0.011	0.7	83.9
90	334.1	82.6	-0.94	3.84	124.2	392.3	546.8	0.009	0.7	88.9
95	351.1	85.8	-0.96	3.88	130.0	410.7	570.7	0.008	0.7	94.0
100	368.0	89.1	-0.97	3.92	135.9	428.8	594.4	0.008	0.8	99.0
110	402.1	95.5	-1.00	3.99	147.8	463.6	641.6	0.006	0.8	109.0
120	436.2	102.0	-1.02	4.05	159.8	497.5	688.5	0.005	0.8	119.0
130	470.5	108.4	-1.04	4.10	172.1	531.4	735.1	0.004	0.8	129.0
140	504.9	114.8	-1.06	4.15	184.5	566.1	781.6	0.003	0.8	139.0
150	539.4	121.2	-1.08	4.20	197.1	602.1	827.8	0.003	0.9	148.9
160	574.1	127.7	-1.09	4.24	209.9	639.8	873.9	0.002	0.9	158.9
170	609.0	134.1	-1.10	4.29	222.9	679.1	919.9	0.002	0.9	168.9
180	644.0	140.5	-1.12	4.32	236.1	719.9	965.8	0.002	0.9	178.9
190	679.2	146.9	-1.13	4.36	249.5	761.8	1011.6	0.002	0.9	188.9
200	714.6	153.4	-1.14	4.39	263.1	804.9	1057.4	0.001	0.9	198.9
210	750.1	159.8	-1.15	4.43	276.8	848.8	1103.1	0.001	0.9	208.9
220	785.8	166.3	-1.16	4.46	290.8	893.6	1148.7	0.001	0.9	218.9
230	821.6	172.8	-1.17	4.49	304.9	939.1	1194.3	0.002	1.0	228.9
240	857.6	179.3	-1.17	4.51	319.2	985.2	1239.9	0.002	1.0	238.9
250	893.8	185.8	-1.18	4.54	333.7	1031.8	1285.5	0.002	1.0	248.8
260	930.1	192.4	-1.19	4.57	348.4	1078.9	1331.1	0.002	1.0	258.8
270	966.6	198.9	-1.19	4.59	363.3	1126.3	1376.7	0.002	1.0	268.8
280	1003.3	205.5	-1.20	4.61	378.3	1174.1	1422.3	0.002	1.0	278.8
290	1040.1	212.1	-1.20	4.64	393.6	1222.0	1467.9	0.003	1.1	288.8
300	1077.0	218.7	-1.21	4.66	409.0	1270.2	1513.5	0.003	1.1	298.7
310	1114.2	225.3	-1.21	4.68	424.6	1318.4	1559.1	0.003	1.1	308.7
320	1151.5	232.0	-1.22	4.70	440.4	1366.7	1604.8	0.003	1.1	318.6
330	1188.9	238.7	-1.22	4.72	456.4	1415.2	1650.4	0.004	1.1	328.6
340	1226.5	245.4	-1.23	4.74	472.5	1463.7	1696.2	0.004	1.1	338.6
350	1264.2	252.1	-1.23	4.75	488.9	1512.4	1741.9	0.004	1.2	348.5
360	1302.2	258.8	-1.23	4.77	505.4	1561.2	1787.7	0.005	1.2	358.4
370	1340.2	265.6	-1.24	4.79	522.1	1610.1	1833.5	0.005	1.2	368.4
380	1378.4	272.3	-1.24	4.80	539.0	1659.2	1879.3	0.005	1.2	378.3
390	1416.8	279.1	-1.24	4.82	556.0	1708.4	1925.2	0.006	1.2	388.3
400	1455.3	286.0	-1.25	4.84	573.3	1757.8	1971.1	0.006	1.2	398.2

He in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	46.7	24.4	0.41	2.78	34.8	54.4	100.1	0.238	2.7	6.2
15	62.8	31.7	0.29	2.52	43.6	69.6	136.5	0.189	3.4	10.4
20	77.4	37.9	0.20	2.39	51.1	83.1	168.9	0.158	4.0	14.8
25	91.0	43.2	0.13	2.33	57.7	95.7	198.4	0.136	4.4	19.4
30	103.8	48.0	0.07	2.30	63.6	107.8	225.8	0.119	4.7	24.1
35	116.1	52.3	0.02	2.29	69.0	119.7	251.4	0.105	5.0	28.8
40	127.9	56.3	-0.03	2.30	74.1	131.7	275.6	0.095	5.3	33.6
45	139.2	59.9	-0.07	2.31	78.9	143.8	298.6	0.085	5.5	38.4
50	150.3	63.3	-0.11	2.33	83.4	156.2	320.5	0.078	5.7	43.2
55	160.9	66.5	-0.15	2.35	87.6	168.8	341.5	0.071	5.9	48.1
60	171.4	69.5	-0.18	2.37	91.7	181.7	361.6	0.065	6.1	53.0
65	181.6	72.3	-0.21	2.40	95.6	194.7	381.0	0.060	6.3	57.9
70	191.5	74.9	-0.24	2.43	99.3	207.8	399.8	0.056	6.4	62.8
75	201.3	77.5	-0.26	2.46	102.9	220.8	417.9	0.052	6.6	67.7
80	210.8	79.9	-0.29	2.49	106.4	233.7	435.5	0.048	6.7	72.6
85	220.2	82.2	-0.31	2.52	109.8	246.4	452.6	0.045	6.8	77.5
90	229.5	84.4	-0.33	2.55	113.1	258.9	469.2	0.042	6.9	82.3
95	238.6	86.5	-0.35	2.58	116.2	270.9	485.3	0.039	6.9	87.2
100	247.5	88.6	-0.37	2.62	119.3	282.4	501.1	0.037	7.0	92.1
110	265.0	92.5	-0.41	2.68	125.2	303.9	531.5	0.032	7.2	101.9
120	282.1	96.1	-0.45	2.74	130.9	323.6	560.5	0.028	7.4	111.8
130	298.8	99.4	-0.48	2.80	136.3	342.2	588.4	0.025	7.5	121.8
140	315.1	102.6	-0.51	2.86	141.5	359.9	615.2	0.023	7.6	131.8
150	331.0	105.6	-0.54	2.92	146.4	377.1	641.0	0.020	7.8	141.7
160	346.7	108.5	-0.57	2.98	151.2	393.9	665.9	0.018	7.9	151.7
170	362.1	111.2	-0.59	3.03	155.9	410.5	690.1	0.016	7.9	161.6
180	377.2	113.7	-0.62	3.09	160.4	426.9	713.5	0.015	8.0	171.5
190	392.1	116.2	-0.64	3.14	164.7	443.0	736.2	0.013	8.1	181.3
200	406.7	118.5	-0.66	3.20	169.0	459.0	758.2	0.012	8.1	191.2
210	421.1	120.8	-0.68	3.25	173.1	474.9	779.7	0.011	8.2	201.1
220	435.3	123.0	-0.70	3.30	177.1	490.7	800.6	0.010	8.3	211.0
230	449.4	125.0	-0.72	3.35	181.0	506.4	821.0	0.009	8.3	220.9
240	463.2	127.0	-0.74	3.40	184.8	521.9	840.9	0.008	8.4	230.8
250	476.9	129.0	-0.76	3.45	188.6	537.5	860.4	0.008	8.5	240.8
260	490.5	130.8	-0.78	3.49	192.2	552.9	879.4	0.007	8.5	250.7
270	503.8	132.6	-0.79	3.54	195.8	568.3	898.0	0.007	8.6	260.6
280	517.1	134.4	-0.81	3.58	199.3	583.7	916.3	0.006	8.6	270.6
290	530.2	136.0	-0.83	3.63	202.7	599.0	934.1	0.006	8.7	280.5
300	543.1	137.7	-0.84	3.67	206.1	614.3	951.6	0.006	8.8	290.5
310	556.0	139.3	-0.86	3.71	209.4	629.6	968.8	0.005	8.8	300.5
320	568.7	140.8	-0.87	3.76	212.7	644.8	985.7	0.005	8.9	310.5
330	581.3	142.3	-0.89	3.80	215.9	660.0	1002.2	0.005	8.9	320.4
340	593.8	143.7	-0.90	3.84	219.0	675.2	1018.5	0.005	9.0	330.4
350	606.2	145.1	-0.91	3.88	222.1	690.3	1034.4	0.005	9.0	340.4
360	618.4	146.5	-0.93	3.92	225.1	705.4	1050.2	0.004	9.1	350.4
370	630.6	147.9	-0.94	3.96	228.1	720.3	1065.6	0.004	9.1	360.5
380	642.7	149.2	-0.95	3.99	231.0	735.3	1080.8	0.004	9.2	370.5
390	654.7	150.4	-0.96	4.03	233.9	750.1	1095.8	0.004	9.2	380.5
400	666.6	151.7	-0.97	4.07	236.8	764.8	1110.5	0.004	9.3	390.5

Be in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	20.7	10.7	0.35	2.80	13.9	23.8	47.5	0.174	4.0	5.3
15	29.7	15.0	0.26	2.55	19.3	32.4	67.1	0.147	5.5	8.7
20	38.2	18.9	0.19	2.42	24.3	40.1	85.3	0.130	6.8	12.2
25	46.5	22.5	0.13	2.35	28.9	47.3	102.4	0.117	8.0	16.0
30	54.4	25.9	0.08	2.31	33.2	54.0	118.6	0.107	9.0	19.8
35	62.2	29.0	0.04	2.29	37.3	60.8	134.2	0.099	10.0	23.7
40	69.8	32.0	0.00	2.28	41.1	67.8	149.1	0.092	10.8	27.8
45	77.2	34.8	-0.04	2.28	44.8	75.3	163.5	0.086	11.6	31.9
50	84.5	37.5	-0.07	2.29	48.3	83.4	177.5	0.081	12.3	36.1
55	91.7	40.1	-0.10	2.30	51.7	92.3	191.1	0.077	13.0	40.4
60	98.7	42.5	-0.12	2.31	55.0	101.6	204.3	0.073	13.6	44.7
65	105.7	44.9	-0.15	2.33	58.2	111.0	217.2	0.070	14.2	49.1
70	112.5	47.2	-0.18	2.35	61.3	120.3	229.8	0.066	14.8	53.5
75	119.3	49.4	-0.20	2.37	64.3	129.3	242.1	0.063	15.4	57.9
80	125.9	51.5	-0.22	2.39	67.2	137.7	254.2	0.061	16.0	62.3
85	132.5	53.6	-0.24	2.41	70.0	145.8	266.0	0.058	16.6	66.8
90	139.1	55.6	-0.26	2.43	72.8	153.6	277.6	0.056	17.2	71.2
95	145.5	57.5	-0.28	2.45	75.5	161.2	288.9	0.054	17.7	75.7
100	151.9	59.4	-0.30	2.47	78.1	168.8	300.1	0.052	18.2	80.3
110	164.6	63.1	-0.33	2.51	83.2	183.8	321.9	0.048	19.0	89.4
120	177.0	66.5	-0.36	2.56	88.1	199.0	343.1	0.045	19.7	98.7
130	189.2	69.8	-0.39	2.60	92.8	214.5	363.7	0.042	20.3	108.0
140	201.2	73.0	-0.42	2.65	97.4	230.2	383.7	0.040	20.9	117.4
150	213.0	76.0	-0.45	2.69	101.8	246.3	403.2	0.037	21.5	126.9
160	224.7	78.9	-0.47	2.73	106.0	262.8	422.2	0.035	22.0	136.4
170	236.3	81.8	-0.50	2.77	110.2	279.4	440.9	0.033	22.6	145.9
180	247.7	84.5	-0.52	2.82	114.2	295.8	459.1	0.032	23.1	155.5
190	259.0	87.1	-0.54	2.86	118.1	311.6	477.0	0.030	23.6	165.0
200	270.1	89.6	-0.56	2.90	121.9	326.8	494.5	0.028	24.1	174.6
210	281.2	92.1	-0.58	2.93	125.7	341.1	511.7	0.027	24.5	184.3
220	292.1	94.5	-0.60	2.97	129.3	354.6	528.6	0.026	24.9	193.9
230	303.0	96.8	-0.62	3.01	132.8	367.4	545.2	0.024	25.3	203.6
240	313.7	99.1	-0.63	3.05	136.3	379.5	561.5	0.023	25.7	213.3
250	324.3	101.2	-0.65	3.08	139.7	391.1	577.6	0.022	26.0	222.9
260	334.9	103.4	-0.67	3.12	143.0	402.3	593.4	0.021	26.4	232.6
270	345.4	105.5	-0.68	3.15	146.3	413.1	608.9	0.020	26.7	242.3
280	355.7	107.5	-0.70	3.19	149.5	423.6	624.3	0.019	27.0	252.0
290	366.0	109.5	-0.71	3.22	152.6	433.8	639.4	0.018	27.2	261.8
300	376.3	111.4	-0.73	3.26	155.7	443.8	654.4	0.018	27.5	271.4
310	386.4	113.3	-0.74	3.29	158.8	453.7	669.1	0.017	27.8	281.1
320	396.5	115.2	-0.76	3.32	161.7	463.4	683.7	0.016	28.0	290.8
330	406.5	117.0	-0.77	3.35	164.7	473.0	698.0	0.015	28.2	300.5
340	416.5	118.8	-0.78	3.38	167.5	482.5	712.2	0.015	28.5	310.2
350	426.4	120.5	-0.79	3.42	170.4	491.8	726.3	0.014	28.7	319.9
360	436.2	122.2	-0.81	3.45	173.2	501.1	740.1	0.013	28.9	329.6
370	446.0	123.9	-0.82	3.48	175.9	510.2	753.8	0.013	29.1	339.3
380	455.7	125.5	-0.83	3.50	178.6	519.2	767.4	0.012	29.3	349.0
390	465.3	127.1	-0.84	3.53	181.3	528.2	780.8	0.012	29.5	358.7
400	474.9	128.7	-0.85	3.56	183.9	537.1	794.0	0.011	29.7	368.5

C in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	14.3	7.8	0.44	2.66	9.3	17.9	29.8	0.157	4.8	4.7
15	20.4	10.8	0.35	2.50	13.0	23.9	43.4	0.139	6.6	7.6
20	26.2	13.5	0.28	2.42	16.4	29.3	56.2	0.127	8.2	10.7
25	31.8	16.0	0.22	2.38	19.5	34.4	68.4	0.118	9.8	14.0
30	37.2	18.4	0.17	2.35	22.5	39.3	80.1	0.111	11.2	17.4
35	42.5	20.6	0.13	2.33	25.3	44.0	91.4	0.104	12.6	21.0
40	47.7	22.7	0.09	2.33	28.0	48.7	102.3	0.099	13.9	24.7
45	52.8	24.7	0.06	2.32	30.6	53.3	112.8	0.094	15.2	28.4
50	57.8	26.7	0.03	2.33	33.1	58.0	123.1	0.090	16.3	32.3
55	62.7	28.6	0.00	2.33	35.5	62.6	133.1	0.087	17.4	36.2
60	67.5	30.4	-0.03	2.33	37.9	67.4	142.8	0.083	18.5	40.2
65	72.3	32.1	-0.05	2.34	40.1	72.4	152.3	0.080	19.5	44.2
70	77.0	33.9	-0.08	2.35	42.4	77.7	161.6	0.077	20.4	48.2
75	81.7	35.5	-0.10	2.36	44.5	83.3	170.7	0.075	21.3	52.3
80	86.3	37.1	-0.12	2.37	46.6	89.2	179.6	0.072	22.1	56.3
85	90.9	38.7	-0.14	2.38	48.7	95.4	188.4	0.070	22.9	60.4
90	95.4	40.3	-0.15	2.39	50.7	101.5	197.0	0.068	23.7	64.5
95	99.9	41.8	-0.17	2.40	52.7	107.5	205.4	0.066	24.4	68.7
100	104.3	43.2	-0.19	2.41	54.6	113.2	213.7	0.064	25.1	72.8
110	113.1	46.1	-0.22	2.43	58.4	123.5	229.9	0.060	26.5	81.3
120	121.8	48.9	-0.25	2.46	62.1	132.8	245.7	0.057	27.9	89.8
130	130.3	51.5	-0.28	2.48	65.6	142.0	261.0	0.054	29.2	98.5
140	138.7	54.1	-0.30	2.50	69.0	151.4	275.8	0.052	30.4	107.4
150	147.0	56.6	-0.32	2.52	72.4	161.7	290.4	0.049	31.5	116.3
160	155.2	59.0	-0.35	2.55	75.6	173.1	304.5	0.047	32.6	125.3
170	163.4	61.4	-0.37	2.57	78.8	185.1	318.4	0.045	33.5	134.4
180	171.4	63.7	-0.39	2.59	81.9	197.5	332.0	0.042	34.4	143.5
190	179.4	65.9	-0.41	2.61	84.9	209.8	345.2	0.041	35.2	152.7
200	187.3	68.1	-0.42	2.63	87.9	221.7	358.2	0.039	36.0	162.0
210	195.1	70.3	-0.44	2.65	90.7	232.8	371.0	0.037	36.7	171.2
220	202.8	72.4	-0.46	2.68	93.6	243.3	383.6	0.035	37.4	180.5
230	210.5	74.4	-0.47	2.70	96.4	253.2	395.9	0.034	38.1	189.8
240	218.2	76.4	-0.49	2.72	99.1	262.7	408.0	0.032	38.8	199.1
250	225.8	78.4	-0.50	2.73	101.8	271.7	419.9	0.031	39.4	208.4
260	233.3	80.3	-0.52	2.75	104.4	280.4	431.6	0.030	40.0	217.8
270	240.8	82.2	-0.53	2.77	107.0	288.9	443.2	0.028	40.5	227.2
280	248.2	84.1	-0.55	2.79	109.6	297.1	454.5	0.027	41.1	236.6
290	255.6	85.9	-0.56	2.81	112.1	305.2	465.7	0.026	41.6	246.0
300	262.9	87.7	-0.57	2.83	114.6	313.3	476.8	0.025	42.1	255.5
310	270.2	89.5	-0.58	2.85	117.0	321.3	487.6	0.024	42.6	265.1
320	277.4	91.2	-0.60	2.86	119.4	329.2	498.4	0.022	43.0	274.6
330	284.6	93.0	-0.61	2.88	121.8	337.2	509.0	0.021	43.4	284.2
340	291.8	94.7	-0.62	2.90	124.1	345.1	519.5	0.020	43.9	293.8
350	298.9	96.3	-0.63	2.91	126.4	352.9	529.8	0.019	44.2	303.5
360	306.0	98.0	-0.64	2.93	128.7	360.7	540.0	0.019	44.6	313.2
370	313.1	99.6	-0.65	2.95	131.0	368.5	550.1	0.018	45.0	322.9
380	320.1	101.2	-0.66	2.96	133.2	376.2	560.1	0.017	45.4	332.6
390	327.1	102.8	-0.67	2.98	135.4	383.9	569.9	0.016	45.7	342.4
400	334.0	104.3	-0.68	2.99	137.5	391.5	579.7	0.015	46.1	352.2

O in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	11.5	6.3	0.44	2.71	7.3	14.4	24.2	0.153	5.6	3.8
15	16.3	8.6	0.38	2.57	10.2	19.1	35.2	0.134	8.0	6.3
20	20.8	10.8	0.33	2.49	12.9	23.5	45.6	0.121	10.2	8.9
25	25.2	12.9	0.29	2.45	15.5	27.6	55.5	0.112	12.3	11.7
30	29.5	14.8	0.25	2.42	17.9	31.7	65.1	0.104	14.3	14.6
35	33.7	16.7	0.21	2.40	20.2	35.6	74.3	0.098	16.1	17.5
40	37.9	18.4	0.18	2.39	22.4	39.6	83.3	0.093	17.9	20.6
45	41.9	20.1	0.15	2.38	24.6	43.4	92.0	0.089	19.7	23.7
50	45.9	21.8	0.13	2.38	26.7	47.2	100.5	0.085	21.3	27.1
55	49.9	23.4	0.10	2.38	28.7	51.0	108.8	0.082	22.8	30.5
60	53.8	24.9	0.08	2.38	30.7	54.8	116.9	0.079	24.3	34.1
65	57.7	26.5	0.05	2.38	32.6	58.5	124.8	0.076	25.7	37.7
70	61.5	27.9	0.03	2.38	34.5	62.3	132.6	0.074	27.1	41.4
75	65.3	29.4	0.01	2.39	36.4	66.1	140.3	0.072	28.4	45.1
80	69.1	30.8	-0.01	2.39	38.2	69.9	147.8	0.069	29.7	48.9
85	72.9	32.2	-0.02	2.40	40.0	73.8	155.2	0.068	30.9	52.6
90	76.6	33.5	-0.04	2.40	41.7	77.7	162.5	0.066	32.1	56.4
95	80.3	34.9	-0.06	2.41	43.4	81.9	169.6	0.064	33.2	60.1
100	84.0	36.2	-0.07	2.42	45.1	86.2	176.7	0.063	34.4	63.9
110	91.2	38.7	-0.10	2.43	48.4	95.4	190.5	0.060	36.6	71.4
120	98.5	41.2	-0.13	2.45	51.6	105.0	204.0	0.057	38.7	79.0
130	105.6	43.6	-0.16	2.46	54.8	114.6	217.1	0.055	40.7	86.7
140	112.7	46.0	-0.19	2.48	57.8	124.0	230.0	0.053	42.7	94.5
150	119.7	48.2	-0.21	2.49	60.8	132.9	242.6	0.051	44.6	102.5
160	126.7	50.5	-0.23	2.51	63.7	141.0	254.9	0.050	46.5	110.7
170	133.6	52.7	-0.25	2.52	66.6	148.7	267.0	0.048	48.3	119.0
180	140.5	54.8	-0.27	2.54	69.4	156.2	278.8	0.047	50.0	127.4
190	147.3	56.9	-0.29	2.55	72.1	163.6	290.5	0.046	51.5	135.9
200	154.1	59.0	-0.31	2.57	74.8	171.2	301.9	0.044	53.0	144.6
210	160.9	61.0	-0.33	2.58	77.5	179.1	313.2	0.043	54.2	153.3
220	167.6	63.0	-0.35	2.60	80.1	187.3	324.3	0.042	55.4	162.1
230	174.3	64.9	-0.37	2.61	82.7	195.6	335.2	0.041	56.4	171.0
240	181.0	66.8	-0.38	2.63	85.2	204.1	345.9	0.040	57.4	179.9
250	187.6	68.7	-0.40	2.64	87.7	212.6	356.5	0.039	58.4	188.8
260	194.2	70.6	-0.41	2.66	90.2	221.1	367.0	0.039	59.3	197.8
270	200.8	72.4	-0.43	2.67	92.6	229.6	377.3	0.038	60.1	206.9
280	207.4	74.2	-0.44	2.68	95.0	237.9	387.5	0.037	61.0	215.9
290	213.9	76.0	-0.46	2.70	97.4	246.2	397.6	0.036	61.9	224.9
300	220.4	77.8	-0.47	2.71	99.7	254.2	407.6	0.036	62.8	234.0
310	226.9	79.5	-0.49	2.72	102.0	262.0	417.4	0.035	63.7	243.1
320	233.3	81.3	-0.50	2.73	104.3	269.6	427.1	0.034	64.6	252.1
330	239.8	83.0	-0.51	2.75	106.6	277.0	436.7	0.034	65.5	261.2
340	246.2	84.6	-0.52	2.76	108.8	284.3	446.2	0.033	66.4	270.3
350	252.6	86.3	-0.54	2.77	111.0	291.4	455.6	0.033	67.4	279.4
360	259.0	87.9	-0.55	2.78	113.2	298.5	464.9	0.032	68.3	288.5
370	265.3	89.6	-0.56	2.80	115.4	305.4	474.1	0.032	69.2	297.6
380	271.7	91.2	-0.57	2.81	117.6	312.2	483.3	0.031	70.2	306.8
390	278.0	92.8	-0.58	2.82	119.7	319.0	492.3	0.031	71.1	316.0
400	284.3	94.4	-0.59	2.83	121.8	325.8	501.2	0.030	72.0	325.2

Mg in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	9.2	5.2	0.58	3.08	5.8	11.5	19.7	0.131	7.5	2.1
15	12.7	7.2	0.56	2.97	8.0	15.5	27.7	0.122	11.0	3.4
20	16.2	9.0	0.53	2.90	10.1	19.3	35.5	0.116	14.4	4.9
25	19.5	10.8	0.51	2.85	12.1	23.0	43.0	0.111	17.7	6.4
30	22.8	12.6	0.48	2.81	14.1	26.6	50.4	0.107	20.9	8.0
35	26.1	14.2	0.46	2.77	16.0	30.3	57.7	0.104	24.1	9.7
40	29.3	15.9	0.44	2.74	17.9	33.9	64.9	0.101	27.1	11.5
45	32.5	17.5	0.42	2.72	19.7	37.6	72.0	0.098	30.1	13.4
50	35.7	19.0	0.40	2.70	21.6	41.3	79.1	0.096	32.9	15.4
55	38.9	20.5	0.39	2.68	23.4	44.9	86.1	0.093	35.7	17.4
60	42.0	22.1	0.37	2.66	25.2	48.5	93.0	0.091	38.4	19.6
65	45.2	23.5	0.35	2.65	26.9	52.1	100.0	0.090	41.0	21.9
70	48.3	25.0	0.34	2.63	28.7	55.6	106.8	0.088	43.7	24.1
75	51.5	26.4	0.32	2.62	30.4	59.0	113.7	0.086	46.4	26.4
80	54.6	27.9	0.31	2.61	32.1	62.4	120.5	0.085	49.1	28.7
85	57.7	29.3	0.29	2.60	33.9	65.7	127.2	0.083	51.8	30.9
90	60.9	30.7	0.28	2.59	35.6	68.9	134.0	0.082	54.4	33.2
95	64.0	32.1	0.27	2.58	37.2	72.1	140.7	0.081	57.1	35.6
100	67.1	33.5	0.26	2.57	38.9	75.3	147.4	0.079	59.6	38.0
110	73.4	36.2	0.23	2.55	42.3	81.7	160.8	0.077	64.4	43.0
120	79.7	38.8	0.21	2.54	45.6	88.0	174.1	0.075	69.0	48.2
130	85.9	41.5	0.19	2.53	48.8	94.3	187.3	0.073	73.3	53.7
140	92.2	44.1	0.17	2.51	52.1	100.4	200.5	0.071	77.4	59.3
150	98.5	46.6	0.15	2.50	55.3	106.4	213.7	0.069	81.5	65.1
160	104.7	49.1	0.13	2.49	58.5	112.2	226.8	0.068	85.4	71.1
170	111.0	51.7	0.11	2.48	61.7	117.9	239.8	0.066	89.3	77.1
180	117.3	54.1	0.10	2.48	64.9	123.8	252.8	0.065	93.1	83.3
190	123.6	56.6	0.08	2.47	68.0	129.7	265.8	0.064	96.8	89.6
200	129.9	59.0	0.06	2.46	71.1	135.7	278.8	0.062	100.4	95.9
210	136.3	61.4	0.05	2.45	74.3	142.1	291.8	0.061	103.9	102.3
220	142.6	63.8	0.03	2.45	77.4	148.5	304.7	0.060	107.3	108.8
230	148.9	66.2	0.02	2.44	80.5	155.2	317.6	0.059	110.6	115.3
240	155.3	68.6	0.01	2.44	83.5	161.9	330.5	0.058	113.9	121.9
250	161.7	70.9	-0.01	2.43	86.6	168.8	343.3	0.057	117.1	128.6
260	168.1	73.2	-0.02	2.43	89.7	175.6	356.2	0.056	120.2	135.3
270	174.5	75.5	-0.03	2.42	92.7	182.5	369.0	0.055	123.2	142.2
280	180.9	77.8	-0.04	2.42	95.8	189.4	381.8	0.054	126.2	149.0
290	187.3	80.1	-0.06	2.41	98.8	196.2	394.6	0.053	129.1	156.0
300	193.7	82.4	-0.07	2.41	101.8	203.0	407.4	0.052	132.0	163.0
310	200.2	84.6	-0.08	2.40	104.8	209.7	420.2	0.051	134.8	170.1
320	206.6	86.9	-0.09	2.40	107.8	216.3	433.0	0.050	137.6	177.3
330	213.1	89.1	-0.10	2.40	110.8	222.9	445.7	0.049	140.3	184.6
340	219.6	91.3	-0.11	2.39	113.8	229.4	458.5	0.049	142.9	191.9
350	226.0	93.6	-0.12	2.39	116.8	235.8	471.2	0.048	145.6	199.3
360	232.5	95.8	-0.13	2.39	119.8	242.2	484.0	0.047	148.2	206.8
370	239.1	97.9	-0.14	2.38	122.8	248.6	496.7	0.046	150.7	214.3
380	245.6	100.1	-0.15	2.38	125.7	255.0	509.4	0.046	153.2	221.9
390	252.1	102.3	-0.16	2.38	128.7	261.3	522.1	0.045	155.7	229.5
400	258.7	104.5	-0.17	2.37	131.6	267.6	534.8	0.044	158.2	237.2

Si in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	8.0	4.4	0.59	3.17	5.0	9.9	17.5	0.129	7.5	2.1
15	10.9	6.1	0.54	3.01	6.8	13.2	24.2	0.120	11.1	3.4
20	13.7	7.6	0.51	2.90	8.6	16.2	30.6	0.113	14.6	4.8
25	16.5	9.1	0.48	2.83	10.2	19.1	36.7	0.108	18.0	6.3
30	19.2	10.5	0.45	2.77	11.8	22.0	42.8	0.104	21.2	7.8
35	21.8	11.9	0.43	2.72	13.4	24.9	48.7	0.100	24.4	9.5
40	24.4	13.2	0.41	2.69	14.9	27.7	54.5	0.097	27.5	11.2
45	27.0	14.5	0.39	2.66	16.4	30.6	60.3	0.094	30.6	13.0
50	29.6	15.8	0.37	2.63	17.8	33.4	66.0	0.092	33.7	14.8
55	32.2	17.0	0.35	2.61	19.3	36.2	71.7	0.089	36.7	16.7
60	34.8	18.2	0.33	2.59	20.7	39.1	77.3	0.087	39.6	18.7
65	37.3	19.4	0.32	2.57	22.1	42.1	82.9	0.085	42.5	20.7
70	39.9	20.6	0.30	2.56	23.5	45.0	88.5	0.083	45.4	22.8
75	42.4	21.8	0.29	2.55	24.9	48.1	94.0	0.081	48.1	25.0
80	45.0	23.0	0.28	2.54	26.3	51.2	99.5	0.080	50.8	27.2
85	47.5	24.1	0.26	2.52	27.6	54.3	105.0	0.078	53.4	29.5
90	50.1	25.3	0.25	2.52	29.0	57.3	110.4	0.077	56.0	31.9
95	52.6	26.4	0.24	2.51	30.3	60.2	115.9	0.075	58.5	34.3
100	55.1	27.5	0.23	2.50	31.7	62.9	121.3	0.074	61.0	36.7
110	60.2	29.7	0.21	2.49	34.3	67.8	132.1	0.071	66.0	41.7
120	65.3	31.8	0.19	2.47	36.9	72.2	142.8	0.069	71.0	46.7
130	70.4	34.0	0.17	2.46	39.5	76.4	153.6	0.067	75.8	51.9
140	75.5	36.1	0.15	2.46	42.1	80.7	164.2	0.065	80.5	57.2
150	80.6	38.1	0.14	2.45	44.6	85.3	174.9	0.063	84.9	62.6
160	85.7	40.2	0.12	2.44	47.1	90.3	185.5	0.061	89.2	68.1
170	90.8	42.2	0.11	2.44	49.6	95.7	196.1	0.060	93.3	73.8
180	96.0	44.2	0.09	2.43	52.1	101.1	206.6	0.058	97.2	79.6
190	101.1	46.2	0.08	2.43	54.6	106.6	217.2	0.057	101.2	85.5
200	106.3	48.2	0.07	2.43	57.1	112.0	227.7	0.055	105.1	91.5
210	111.5	50.1	0.05	2.42	59.5	117.3	238.3	0.054	109.0	97.5
220	116.6	52.0	0.04	2.42	62.0	122.4	248.8	0.053	113.0	103.6
230	121.8	54.0	0.03	2.42	64.4	127.3	259.3	0.051	116.9	109.7
240	127.0	55.9	0.02	2.42	66.8	132.3	269.8	0.050	120.7	115.9
250	132.3	57.7	0.01	2.41	69.2	137.2	280.2	0.049	124.5	122.2
260	137.5	59.6	0.00	2.41	71.6	142.1	290.7	0.048	128.2	128.6
270	142.7	61.5	-0.01	2.41	74.0	147.1	301.2	0.047	131.8	135.1
280	148.0	63.3	-0.02	2.41	76.4	152.1	311.7	0.046	135.3	141.6
290	153.3	65.2	-0.03	2.41	78.8	157.3	322.1	0.045	138.7	148.2
300	158.5	67.0	-0.04	2.41	81.1	162.5	332.6	0.044	142.0	154.9
310	163.8	68.8	-0.05	2.41	83.5	167.9	343.0	0.043	145.1	161.7
320	169.2	70.6	-0.06	2.41	85.8	173.5	353.5	0.042	148.1	168.6
330	174.5	72.4	-0.07	2.41	88.2	179.1	363.9	0.041	151.0	175.6
340	179.8	74.2	-0.08	2.41	90.5	184.9	374.4	0.040	153.8	182.6
350	185.2	76.0	-0.09	2.41	92.9	190.8	384.8	0.039	156.6	189.8
360	190.5	77.8	-0.09	2.41	95.2	196.7	395.3	0.039	159.2	197.0
370	195.9	79.5	-0.10	2.41	97.5	202.7	405.7	0.038	161.8	204.3
380	201.3	81.3	-0.11	2.41	99.8	208.7	416.2	0.037	164.4	211.6
390	206.7	83.0	-0.12	2.41	102.2	214.8	426.6	0.036	166.9	219.0
400	212.1	84.8	-0.13	2.41	104.5	220.9	437.1	0.036	169.4	226.5

Ar in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	6.5	3.5	0.50	2.90	3.9	7.8	13.9	0.083	7.7	2.0
15	8.7	4.7	0.48	2.85	5.1	10.5	19.1	0.080	11.5	3.2
20	10.8	5.8	0.46	2.82	6.3	12.9	24.0	0.078	15.2	4.4
25	12.9	6.9	0.44	2.79	7.3	15.1	28.7	0.076	18.8	5.7
30	14.9	7.9	0.43	2.77	8.4	17.2	33.4	0.073	22.3	7.2
35	16.8	8.8	0.41	2.75	9.4	19.3	37.9	0.072	25.7	8.6
40	18.7	9.8	0.39	2.74	10.4	21.4	42.4	0.070	29.1	10.2
45	20.6	10.7	0.38	2.72	11.4	23.5	46.8	0.068	32.4	11.8
50	22.5	11.6	0.36	2.71	12.3	25.7	51.1	0.067	35.7	13.5
55	24.4	12.5	0.35	2.70	13.3	28.0	55.4	0.066	38.9	15.2
60	26.3	13.4	0.33	2.69	14.2	30.2	59.7	0.064	42.0	17.0
65	28.1	14.2	0.32	2.68	15.1	32.4	64.0	0.063	45.2	18.7
70	30.0	15.1	0.31	2.67	16.0	34.3	68.2	0.062	48.3	20.5
75	31.8	15.9	0.29	2.66	16.9	36.0	72.4	0.061	51.4	22.3
80	33.7	16.7	0.28	2.65	17.8	37.5	76.6	0.060	54.6	24.2
85	35.5	17.6	0.27	2.64	18.7	38.9	80.7	0.059	57.7	26.0
90	37.4	18.4	0.26	2.63	19.6	40.3	84.9	0.058	60.7	27.9
95	39.2	19.2	0.25	2.63	20.4	41.7	89.0	0.057	63.7	29.8
100	41.0	20.0	0.24	2.62	21.3	43.3	93.1	0.057	66.6	31.8
110	44.7	21.5	0.22	2.61	23.0	47.0	101.3	0.055	72.2	36.1
120	48.3	23.1	0.20	2.59	24.7	51.1	109.4	0.053	77.4	40.7
130	52.0	24.6	0.18	2.58	26.4	55.5	117.5	0.052	82.6	45.4
140	55.6	26.2	0.17	2.57	28.1	59.7	125.6	0.051	87.6	50.3
150	59.3	27.7	0.15	2.56	29.7	63.7	133.7	0.049	92.7	55.2
160	62.9	29.2	0.13	2.55	31.4	67.2	141.7	0.048	97.8	60.2
170	66.6	30.6	0.12	2.54	33.0	70.4	149.7	0.047	102.9	65.2
180	70.2	32.1	0.10	2.54	34.7	73.4	157.7	0.046	108.0	70.2
190	73.9	33.6	0.09	2.53	36.3	76.3	165.6	0.045	113.0	75.2
200	77.6	35.0	0.08	2.52	37.9	79.4	173.6	0.044	118.0	80.3
210	81.3	36.4	0.07	2.51	39.5	82.6	181.5	0.043	122.8	85.5
220	84.9	37.9	0.05	2.51	41.1	85.9	189.5	0.042	127.5	90.7
230	88.6	39.3	0.04	2.50	42.7	89.3	197.4	0.041	132.1	96.0
240	92.3	40.7	0.03	2.50	44.3	92.9	205.3	0.040	136.6	101.4
250	96.0	42.1	0.02	2.49	45.9	96.5	213.2	0.039	141.0	106.8
260	99.7	43.5	0.01	2.48	47.5	100.3	221.1	0.039	145.3	112.3
270	103.5	44.9	0.00	2.48	49.1	104.1	229.0	0.038	149.5	117.9
280	107.2	46.2	-0.01	2.47	50.7	108.0	236.9	0.037	153.7	123.6
290	110.9	47.6	-0.02	2.47	52.3	111.9	244.7	0.036	157.8	129.4
300	114.7	49.0	-0.03	2.46	53.9	115.9	252.6	0.035	161.8	135.2
310	118.4	50.3	-0.04	2.46	55.4	120.0	260.5	0.035	165.8	141.2
320	122.2	51.7	-0.05	2.45	57.0	124.1	268.4	0.034	169.7	147.2
330	125.9	53.1	-0.06	2.45	58.6	128.2	276.2	0.033	173.5	153.3
340	129.7	54.4	-0.07	2.44	60.1	132.3	284.1	0.033	177.3	159.4
350	133.5	55.7	-0.08	2.44	61.7	136.5	292.0	0.032	181.1	165.6
360	137.3	57.1	-0.09	2.43	63.3	140.7	299.8	0.031	184.8	171.9
370	141.1	58.4	-0.10	2.43	64.8	144.9	307.7	0.031	188.5	178.3
380	144.9	59.8	-0.11	2.43	66.4	149.2	315.5	0.030	192.2	184.7
390	148.7	61.1	-0.11	2.42	68.0	153.4	323.4	0.030	195.8	191.2
400	152.5	62.4	-0.12	2.42	69.5	157.7	331.3	0.029	199.5	197.7

Cr in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	5.9	3.2	0.58	3.04	3.3	7.1	12.4	0.094	8.8	1.0
15	7.7	4.2	0.57	3.04	4.3	9.6	16.5	0.086	13.1	1.6
20	9.4	5.2	0.57	3.04	5.3	11.8	20.4	0.080	17.4	2.2
25	11.0	6.0	0.55	3.02	6.2	13.6	24.2	0.076	21.6	2.9
30	12.7	6.9	0.54	3.01	7.0	15.2	27.8	0.073	25.8	3.7
35	14.2	7.8	0.53	3.00	7.9	16.8	31.5	0.070	30.0	4.5
40	15.8	8.6	0.52	2.98	8.7	18.3	35.0	0.068	34.1	5.3
45	17.3	9.4	0.51	2.97	9.5	20.0	38.6	0.066	38.2	6.2
50	18.9	10.2	0.50	2.96	10.3	21.9	42.1	0.064	42.2	7.2
55	20.4	10.9	0.49	2.95	11.1	23.9	45.6	0.062	46.2	8.1
60	21.9	11.7	0.48	2.93	11.9	26.0	49.0	0.061	50.2	9.1
65	23.4	12.5	0.47	2.92	12.7	28.1	52.5	0.059	54.1	10.2
70	24.9	13.2	0.46	2.91	13.5	30.0	55.9	0.058	58.0	11.2
75	26.4	14.0	0.45	2.90	14.2	31.8	59.4	0.057	61.9	12.3
80	27.9	14.7	0.44	2.89	15.0	33.3	62.8	0.056	65.8	13.3
85	29.4	15.4	0.43	2.88	15.7	34.7	66.2	0.055	69.6	14.4
90	30.9	16.1	0.42	2.87	16.5	36.0	69.6	0.054	73.5	15.5
95	32.4	16.9	0.42	2.86	17.2	37.2	73.0	0.053	77.3	16.6
100	33.9	17.6	0.41	2.85	18.0	38.5	76.5	0.052	81.0	17.8
110	36.9	19.0	0.39	2.83	19.5	41.1	83.3	0.051	88.5	20.3
120	39.9	20.4	0.38	2.81	20.9	43.9	90.1	0.050	95.7	23.0
130	42.9	21.8	0.36	2.79	22.4	46.9	96.9	0.048	102.9	25.8
140	45.9	23.2	0.35	2.77	23.9	50.0	103.7	0.047	109.9	28.8
150	48.9	24.6	0.34	2.76	25.3	53.4	110.5	0.046	116.8	31.8
160	51.9	25.9	0.33	2.74	26.8	56.9	117.4	0.045	123.6	34.9
170	54.9	27.3	0.32	2.73	28.2	60.6	124.2	0.044	130.4	38.1
180	57.9	28.6	0.30	2.71	29.7	64.2	131.1	0.044	137.0	41.3
190	61.0	30.0	0.29	2.70	31.1	67.9	138.0	0.043	143.7	44.5
200	64.0	31.3	0.28	2.69	32.5	71.5	144.8	0.042	150.2	47.9
210	67.1	32.7	0.27	2.67	34.0	75.1	151.7	0.041	156.8	51.3
220	70.1	34.0	0.26	2.66	35.4	78.5	158.7	0.041	163.2	54.8
230	73.2	35.3	0.25	2.65	36.8	81.8	165.6	0.040	169.7	58.3
240	76.3	36.6	0.24	2.64	38.3	85.0	172.6	0.039	176.0	62.0
250	79.4	38.0	0.24	2.62	39.7	88.1	179.5	0.039	182.4	65.7
260	82.5	39.3	0.23	2.61	41.1	91.2	186.5	0.038	188.6	69.4
270	85.6	40.6	0.22	2.60	42.5	94.2	193.5	0.038	194.8	73.3
280	88.7	41.9	0.21	2.59	44.0	97.2	200.5	0.037	200.9	77.1
290	91.8	43.2	0.20	2.58	45.4	100.1	207.6	0.037	206.9	81.1
300	95.0	44.5	0.19	2.57	46.8	103.0	214.6	0.036	212.9	85.0
310	98.1	45.8	0.19	2.56	48.2	105.8	221.7	0.036	218.8	89.1
320	101.3	47.1	0.18	2.55	49.7	108.6	228.8	0.036	224.6	93.1
330	104.5	48.4	0.17	2.54	51.1	111.4	235.9	0.035	230.4	97.2
340	107.7	49.7	0.17	2.53	52.5	114.2	243.1	0.035	236.1	101.4
350	110.8	51.0	0.16	2.52	53.9	116.9	250.2	0.034	241.8	105.6
360	114.1	52.3	0.15	2.51	55.4	119.6	257.4	0.034	247.4	109.8
370	117.3	53.6	0.14	2.50	56.8	122.3	264.6	0.034	253.0	114.1
380	120.5	54.9	0.14	2.50	58.2	125.0	271.8	0.033	258.5	118.4
390	123.7	56.2	0.13	2.49	59.7	127.7	279.0	0.033	264.1	122.8
400	127.0	57.5	0.12	2.48	61.1	130.3	286.2	0.033	269.5	127.2

Se in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	4.9	2.6	0.55	2.98	2.5	5.9	10.3	0.063	9.2	0.7
15	6.3	3.3	0.56	3.06	3.3	7.6	13.5	0.057	13.8	1.1
20	7.7	4.0	0.56	3.09	3.9	9.2	16.6	0.054	18.3	1.5
25	8.9	4.7	0.56	3.11	4.5	10.6	19.6	0.051	22.9	1.9
30	10.1	5.3	0.55	3.11	5.1	12.1	22.4	0.049	27.4	2.4
35	11.3	5.9	0.55	3.12	5.7	13.5	25.2	0.047	31.9	2.9
40	12.5	6.5	0.54	3.11	6.3	14.9	27.9	0.045	36.3	3.4
45	13.6	7.1	0.53	3.11	6.8	16.2	30.6	0.043	40.7	4.0
50	14.8	7.6	0.52	3.10	7.4	17.6	33.3	0.042	45.1	4.6
55	15.9	8.2	0.52	3.10	7.9	18.9	35.9	0.041	49.5	5.2
60	17.0	8.7	0.51	3.09	8.4	20.2	38.5	0.040	53.9	5.8
65	18.1	9.3	0.50	3.08	8.9	21.4	41.0	0.039	58.2	6.4
70	19.2	9.8	0.49	3.07	9.4	22.7	43.6	0.038	62.5	7.1
75	20.3	10.4	0.49	3.06	9.9	23.9	46.1	0.037	66.8	7.8
80	21.4	10.9	0.48	3.05	10.4	25.0	48.6	0.036	71.2	8.5
85	22.4	11.4	0.47	3.04	10.9	26.1	51.1	0.035	75.5	9.1
90	23.5	11.9	0.47	3.03	11.4	27.2	53.6	0.035	79.7	9.9
95	24.6	12.4	0.46	3.02	11.9	28.3	56.1	0.034	84.0	10.6
100	25.6	12.9	0.45	3.01	12.4	29.3	58.6	0.033	88.3	11.3
110	27.7	13.9	0.44	3.00	13.4	31.4	63.5	0.032	96.8	12.7
120	29.8	14.9	0.43	2.98	14.3	33.4	68.4	0.031	105.2	14.2
130	31.9	15.9	0.42	2.96	15.3	35.5	73.3	0.030	113.6	15.8
140	34.0	16.9	0.41	2.94	16.2	37.6	78.1	0.029	121.9	17.4
150	36.1	17.9	0.39	2.92	17.2	39.8	83.0	0.028	130.2	19.1
160	38.2	18.9	0.38	2.91	18.1	42.0	87.8	0.028	138.3	20.9
170	40.3	19.8	0.37	2.89	19.0	44.3	92.6	0.027	146.5	22.7
180	42.4	20.8	0.36	2.87	20.0	46.6	97.4	0.026	154.5	24.7
190	44.4	21.7	0.35	2.86	20.9	48.9	102.2	0.025	162.5	26.7
200	46.5	22.7	0.34	2.84	21.8	51.3	106.9	0.025	170.5	28.7
210	48.6	23.6	0.34	2.83	22.7	53.7	111.7	0.024	178.3	30.8
220	50.7	24.6	0.33	2.81	23.6	56.1	116.5	0.024	186.2	33.0
230	52.7	25.5	0.32	2.80	24.5	58.4	121.3	0.023	194.0	35.2
240	54.8	26.4	0.31	2.78	25.5	60.8	126.0	0.023	201.7	37.4
250	56.9	27.4	0.30	2.77	26.4	63.2	130.8	0.022	209.4	39.7
260	59.0	28.3	0.29	2.75	27.3	65.5	135.6	0.022	217.1	42.0
270	61.1	29.2	0.29	2.74	28.2	67.8	140.3	0.021	224.8	44.3
280	63.2	30.1	0.28	2.73	29.1	70.1	145.1	0.021	232.4	46.7
290	65.2	31.1	0.27	2.71	30.0	72.3	149.8	0.020	240.0	49.1
300	67.3	32.0	0.26	2.70	30.9	74.5	154.6	0.020	247.6	51.5
310	69.4	32.9	0.26	2.69	31.8	76.6	159.4	0.020	255.2	53.9
320	71.5	33.8	0.25	2.68	32.7	78.7	164.1	0.019	262.8	56.3
330	73.6	34.7	0.24	2.66	33.6	80.8	168.9	0.019	270.3	58.7
340	75.7	35.6	0.24	2.65	34.5	82.8	173.7	0.018	277.9	61.2
350	77.8	36.6	0.23	2.64	35.4	84.8	178.4	0.018	285.4	63.7
360	79.9	37.5	0.22	2.63	36.3	86.7	183.2	0.018	292.9	66.1
370	82.0	38.4	0.22	2.62	37.1	88.7	188.0	0.017	300.4	68.7
380	84.1	39.3	0.21	2.61	38.0	90.6	192.7	0.017	307.8	71.2
390	86.2	40.2	0.21	2.59	38.9	92.5	197.5	0.017	315.3	73.7
400	88.4	41.1	0.20	2.58	39.8	94.4	202.3	0.016	322.7	76.3

Sn in WSix=1.4 Density= 11.90

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	4.3	2.2	0.45	2.98	2.1	4.9	9.7	0.037	9.4	0.5
15	5.4	2.7	0.47	3.00	2.5	6.2	12.2	0.034	14.2	0.8
20	6.4	3.3	0.48	3.01	3.0	7.4	14.4	0.031	18.9	1.1
25	7.4	3.8	0.49	3.02	3.4	8.6	16.5	0.029	23.5	1.4
30	8.3	4.2	0.49	3.02	3.8	9.8	18.5	0.028	28.2	1.7
35	9.2	4.7	0.49	3.02	4.2	10.9	20.5	0.026	32.9	2.0
40	10.1	5.1	0.49	3.02	4.5	12.0	22.4	0.025	37.5	2.4
45	10.9	5.5	0.49	3.01	4.9	13.0	24.3	0.024	42.2	2.7
50	11.7	5.9	0.48	3.01	5.2	13.9	26.1	0.023	46.8	3.1
55	12.5	6.3	0.48	3.01	5.6	14.8	27.9	0.023	51.4	3.5
60	13.3	6.7	0.48	3.00	5.9	15.6	29.7	0.022	56.0	3.9
65	14.1	7.1	0.48	3.00	6.2	16.4	31.5	0.021	60.6	4.3
70	14.9	7.5	0.47	3.00	6.5	17.1	33.3	0.021	65.2	4.7
75	15.7	7.9	0.47	2.99	6.9	17.9	35.0	0.020	69.7	5.2
80	16.5	8.2	0.47	2.99	7.2	18.7	36.7	0.020	74.3	5.6
85	17.2	8.6	0.46	2.98	7.5	19.6	38.5	0.019	78.9	6.0
90	18.0	9.0	0.46	2.98	7.8	20.4	40.2	0.019	83.4	6.4
95	18.7	9.3	0.46	2.98	8.1	21.3	41.9	0.018	88.0	6.9
100	19.5	9.7	0.45	2.97	8.4	22.1	43.6	0.018	92.5	7.3
110	20.9	10.4	0.45	2.97	9.0	23.9	46.9	0.017	101.6	8.2
120	22.4	11.1	0.44	2.96	9.6	25.6	50.3	0.017	110.6	9.2
130	23.9	11.8	0.43	2.95	10.2	27.3	53.6	0.016	119.6	10.2
140	25.3	12.4	0.43	2.94	10.8	28.9	56.9	0.015	128.5	11.3
150	26.7	13.1	0.42	2.94	11.3	30.4	60.2	0.015	137.5	12.3
160	28.1	13.8	0.42	2.93	11.9	31.8	63.5	0.014	146.4	13.4
170	29.6	14.4	0.41	2.92	12.5	33.2	66.8	0.014	155.3	14.5
180	31.0	15.1	0.40	2.92	13.0	34.5	70.1	0.014	164.2	15.6
190	32.4	15.7	0.40	2.91	13.6	35.8	73.3	0.013	173.0	16.8
200	33.8	16.3	0.39	2.91	14.2	37.1	76.6	0.013	181.8	18.0
210	35.2	17.0	0.39	2.90	14.7	38.5	79.9	0.013	190.6	19.2
220	36.6	17.6	0.38	2.90	15.3	39.8	83.1	0.012	199.4	20.4
230	38.0	18.2	0.38	2.89	15.8	41.3	86.4	0.012	208.1	21.7
240	39.3	18.9	0.37	2.88	16.4	42.7	89.7	0.012	216.9	22.9
250	40.7	19.5	0.37	2.88	16.9	44.2	92.9	0.011	225.5	24.3
260	42.1	20.1	0.36	2.87	17.5	45.7	96.2	0.011	234.2	25.6
270	43.5	20.7	0.36	2.87	18.0	47.2	99.4	0.011	242.8	27.0
280	44.9	21.3	0.35	2.86	18.5	48.7	102.7	0.011	251.4	28.4
290	46.2	21.9	0.35	2.86	19.1	50.3	105.9	0.010	260.0	29.8
300	47.6	22.6	0.35	2.85	19.6	51.9	109.2	0.010	268.6	31.2
310	49.0	23.2	0.34	2.85	20.2	53.5	112.5	0.010	277.1	32.7
320	50.4	23.8	0.34	2.84	20.7	55.1	115.7	0.010	285.6	34.2
330	51.7	24.4	0.33	2.84	21.2	56.8	119.0	0.009	294.0	35.7
340	53.1	25.0	0.33	2.84	21.8	58.5	122.3	0.009	302.5	37.3
350	54.5	25.6	0.33	2.83	22.3	60.2	125.6	0.009	310.9	38.8
360	55.9	26.2	0.32	2.83	22.8	61.9	128.8	0.009	319.3	40.4
370	57.2	26.8	0.32	2.82	23.4	63.6	132.1	0.009	327.7	42.0
380	58.6	27.4	0.31	2.82	23.9	65.3	135.4	0.009	336.1	43.7
390	60.0	27.9	0.31	2.81	24.4	67.0	138.7	0.008	344.4	45.3
400	61.3	28.5	0.31	2.81	25.0	68.8	142.0	0.008	352.8	47.0

H in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	52.7	26.7	0.24	2.29	37.6	59.4	106.0	0.202	0.3	8.9
15	72.1	34.1	0.07	2.28	46.4	82.3	145.5	0.155	0.3	13.8
20	90.6	40.8	-0.05	2.31	54.6	103.3	182.6	0.125	0.4	18.7
25	108.6	47.0	-0.14	2.35	62.5	122.6	218.1	0.105	0.4	23.7
30	126.2	52.8	-0.21	2.39	70.1	140.7	252.3	0.089	0.5	28.7
35	143.7	58.3	-0.27	2.44	77.6	158.6	285.6	0.077	0.5	33.8
40	161.0	63.6	-0.32	2.48	84.9	177.1	318.1	0.068	0.6	38.8
45	178.1	68.8	-0.37	2.52	92.1	196.7	350.0	0.060	0.6	43.8
50	195.2	73.7	-0.40	2.57	99.3	218.0	381.3	0.053	0.6	48.7
55	212.1	78.6	-0.44	2.61	106.4	241.0	412.2	0.047	0.6	53.6
60	229.0	83.3	-0.47	2.65	113.4	265.2	442.6	0.042	0.7	58.5
65	245.9	87.9	-0.50	2.69	120.4	290.0	472.6	0.038	0.7	63.4
70	262.7	92.4	-0.52	2.72	127.3	314.8	502.2	0.035	0.7	68.3
75	279.5	96.9	-0.55	2.76	134.3	339.2	531.6	0.031	0.7	73.3
80	296.3	101.2	-0.57	2.79	141.2	362.9	560.7	0.028	0.8	78.3
85	313.0	105.5	-0.59	2.83	148.0	385.5	589.5	0.026	0.8	83.3
90	329.8	109.7	-0.61	2.86	154.9	407.0	618.0	0.024	0.8	88.4
95	346.5	113.9	-0.63	2.89	161.8	427.2	646.4	0.022	0.8	93.5
100	363.2	118.0	-0.64	2.93	168.6	446.2	674.5	0.020	0.8	98.6
110	396.7	126.1	-0.67	2.99	182.3	480.7	730.1	0.017	0.9	108.7
120	430.2	134.0	-0.70	3.05	196.0	512.5	785.1	0.014	0.9	118.7
130	463.7	141.8	-0.72	3.10	209.7	543.9	839.5	0.012	0.9	128.7
140	497.2	149.4	-0.75	3.15	223.4	576.5	893.3	0.011	0.9	138.6
150	530.9	156.8	-0.77	3.20	237.1	611.7	946.5	0.009	1.0	148.6
160	564.5	164.2	-0.79	3.25	250.8	650.3	999.4	0.008	1.0	158.5
170	598.3	171.5	-0.81	3.30	264.6	691.4	1051.7	0.007	1.0	168.4
180	632.1	178.6	-0.82	3.35	278.4	733.9	1103.7	0.007	1.0	178.3
190	666.0	185.7	-0.84	3.39	292.3	776.6	1155.4	0.006	1.0	188.2
200	699.9	192.7	-0.85	3.43	306.1	818.7	1206.6	0.006	1.0	198.2
210	733.9	199.6	-0.87	3.47	320.1	859.6	1257.6	0.005	1.1	208.2
220	768.1	206.4	-0.88	3.51	334.0	899.5	1308.3	0.005	1.1	218.2
230	802.2	213.2	-0.89	3.55	348.1	938.7	1358.7	0.005	1.1	228.2
240	836.5	219.9	-0.91	3.59	362.1	977.5	1408.8	0.005	1.1	238.2
250	870.9	226.6	-0.92	3.63	376.3	1016.4	1458.7	0.005	1.1	248.2
260	905.3	233.2	-0.93	3.66	390.4	1055.5	1508.3	0.005	1.2	258.3
270	939.9	239.7	-0.94	3.70	404.6	1095.2	1557.7	0.005	1.2	268.3
280	974.5	246.2	-0.95	3.73	418.9	1135.7	1606.9	0.005	1.2	278.3
290	1009.2	252.6	-0.96	3.76	433.2	1177.1	1655.9	0.006	1.2	288.4
300	1043.9	259.0	-0.97	3.79	447.6	1219.8	1704.7	0.006	1.2	298.4
310	1078.8	265.4	-0.97	3.83	462.0	1263.8	1753.3	0.006	1.2	308.4
320	1113.8	271.7	-0.98	3.86	476.5	1309.0	1801.7	0.007	1.3	318.3
330	1148.8	278.0	-0.99	3.89	491.0	1355.4	1849.9	0.007	1.3	328.3
340	1183.9	284.2	-1.00	3.92	505.6	1402.8	1898.0	0.007	1.3	338.3
350	1219.1	290.4	-1.01	3.95	520.2	1451.2	1946.0	0.008	1.3	348.2
360	1254.4	296.5	-1.01	3.97	534.9	1500.2	1993.7	0.008	1.3	358.1
370	1289.8	302.7	-1.02	4.00	549.7	1550.0	2041.4	0.009	1.3	368.1
380	1325.2	308.8	-1.03	4.03	564.5	1600.3	2088.8	0.009	1.3	378.0
390	1360.8	314.8	-1.03	4.06	579.3	1651.0	2136.2	0.010	1.3	387.9
400	1396.4	320.8	-1.04	4.08	594.2	1702.2	2183.4	0.010	1.3	397.9

He in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	44.8	23.2	0.58	2.94	36.1	56.1	88.6	0.400	2.0	5.9
15	59.0	30.5	0.49	2.69	45.4	72.3	119.3	0.329	2.7	9.8
20	72.0	36.8	0.42	2.55	53.4	85.9	147.5	0.283	3.2	14.0
25	84.2	42.4	0.36	2.47	60.6	97.4	174.0	0.249	3.7	18.5
30	95.9	47.6	0.31	2.41	67.2	107.4	199.3	0.224	4.1	23.0
35	107.1	52.4	0.26	2.38	73.3	116.8	223.6	0.203	4.4	27.7
40	117.9	56.9	0.22	2.35	79.1	126.0	247.1	0.186	4.7	32.4
45	128.5	61.1	0.19	2.34	84.6	135.4	269.9	0.171	5.0	37.2
50	138.8	65.1	0.15	2.33	89.8	145.3	292.1	0.159	5.3	41.9
55	148.9	68.9	0.12	2.32	94.8	155.6	313.8	0.148	5.5	46.7
60	158.8	72.5	0.09	2.32	99.6	166.1	335.1	0.138	5.7	51.5
65	168.5	76.0	0.07	2.32	104.2	176.3	356.0	0.130	5.9	56.4
70	178.1	79.3	0.04	2.33	108.6	185.9	376.5	0.122	6.1	61.2
75	187.5	82.5	0.02	2.33	113.0	194.6	396.6	0.115	6.3	66.1
80	196.8	85.7	0.00	2.34	117.2	202.5	416.5	0.109	6.5	70.9
85	206.0	88.7	-0.03	2.35	121.3	210.0	436.1	0.103	6.7	75.8
90	215.1	91.6	-0.05	2.36	125.3	217.4	455.4	0.098	6.8	80.7
95	224.1	94.4	-0.07	2.36	129.2	225.3	474.5	0.093	6.9	85.6
100	233.1	97.2	-0.08	2.37	133.0	233.9	493.4	0.089	7.1	90.6
110	250.6	102.5	-0.12	2.40	140.4	253.6	530.5	0.081	7.3	100.5
120	267.9	107.6	-0.15	2.42	147.5	275.9	566.9	0.074	7.5	110.4
130	285.0	112.4	-0.18	2.44	154.3	299.9	602.6	0.067	7.7	120.4
140	301.8	117.0	-0.21	2.47	160.9	324.6	637.8	0.062	7.8	130.3
150	318.4	121.5	-0.24	2.49	167.3	349.3	672.3	0.057	8.0	140.3
160	334.8	125.7	-0.26	2.51	173.6	373.5	706.4	0.053	8.2	150.2
170	351.0	129.9	-0.29	2.54	179.6	396.9	740.1	0.049	8.4	160.2
180	367.0	133.9	-0.31	2.56	185.6	419.2	773.3	0.045	8.6	170.1
190	383.0	137.7	-0.33	2.59	191.3	440.3	806.1	0.042	8.7	180.0
200	398.7	141.5	-0.35	2.61	197.0	460.2	838.5	0.039	8.9	189.9
210	414.4	145.1	-0.37	2.63	202.5	478.8	870.6	0.036	9.0	199.8
220	429.9	148.7	-0.39	2.66	207.9	496.2	902.4	0.034	9.1	209.7
230	445.4	152.1	-0.41	2.68	213.2	512.8	933.8	0.031	9.2	219.6
240	460.7	155.5	-0.43	2.70	218.4	528.7	965.0	0.029	9.3	229.5
250	475.9	158.8	-0.45	2.73	223.5	544.3	995.9	0.027	9.3	239.4
260	491.0	162.0	-0.47	2.75	228.5	559.6	1026.5	0.025	9.4	249.3
270	506.1	165.1	-0.48	2.77	233.5	574.8	1056.9	0.024	9.5	259.2
280	521.0	168.2	-0.50	2.79	238.3	590.1	1087.1	0.022	9.5	269.0
290	535.9	171.2	-0.51	2.82	243.1	605.6	1117.0	0.021	9.6	278.9
300	550.7	174.1	-0.53	2.84	247.9	621.4	1146.7	0.019	9.7	288.8
310	565.4	177.0	-0.54	2.86	252.5	637.5	1176.2	0.018	9.7	298.7
320	580.0	179.8	-0.56	2.88	257.1	654.0	1205.6	0.017	9.8	308.5
330	594.6	182.6	-0.57	2.90	261.6	670.8	1234.7	0.016	9.9	318.4
340	609.2	185.3	-0.58	2.92	266.1	687.8	1263.6	0.015	9.9	328.3
350	623.6	188.0	-0.60	2.94	270.5	704.9	1292.4	0.014	10.0	338.1
360	638.0	190.6	-0.61	2.96	274.8	722.3	1321.0	0.013	10.1	348.0
370	652.4	193.2	-0.62	2.98	279.1	739.7	1349.4	0.012	10.2	357.9
380	666.7	195.7	-0.63	3.00	283.4	757.1	1377.7	0.011	10.2	367.7
390	680.9	198.2	-0.65	3.02	287.6	774.6	1405.8	0.010	10.3	377.6
400	695.1	200.6	-0.66	3.04	291.7	792.0	1433.8	0.009	10.4	387.5

Be in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	22.6	13.0	0.68	3.25	18.1	29.3	47.7	0.364	3.6	4.6
15	31.1	17.6	0.60	2.97	24.5	40.1	65.7	0.320	5.0	7.6
20	39.0	21.8	0.53	2.81	30.2	49.5	82.7	0.289	6.4	10.9
25	46.7	25.7	0.48	2.70	35.5	57.5	98.7	0.267	7.6	14.3
30	54.0	29.3	0.44	2.62	40.4	64.4	114.2	0.249	8.8	17.8
35	61.1	32.7	0.40	2.56	45.1	70.8	129.1	0.234	9.9	21.5
40	68.0	36.0	0.36	2.51	49.6	77.1	143.7	0.221	11.0	25.3
45	74.8	39.1	0.33	2.47	53.8	83.5	157.9	0.210	11.9	29.1
50	81.5	42.1	0.30	2.45	57.9	90.2	171.8	0.200	12.8	33.0
55	88.0	44.9	0.27	2.42	61.9	97.3	185.4	0.192	13.6	37.0
60	94.5	47.7	0.25	2.40	65.7	104.5	198.7	0.184	14.3	41.1
65	100.8	50.4	0.22	2.39	69.5	111.5	211.9	0.177	15.1	45.2
70	107.1	53.0	0.20	2.38	73.1	118.2	224.9	0.170	15.8	49.4
75	113.3	55.6	0.18	2.37	76.6	124.3	237.7	0.164	16.5	53.6
80	119.4	58.1	0.16	2.36	80.1	129.9	250.3	0.159	17.2	58.0
85	125.5	60.5	0.14	2.35	83.5	135.1	262.8	0.154	17.9	62.4
90	131.5	62.8	0.12	2.35	86.8	140.2	275.1	0.149	18.6	66.8
95	137.4	65.2	0.11	2.34	90.0	145.4	287.3	0.144	19.2	71.3
100	143.3	67.4	0.09	2.34	93.2	150.9	299.4	0.140	19.8	75.7
110	155.0	71.8	0.06	2.34	99.4	163.2	323.2	0.132	20.9	84.6
120	166.5	76.1	0.03	2.34	105.3	176.6	346.7	0.125	21.9	93.5
130	177.9	80.2	0.00	2.34	111.1	190.2	369.7	0.119	22.8	102.4
140	189.1	84.2	-0.02	2.35	116.7	203.6	392.4	0.113	23.6	111.4
150	200.2	88.0	-0.05	2.35	122.2	216.3	414.8	0.108	24.3	120.6
160	211.1	91.8	-0.07	2.36	127.5	228.0	437.0	0.103	25.1	129.9
170	222.0	95.4	-0.09	2.36	132.7	239.0	458.8	0.098	25.8	139.3
180	232.8	99.0	-0.11	2.37	137.8	249.6	480.4	0.094	26.5	148.8
190	243.5	102.5	-0.13	2.38	142.7	260.1	501.8	0.090	27.2	158.3
200	254.1	105.9	-0.15	2.39	147.6	270.9	523.0	0.086	27.9	167.8
210	264.6	109.2	-0.17	2.40	152.4	281.9	544.0	0.083	28.6	177.2
220	275.0	112.5	-0.18	2.40	157.0	293.4	564.8	0.079	29.2	186.6
230	285.4	115.6	-0.20	2.41	161.6	305.0	585.5	0.076	29.9	195.9
240	295.7	118.8	-0.22	2.42	166.1	316.9	605.9	0.073	30.5	205.2
250	305.9	121.9	-0.23	2.43	170.6	329.0	626.2	0.070	31.0	214.5
260	316.1	124.9	-0.25	2.44	174.9	341.2	646.4	0.067	31.6	223.8
270	326.2	127.9	-0.26	2.45	179.2	353.5	666.4	0.065	32.1	233.2
280	336.3	130.8	-0.28	2.46	183.5	365.8	686.2	0.062	32.5	242.5
290	346.3	133.7	-0.29	2.47	187.7	378.1	706.0	0.060	33.0	252.0
300	356.3	136.5	-0.30	2.48	191.8	390.4	725.6	0.057	33.3	261.5
310	366.2	139.3	-0.31	2.49	195.8	402.6	745.0	0.055	33.7	271.0
320	376.1	142.0	-0.33	2.50	199.8	414.8	764.4	0.053	34.0	280.6
330	385.9	144.7	-0.34	2.51	203.8	427.0	783.7	0.051	34.3	290.3
340	395.7	147.4	-0.35	2.52	207.7	439.1	802.8	0.049	34.6	300.1
350	405.4	150.0	-0.36	2.53	211.5	451.2	821.9	0.047	34.8	309.8
360	415.1	152.6	-0.37	2.54	215.4	463.3	840.8	0.045	35.0	319.7
370	424.8	155.2	-0.38	2.55	219.1	475.3	859.6	0.043	35.2	329.6
380	434.4	157.8	-0.39	2.56	222.8	487.3	878.4	0.042	35.4	339.5
390	444.0	160.3	-0.41	2.57	226.5	499.3	897.1	0.040	35.6	349.4
400	453.6	162.7	-0.42	2.58	230.2	511.2	915.6	0.038	35.8	359.4

C in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	16.5	8.9	0.76	3.71	12.3	20.4	35.4	0.345	4.3	4.1
15	22.4	12.2	0.66	3.32	16.8	27.7	48.3	0.311	6.2	6.6
20	27.9	15.1	0.59	3.09	21.0	34.3	60.2	0.287	8.0	9.4
25	33.1	17.9	0.54	2.92	24.8	40.3	71.5	0.269	9.6	12.4
30	38.1	20.5	0.49	2.81	28.4	45.8	82.3	0.254	11.2	15.4
35	43.0	22.9	0.45	2.72	31.7	51.1	92.8	0.241	12.7	18.6
40	47.7	25.3	0.42	2.64	35.0	56.3	102.9	0.230	14.1	22.0
45	52.3	27.5	0.39	2.59	38.1	61.5	112.7	0.221	15.4	25.4
50	56.9	29.7	0.36	2.54	41.1	66.9	122.3	0.212	16.6	29.0
55	61.3	31.8	0.34	2.50	44.0	72.4	131.7	0.205	17.8	32.7
60	65.7	33.8	0.31	2.47	46.8	77.8	140.9	0.198	19.0	36.4
65	70.1	35.8	0.29	2.44	49.5	82.9	150.0	0.191	20.1	40.2
70	74.4	37.8	0.27	2.42	52.2	87.5	158.9	0.185	21.2	44.0
75	78.6	39.7	0.25	2.40	54.7	91.6	167.7	0.180	22.3	47.7
80	82.8	41.5	0.24	2.38	57.3	95.1	176.4	0.175	23.3	51.5
85	86.9	43.3	0.22	2.37	59.7	98.2	184.9	0.170	24.3	55.2
90	91.0	45.1	0.20	2.36	62.1	101.1	193.3	0.166	25.3	58.9
95	95.1	46.9	0.19	2.35	64.5	104.0	201.7	0.161	26.2	62.7
100	99.1	48.6	0.18	2.34	66.8	107.1	209.9	0.157	27.1	66.6
110	107.1	51.9	0.15	2.32	71.3	113.7	226.2	0.150	28.9	74.6
120	114.9	55.1	0.13	2.31	75.7	121.0	242.1	0.143	30.5	82.8
130	122.7	58.3	0.10	2.31	79.9	128.4	257.8	0.137	32.0	91.4
140	130.4	61.3	0.08	2.30	84.0	136.0	273.2	0.131	33.4	100.0
150	138.0	64.3	0.06	2.30	87.9	143.4	288.4	0.126	34.7	108.8
160	145.5	67.2	0.05	2.30	91.8	150.5	303.4	0.121	35.9	117.7
170	152.9	70.1	0.03	2.30	95.6	157.5	318.2	0.116	37.1	126.5
180	160.3	72.9	0.01	2.31	99.3	164.4	332.8	0.112	38.2	135.5
190	167.7	75.6	0.00	2.31	102.9	171.4	347.3	0.108	39.3	144.4
200	174.9	78.3	-0.02	2.31	106.4	178.6	361.6	0.104	40.3	153.4
210	182.2	80.9	-0.03	2.32	109.9	185.9	375.8	0.100	41.3	162.4
220	189.4	83.5	-0.04	2.32	113.3	193.4	389.8	0.096	42.3	171.5
230	196.5	86.0	-0.06	2.33	116.6	201.1	403.7	0.093	43.3	180.6
240	203.6	88.5	-0.07	2.34	119.9	208.9	417.4	0.090	44.2	189.7
250	210.7	91.0	-0.08	2.34	123.1	216.9	431.1	0.087	45.1	198.8
260	217.7	93.4	-0.09	2.35	126.3	224.9	444.7	0.084	46.0	208.0
270	224.7	95.8	-0.10	2.36	129.4	233.1	458.1	0.081	46.9	217.1
280	231.6	98.1	-0.11	2.37	132.5	241.3	471.4	0.078	47.7	226.3
290	238.5	100.5	-0.12	2.37	135.5	249.5	484.7	0.075	48.5	235.6
300	245.4	102.8	-0.13	2.38	138.5	257.9	497.8	0.073	49.3	244.8
310	252.3	105.0	-0.14	2.39	141.4	266.2	510.9	0.070	50.0	254.1
320	259.1	107.3	-0.15	2.40	144.3	274.6	523.9	0.068	50.7	263.4
330	265.9	109.5	-0.16	2.41	147.1	283.0	536.8	0.066	51.4	272.8
340	272.7	111.6	-0.17	2.42	150.0	291.5	549.6	0.064	52.1	282.1
350	279.5	113.8	-0.18	2.43	152.7	299.9	562.4	0.061	52.8	291.5
360	286.2	115.9	-0.19	2.43	155.5	308.4	575.1	0.059	53.4	300.9
370	292.9	118.1	-0.19	2.44	158.2	316.9	587.7	0.057	54.0	310.4
380	299.6	120.1	-0.20	2.45	160.9	325.4	600.2	0.055	54.7	319.9
390	306.3	122.2	-0.21	2.46	163.5	333.9	612.7	0.053	55.3	329.4
400	312.9	124.3	-0.22	2.47	166.2	342.4	625.1	0.051	55.9	338.9

O in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	13.2	7.3	0.75	3.68	10.0	16.3	28.9	0.341	5.2	3.3
15	17.8	9.9	0.69	3.38	13.5	22.0	38.7	0.313	7.5	5.3
20	22.1	12.2	0.64	3.20	16.8	27.3	47.8	0.293	9.8	7.5
25	26.2	14.4	0.60	3.06	19.8	32.3	56.5	0.277	11.9	9.9
30	30.2	16.4	0.56	2.96	22.6	37.1	64.9	0.264	14.1	12.4
35	34.1	18.4	0.53	2.88	25.3	41.7	73.1	0.253	16.1	15.1
40	37.8	20.3	0.50	2.82	27.9	46.1	81.0	0.243	18.1	18.0
45	41.5	22.1	0.48	2.77	30.4	50.3	88.8	0.234	20.0	20.9
50	45.2	23.9	0.45	2.72	32.9	54.3	96.5	0.227	21.8	24.0
55	48.7	25.7	0.43	2.68	35.2	58.0	104.0	0.219	23.5	27.0
60	52.3	27.4	0.41	2.65	37.5	61.7	111.4	0.213	25.1	30.2
65	55.8	29.1	0.39	2.62	39.8	65.3	118.8	0.207	26.7	33.3
70	59.2	30.7	0.37	2.59	42.0	69.0	126.0	0.202	28.2	36.5
75	62.7	32.3	0.36	2.57	44.1	72.8	133.2	0.196	29.7	39.7
80	66.0	33.9	0.34	2.55	46.3	76.6	140.4	0.192	31.1	43.0
85	69.4	35.4	0.33	2.53	48.3	80.5	147.4	0.187	32.6	46.2
90	72.8	37.0	0.31	2.51	50.4	84.3	154.4	0.183	33.9	49.5
95	76.1	38.5	0.30	2.50	52.4	88.0	161.4	0.179	35.3	52.9
100	79.4	40.0	0.29	2.49	54.3	91.4	168.3	0.175	36.7	56.3
110	85.9	42.9	0.26	2.46	58.2	97.6	182.0	0.168	39.3	63.3
120	92.4	45.7	0.24	2.44	61.9	103.1	195.6	0.161	41.9	70.6
130	98.8	48.5	0.22	2.43	65.6	108.5	209.0	0.155	44.4	78.0
140	105.1	51.3	0.20	2.41	69.1	114.0	222.4	0.149	46.7	85.6
150	111.4	53.9	0.18	2.40	72.6	119.9	235.6	0.144	48.9	93.3
160	117.6	56.6	0.16	2.39	76.1	126.2	248.7	0.139	51.0	101.0
170	123.9	59.2	0.14	2.38	79.4	132.9	261.7	0.134	53.0	108.9
180	130.0	61.8	0.13	2.37	82.7	139.6	274.7	0.130	54.9	116.8
190	136.2	64.3	0.11	2.37	85.9	146.2	287.6	0.126	56.7	124.9
200	142.3	66.8	0.10	2.36	89.1	152.4	300.4	0.122	58.5	133.0
210	148.4	69.2	0.08	2.35	92.3	158.3	313.2	0.118	60.3	141.3
220	154.4	71.7	0.07	2.35	95.4	163.9	325.9	0.114	62.0	149.8
230	160.4	74.1	0.05	2.35	98.4	169.2	338.5	0.111	63.7	158.3
240	166.4	76.5	0.04	2.34	101.4	174.3	351.2	0.108	65.4	166.9
250	172.4	78.8	0.03	2.34	104.4	179.4	363.7	0.105	67.0	175.6
260	178.4	81.2	0.02	2.34	107.3	184.5	376.2	0.101	68.5	184.3
270	184.3	83.5	0.01	2.34	110.2	189.7	388.7	0.098	70.0	193.0
280	190.3	85.7	-0.01	2.34	113.1	195.0	401.2	0.096	71.4	201.8
290	196.2	88.0	-0.02	2.34	115.9	200.5	413.6	0.093	72.7	210.5
300	202.1	90.3	-0.03	2.34	118.7	206.1	426.0	0.090	74.0	219.3
310	207.9	92.5	-0.04	2.34	121.5	212.0	438.3	0.088	75.2	228.0
320	213.8	94.7	-0.05	2.34	124.2	218.1	450.6	0.085	76.4	236.7
330	219.6	96.9	-0.06	2.34	126.9	224.5	462.9	0.083	77.5	245.4
340	225.5	99.1	-0.07	2.34	129.6	230.9	475.2	0.080	78.6	254.1
350	231.3	101.2	-0.07	2.34	132.3	237.5	487.4	0.078	79.6	262.8
360	237.1	103.4	-0.08	2.34	134.9	244.2	499.7	0.076	80.6	271.5
370	242.9	105.5	-0.09	2.34	137.5	251.0	511.9	0.074	81.5	280.3
380	248.7	107.6	-0.10	2.34	140.1	257.8	524.0	0.072	82.5	289.0
390	254.4	109.7	-0.11	2.34	142.7	264.7	536.2	0.070	83.4	297.8
400	260.2	111.8	-0.12	2.34	145.2	271.6	548.3	0.068	84.3	306.5

Mg in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	9.9	5.9	0.85	3.65	7.3	13.9	20.0	0.315	7.0	1.7
15	13.3	7.9	0.83	3.57	10.0	17.8	27.2	0.298	10.3	2.8
20	16.6	9.7	0.81	3.49	12.5	21.5	34.0	0.286	13.6	4.0
25	19.6	11.5	0.78	3.43	14.8	25.1	40.5	0.276	16.9	5.2
30	22.6	13.2	0.76	3.38	17.1	28.7	46.9	0.267	20.1	6.5
35	25.6	14.8	0.74	3.33	19.3	32.4	53.2	0.259	23.3	7.9
40	28.5	16.4	0.72	3.29	21.4	36.0	59.3	0.252	26.4	9.3
45	31.3	18.0	0.70	3.25	23.5	39.7	65.4	0.246	29.4	10.8
50	34.1	19.5	0.68	3.21	25.5	43.3	71.4	0.240	32.4	12.5
55	36.9	21.0	0.66	3.18	27.5	47.0	77.4	0.235	35.2	14.2
60	39.7	22.5	0.65	3.14	29.5	50.6	83.3	0.230	38.1	16.1
65	42.4	24.0	0.63	3.11	31.4	54.1	89.2	0.225	40.8	18.0
70	45.2	25.4	0.62	3.08	33.3	57.5	95.0	0.221	43.6	19.9
75	47.9	26.8	0.60	3.06	35.2	60.8	100.8	0.217	46.4	21.9
80	50.6	28.3	0.59	3.03	37.0	64.0	106.6	0.213	49.3	23.9
85	53.3	29.7	0.58	3.01	38.9	67.0	112.3	0.209	52.1	25.9
90	55.9	31.0	0.57	2.98	40.7	70.1	118.1	0.206	54.9	27.9
95	58.6	32.4	0.55	2.96	42.5	73.1	123.8	0.202	57.6	29.9
100	61.3	33.8	0.54	2.94	44.3	76.2	129.5	0.199	60.3	32.0
110	66.5	36.5	0.52	2.90	47.8	82.5	140.8	0.193	65.4	36.4
120	71.8	39.1	0.50	2.86	51.2	88.9	152.1	0.187	70.3	41.0
130	77.1	41.8	0.48	2.82	54.7	95.3	163.3	0.182	75.0	45.8
140	82.3	44.4	0.46	2.79	58.0	101.5	174.5	0.177	79.7	50.8
150	87.5	47.0	0.44	2.76	61.3	107.5	185.7	0.173	84.3	55.9
160	92.7	49.5	0.42	2.73	64.6	113.4	196.9	0.168	88.9	61.1
170	97.9	52.0	0.41	2.70	67.9	118.9	208.0	0.164	93.4	66.5
180	103.1	54.6	0.39	2.67	71.1	124.4	219.1	0.160	97.9	71.9
190	108.2	57.0	0.38	2.64	74.3	129.7	230.2	0.156	102.3	77.5
200	113.4	59.5	0.36	2.62	77.5	134.9	241.3	0.153	106.5	83.2
210	118.6	62.0	0.35	2.59	80.6	140.1	252.3	0.149	110.5	88.9
220	123.7	64.4	0.33	2.57	83.7	145.2	263.4	0.146	114.4	94.8
230	128.9	66.9	0.32	2.55	86.8	150.2	274.5	0.143	118.2	100.7
240	134.1	69.3	0.31	2.53	89.9	155.2	285.5	0.140	121.9	106.8
250	139.2	71.7	0.30	2.50	92.9	160.2	296.6	0.137	125.4	112.9
260	144.4	74.1	0.28	2.48	96.0	165.1	307.6	0.134	128.8	119.1
270	149.5	76.5	0.27	2.46	99.0	170.0	318.7	0.131	132.2	125.4
280	154.7	78.9	0.26	2.45	102.0	174.8	329.7	0.128	135.5	131.8
290	159.9	81.3	0.25	2.43	104.9	179.6	340.7	0.126	138.7	138.2
300	165.0	83.6	0.24	2.41	107.9	184.4	351.8	0.123	141.8	144.8
310	170.2	86.0	0.23	2.39	110.8	189.1	362.8	0.121	144.9	151.5
320	175.3	88.3	0.22	2.37	113.8	193.8	373.9	0.118	148.0	158.2
330	180.5	90.7	0.21	2.36	116.7	198.5	384.9	0.116	151.0	165.1
340	185.7	93.0	0.20	2.34	119.6	203.1	396.0	0.114	154.0	172.0
350	190.8	95.3	0.19	2.32	122.5	207.7	407.0	0.112	156.9	179.0
360	196.0	97.6	0.18	2.31	125.3	212.3	418.1	0.109	159.8	186.1
370	201.2	100.0	0.17	2.29	128.2	216.9	429.2	0.107	162.6	193.3
380	206.4	102.3	0.16	2.28	131.1	221.4	440.2	0.105	165.4	200.5
390	211.5	104.6	0.15	2.26	133.9	225.9	451.3	0.103	168.2	207.8
400	216.7	106.8	0.14	2.25	136.7	230.4	462.4	0.101	171.0	215.2

Si in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	8.6	5.0	0.77	3.69	6.5	11.0	18.9	0.286	7.2	1.7
15	11.5	6.7	0.78	3.62	8.7	14.3	25.1	0.274	10.7	2.7
20	14.2	8.3	0.77	3.56	10.7	17.5	30.8	0.264	14.1	3.8
25	16.8	9.8	0.76	3.50	12.7	20.8	36.3	0.255	17.5	5.0
30	19.3	11.2	0.75	3.46	14.5	24.3	41.7	0.248	20.9	6.2
35	21.8	12.6	0.73	3.41	16.3	27.9	46.9	0.241	24.2	7.5
40	24.2	13.9	0.72	3.37	18.1	31.4	52.1	0.236	27.5	8.9
45	26.6	15.3	0.70	3.33	19.8	34.7	57.1	0.230	30.7	10.3
50	29.0	16.5	0.69	3.29	21.5	37.8	62.1	0.226	33.8	11.8
55	31.3	17.8	0.67	3.26	23.1	40.8	67.1	0.221	36.9	13.4
60	33.6	19.0	0.66	3.23	24.7	43.5	72.0	0.217	39.9	15.0
65	35.9	20.2	0.65	3.20	26.3	46.1	76.9	0.213	42.9	16.7
70	38.2	21.4	0.63	3.17	27.9	48.6	81.7	0.209	45.8	18.5
75	40.4	22.6	0.62	3.14	29.4	51.1	86.5	0.206	48.7	20.3
80	42.7	23.8	0.61	3.11	30.9	53.6	91.3	0.202	51.7	22.2
85	44.9	25.0	0.59	3.09	32.4	56.0	96.1	0.199	54.6	24.1
90	47.1	26.1	0.58	3.06	33.9	58.4	100.9	0.196	57.4	26.0
95	49.3	27.2	0.57	3.04	35.4	60.8	105.6	0.193	60.3	28.0
100	51.6	28.4	0.56	3.02	36.9	63.1	110.3	0.191	63.0	30.1
110	55.9	30.6	0.54	2.97	39.8	67.8	119.7	0.185	68.5	34.2
120	60.3	32.8	0.51	2.93	42.7	72.5	129.1	0.181	73.7	38.6
130	64.7	34.9	0.49	2.89	45.5	77.2	138.5	0.176	78.8	43.0
140	69.0	37.1	0.47	2.86	48.3	82.0	147.8	0.172	83.8	47.6
150	73.3	39.2	0.46	2.82	51.0	86.9	157.1	0.168	88.7	52.3
160	77.6	41.2	0.44	2.79	53.7	91.9	166.3	0.164	93.6	57.1
170	81.9	43.3	0.42	2.76	56.4	96.9	175.6	0.160	98.4	62.1
180	86.2	45.4	0.40	2.73	59.1	101.9	184.9	0.157	103.1	67.1
190	90.5	47.4	0.39	2.70	61.8	106.8	194.1	0.154	107.8	72.1
200	94.7	49.4	0.37	2.67	64.4	111.5	203.4	0.151	112.4	77.3
210	99.0	51.4	0.36	2.65	67.0	116.0	212.6	0.148	116.9	82.6
220	103.3	53.4	0.34	2.62	69.6	120.4	221.9	0.145	121.4	87.9
230	107.5	55.3	0.33	2.60	72.2	124.6	231.1	0.142	125.8	93.3
240	111.8	57.3	0.31	2.57	74.8	128.7	240.4	0.139	130.2	98.8
250	116.0	59.2	0.30	2.55	77.3	132.7	249.6	0.137	134.4	104.4
260	120.3	61.2	0.29	2.53	79.8	136.7	258.9	0.134	138.5	110.0
270	124.5	63.1	0.27	2.50	82.4	140.6	268.2	0.132	142.6	115.8
280	128.8	65.0	0.26	2.48	84.9	144.4	277.4	0.129	146.5	121.6
290	133.0	66.9	0.25	2.46	87.4	148.3	286.7	0.127	150.3	127.5
300	137.3	68.8	0.23	2.44	89.8	152.1	296.0	0.125	154.1	133.5
310	141.5	70.7	0.22	2.42	92.3	156.0	305.3	0.123	157.7	139.6
320	145.8	72.5	0.21	2.40	94.8	159.8	314.6	0.120	161.2	145.8
330	150.0	74.4	0.20	2.39	97.2	163.6	323.9	0.118	164.6	152.1
340	154.3	76.3	0.19	2.37	99.7	167.4	333.2	0.116	168.0	158.5
350	158.5	78.1	0.18	2.35	102.1	171.3	342.5	0.114	171.3	164.9
360	162.8	79.9	0.17	2.33	104.5	175.1	351.9	0.112	174.5	171.4
370	167.0	81.8	0.16	2.32	107.0	178.9	361.2	0.111	177.7	178.1
380	171.3	83.6	0.15	2.30	109.4	182.7	370.6	0.109	180.8	184.7
390	175.5	85.4	0.14	2.28	111.8	186.4	379.9	0.107	183.9	191.5
400	179.8	87.3	0.13	2.27	114.1	190.2	389.3	0.105	187.0	198.3

Ar in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	6.9	4.1	0.78	3.44	4.8	9.3	14.1	0.235	7.8	1.4
15	9.0	5.3	0.78	3.47	6.4	12.1	18.8	0.223	11.6	2.3
20	11.0	6.5	0.78	3.47	7.8	14.5	23.2	0.215	15.4	3.2
25	12.9	7.6	0.76	3.46	9.1	16.8	27.4	0.208	19.1	4.2
30	14.7	8.6	0.75	3.44	10.3	18.9	31.5	0.201	22.7	5.3
35	16.5	9.6	0.74	3.41	11.6	21.0	35.5	0.196	26.3	6.4
40	18.2	10.6	0.72	3.39	12.7	23.1	39.4	0.191	29.9	7.6
45	20.0	11.6	0.71	3.36	13.9	25.2	43.3	0.187	33.4	8.8
50	21.7	12.5	0.70	3.34	15.0	27.3	47.0	0.183	37.0	10.1
55	23.4	13.5	0.69	3.31	16.2	29.6	50.8	0.179	40.5	11.3
60	25.0	14.4	0.67	3.29	17.3	31.8	54.5	0.176	44.0	12.6
65	26.7	15.3	0.66	3.27	18.3	33.8	58.2	0.172	47.5	13.9
70	28.4	16.2	0.65	3.24	19.4	35.7	61.8	0.169	51.0	15.3
75	30.0	17.1	0.64	3.22	20.5	37.4	65.4	0.167	54.4	16.7
80	31.6	17.9	0.63	3.20	21.5	38.8	69.0	0.164	57.7	18.2
85	33.3	18.8	0.61	3.17	22.6	40.2	72.6	0.161	61.0	19.7
90	34.9	19.7	0.60	3.15	23.6	41.5	76.1	0.159	64.3	21.3
95	36.5	20.5	0.59	3.13	24.6	42.9	79.7	0.156	67.5	23.0
100	38.1	21.4	0.58	3.11	25.6	44.6	83.2	0.154	70.6	24.6
110	41.4	23.0	0.56	3.07	27.6	48.6	90.2	0.150	76.9	28.0
120	44.6	24.7	0.55	3.03	29.6	53.3	97.1	0.146	83.0	31.5
130	47.8	26.3	0.53	2.99	31.6	58.2	104.0	0.143	89.0	35.1
140	51.0	27.9	0.51	2.96	33.5	62.9	110.9	0.139	95.0	38.8
150	54.2	29.6	0.50	2.92	35.5	67.3	117.7	0.136	100.9	42.6
160	57.3	31.2	0.48	2.89	37.4	71.1	124.5	0.133	106.7	46.5
170	60.5	32.7	0.46	2.86	39.3	74.5	131.3	0.130	112.5	50.5
180	63.7	34.3	0.45	2.83	41.2	77.6	138.1	0.127	118.3	54.7
190	66.9	35.9	0.44	2.80	43.0	80.7	144.8	0.125	123.9	58.9
200	70.1	37.5	0.42	2.77	44.9	84.0	151.6	0.122	129.5	63.2
210	73.3	39.0	0.41	2.74	46.7	87.4	158.3	0.120	135.0	67.6
220	76.5	40.5	0.40	2.71	48.6	91.1	165.0	0.117	140.4	72.1
230	79.7	42.1	0.38	2.69	50.4	94.8	171.7	0.115	145.7	76.6
240	82.9	43.6	0.37	2.66	52.3	98.6	178.4	0.113	151.0	81.3
250	86.1	45.2	0.36	2.63	54.1	102.5	185.1	0.111	156.2	86.0
260	89.3	46.7	0.35	2.61	55.9	106.2	191.7	0.109	161.3	90.7
270	92.5	48.2	0.34	2.59	57.7	109.9	198.4	0.107	166.3	95.5
280	95.7	49.7	0.33	2.56	59.5	113.5	205.1	0.105	171.3	100.4
290	98.9	51.2	0.32	2.54	61.3	117.0	211.7	0.103	176.2	105.3
300	102.2	52.7	0.31	2.52	63.1	120.2	218.4	0.102	181.0	110.3
310	105.4	54.2	0.30	2.49	64.9	123.3	225.0	0.100	185.8	115.3
320	108.6	55.7	0.29	2.47	66.7	126.1	231.6	0.098	190.5	120.4
330	111.9	57.2	0.28	2.45	68.5	128.8	238.3	0.097	195.2	125.5
340	115.1	58.7	0.27	2.43	70.2	131.4	244.9	0.095	199.8	130.7
350	118.4	60.2	0.26	2.41	72.0	133.9	251.5	0.094	204.3	135.9
360	121.6	61.7	0.25	2.39	73.8	136.2	258.2	0.092	208.9	141.2
370	124.9	63.2	0.24	2.37	75.5	138.5	264.8	0.091	213.4	146.5
380	128.1	64.7	0.23	2.35	77.3	140.7	271.4	0.089	217.8	151.9
390	131.4	66.1	0.22	2.33	79.1	142.9	278.1	0.088	222.3	157.3
400	134.7	67.6	0.21	2.31	80.8	145.0	284.7	0.086	226.7	162.7

Cr in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	5.6	3.4	0.89	3.73	3.8	7.7	11.3	0.217	8.5	0.9
15	7.3	4.4	0.86	3.66	5.0	10.1	14.9	0.204	12.7	1.5
20	8.8	5.3	0.83	3.61	6.1	12.1	18.2	0.194	16.9	2.0
25	10.2	6.2	0.81	3.56	7.1	13.8	21.5	0.186	21.0	2.7
30	11.7	7.0	0.79	3.52	8.0	15.3	24.6	0.180	25.1	3.3
35	13.1	7.8	0.78	3.49	9.0	16.7	27.7	0.174	29.2	4.0
40	14.4	8.6	0.76	3.46	9.9	18.2	30.7	0.170	33.2	4.7
45	15.8	9.4	0.75	3.43	10.8	19.7	33.7	0.165	37.2	5.5
50	17.1	10.1	0.74	3.41	11.7	21.4	36.6	0.161	41.3	6.3
55	18.4	10.9	0.73	3.39	12.6	23.3	39.5	0.158	45.4	7.1
60	19.7	11.6	0.72	3.37	13.4	25.3	42.3	0.155	49.4	7.9
65	21.0	12.4	0.71	3.35	14.3	27.2	45.2	0.152	53.5	8.7
70	22.3	13.1	0.70	3.33	15.1	29.1	48.0	0.149	57.5	9.6
75	23.6	13.8	0.69	3.31	15.9	30.8	50.8	0.146	61.5	10.5
80	24.9	14.5	0.69	3.29	16.7	32.4	53.6	0.144	65.5	11.4
85	26.1	15.2	0.68	3.28	17.6	33.8	56.4	0.142	69.4	12.3
90	27.4	15.9	0.67	3.26	18.4	35.2	59.2	0.139	73.3	13.3
95	28.7	16.6	0.67	3.25	19.2	36.5	61.9	0.137	77.2	14.2
100	29.9	17.3	0.66	3.23	20.0	37.8	64.7	0.135	81.1	15.3
110	32.5	18.7	0.65	3.21	21.5	40.6	70.2	0.132	88.7	17.4
120	35.0	20.0	0.64	3.18	23.1	43.4	75.6	0.128	96.2	19.6
130	37.5	21.4	0.63	3.16	24.6	46.4	81.1	0.125	103.7	21.9
140	40.0	22.7	0.62	3.14	26.2	49.5	86.5	0.122	111.2	24.3
150	42.5	24.1	0.61	3.12	27.7	52.8	91.9	0.120	118.7	26.7
160	45.0	25.4	0.60	3.10	29.2	56.2	97.3	0.117	126.1	29.0
170	47.5	26.7	0.59	3.09	30.7	59.6	102.7	0.115	133.5	31.4
180	50.0	28.1	0.58	3.07	32.2	63.1	108.0	0.113	140.8	33.8
190	52.5	29.4	0.58	3.05	33.7	66.4	113.4	0.110	148.1	36.2
200	55.0	30.7	0.57	3.04	35.2	69.6	118.8	0.108	155.3	38.8
210	57.6	32.0	0.56	3.02	36.7	72.6	124.2	0.106	162.4	41.4
220	60.1	33.3	0.56	3.01	38.1	75.5	129.5	0.105	169.4	44.1
230	62.6	34.6	0.55	2.99	39.6	78.2	134.9	0.103	176.4	47.0
240	65.1	35.9	0.55	2.98	41.1	80.9	140.3	0.101	183.2	49.8
250	67.7	37.2	0.54	2.97	42.5	83.5	145.6	0.099	190.0	52.8
260	70.2	38.5	0.53	2.96	44.0	86.1	151.0	0.098	196.8	55.9
270	72.8	39.8	0.53	2.94	45.4	88.6	156.4	0.096	203.5	59.0
280	75.3	41.1	0.52	2.93	46.9	91.3	161.7	0.095	210.1	62.1
290	77.9	42.4	0.52	2.92	48.3	93.9	167.1	0.093	216.7	65.3
300	80.4	43.6	0.51	2.91	49.7	96.7	172.5	0.092	223.3	68.6
310	83.0	44.9	0.51	2.90	51.2	99.5	177.9	0.091	229.9	71.9
320	85.5	46.2	0.51	2.89	52.6	102.4	183.3	0.089	236.5	75.2
330	88.1	47.5	0.50	2.88	54.0	105.3	188.7	0.088	243.0	78.6
340	90.7	48.8	0.50	2.87	55.5	108.3	194.1	0.087	249.5	82.0
350	93.3	50.1	0.49	2.86	56.9	111.4	199.5	0.086	255.9	85.4
360	95.9	51.3	0.49	2.85	58.3	114.5	204.9	0.085	262.4	88.9
370	98.5	52.6	0.48	2.84	59.8	117.6	210.3	0.083	268.8	92.4
380	101.1	53.9	0.48	2.83	61.2	120.7	215.7	0.082	275.2	96.0
390	103.7	55.2	0.48	2.83	62.6	123.8	221.1	0.081	281.6	99.6
400	106.3	56.5	0.47	2.82	64.0	127.0	226.5	0.080	288.0	103.2

Se in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	4.3	2.6	0.83	3.59	2.9	5.7	8.8	0.149	9.1	0.6
15	5.6	3.3	0.84	3.64	3.6	7.6	11.5	0.139	13.7	0.9
20	6.7	4.0	0.84	3.66	4.3	9.2	14.0	0.132	18.2	1.3
25	7.8	4.7	0.83	3.66	5.0	10.7	16.3	0.127	22.7	1.6
30	8.8	5.3	0.82	3.65	5.6	12.0	18.6	0.122	27.2	2.0
35	9.9	5.9	0.82	3.64	6.3	13.2	20.9	0.118	31.7	2.4
40	10.8	6.5	0.81	3.63	6.9	14.4	23.0	0.115	36.1	2.8
45	11.8	7.1	0.80	3.62	7.4	15.6	25.2	0.112	40.6	3.3
50	12.8	7.6	0.79	3.60	8.0	16.8	27.3	0.109	45.1	3.8
55	13.7	8.2	0.79	3.58	8.6	18.1	29.3	0.107	49.6	4.2
60	14.6	8.7	0.78	3.57	9.1	19.4	31.4	0.105	54.1	4.7
65	15.5	9.2	0.77	3.55	9.7	20.7	33.4	0.103	58.5	5.3
70	16.5	9.7	0.76	3.53	10.2	21.9	35.4	0.101	63.0	5.8
75	17.4	10.3	0.76	3.51	10.7	22.9	37.3	0.099	67.4	6.3
80	18.2	10.8	0.75	3.50	11.3	23.9	39.3	0.097	71.7	6.9
85	19.1	11.3	0.74	3.48	11.8	24.7	41.2	0.096	76.0	7.4
90	20.0	11.8	0.74	3.47	12.3	25.6	43.2	0.094	80.3	8.0
95	20.9	12.3	0.73	3.45	12.8	26.4	45.1	0.093	84.6	8.5
100	21.8	12.8	0.72	3.43	13.3	27.3	47.0	0.092	89.0	9.1
110	23.5	13.7	0.71	3.40	14.4	29.3	50.8	0.089	97.7	10.2
120	25.2	14.7	0.70	3.37	15.4	31.3	54.6	0.087	106.5	11.4
130	27.0	15.6	0.69	3.34	16.4	33.5	58.3	0.085	115.2	12.6
140	28.7	16.6	0.68	3.32	17.3	35.5	62.0	0.083	123.9	13.9
150	30.4	17.5	0.67	3.29	18.3	37.5	65.7	0.081	132.5	15.3
160	32.1	18.4	0.66	3.26	19.3	39.4	69.3	0.079	140.9	16.7
170	33.7	19.3	0.65	3.24	20.3	41.1	73.0	0.078	149.3	18.2
180	35.4	20.2	0.64	3.21	21.2	43.0	76.6	0.076	157.6	19.8
190	37.1	21.1	0.63	3.19	22.2	44.8	80.2	0.075	165.9	21.3
200	38.8	22.0	0.62	3.17	23.1	46.9	83.8	0.073	174.2	22.9
210	40.5	22.9	0.61	3.14	24.1	49.1	87.4	0.072	182.5	24.5
220	42.1	23.8	0.61	3.12	25.0	51.5	91.0	0.071	190.8	26.1
230	43.8	24.7	0.60	3.10	26.0	54.0	94.6	0.070	199.2	27.7
240	45.5	25.6	0.59	3.08	26.9	56.5	98.2	0.069	207.6	29.3
250	47.1	26.4	0.58	3.06	27.9	59.1	101.7	0.067	215.9	30.9
260	48.8	27.3	0.58	3.04	28.8	61.7	105.3	0.066	224.2	32.5
270	50.5	28.2	0.57	3.02	29.7	64.2	108.8	0.065	232.5	34.2
280	52.1	29.0	0.56	3.00	30.7	66.7	112.4	0.064	240.8	35.9
290	53.8	29.9	0.56	2.98	31.6	69.0	115.9	0.063	249.0	37.6
300	55.5	30.7	0.55	2.96	32.5	71.2	119.5	0.063	257.1	39.4
310	57.1	31.6	0.54	2.94	33.5	73.3	123.0	0.062	265.2	41.2
320	58.8	32.4	0.54	2.93	34.4	75.3	126.5	0.061	273.2	43.0
330	60.4	33.3	0.53	2.91	35.3	77.2	130.0	0.060	281.2	44.8
340	62.1	34.1	0.52	2.89	36.2	78.9	133.6	0.059	289.2	46.7
350	63.8	35.0	0.52	2.87	37.2	80.6	137.1	0.058	297.0	48.6
360	65.4	35.8	0.51	2.86	38.1	82.2	140.6	0.058	304.9	50.6
370	67.1	36.7	0.51	2.84	39.0	83.7	144.1	0.057	312.7	52.6
380	68.8	37.5	0.50	2.83	39.9	85.3	147.6	0.056	320.5	54.6
390	70.4	38.3	0.50	2.81	40.9	86.7	151.1	0.055	328.3	56.6
400	72.1	39.2	0.49	2.79	41.8	88.2	154.7	0.055	336.1	58.6

Sn in Gold Density= 19.00

VII. Ion Distributions in amorphous layers:

E keV	Rp nm	SigRp nm	Gamma	Beta	Sig.Lat nm	Peak nm	Stopped nm	Backsct per ion	Dmg keV	Ioniz keV
10	3.6	2.1	0.83	3.70	2.1	4.7	7.5	0.095	9.5	0.4
15	4.5	2.7	0.84	3.71	2.6	5.6	9.4	0.088	14.2	0.6
20	5.3	3.2	0.84	3.71	3.1	6.7	11.2	0.083	19.0	0.8
25	6.1	3.6	0.84	3.69	3.5	7.8	12.8	0.080	23.7	1.1
30	6.8	4.1	0.84	3.68	3.9	9.1	14.4	0.076	28.4	1.3
35	7.6	4.5	0.83	3.66	4.3	10.4	15.9	0.074	33.1	1.6
40	8.3	4.9	0.82	3.64	4.7	11.6	17.4	0.072	37.8	1.9
45	8.9	5.3	0.82	3.62	5.1	12.7	18.8	0.070	42.5	2.1
50	9.6	5.7	0.81	3.60	5.5	13.5	20.3	0.068	47.2	2.4
55	10.3	6.1	0.81	3.59	5.8	14.0	21.7	0.066	51.9	2.7
60	10.9	6.5	0.80	3.57	6.2	14.5	23.0	0.065	56.6	3.0
65	11.6	6.9	0.79	3.55	6.6	15.0	24.4	0.063	61.3	3.2
70	12.2	7.2	0.79	3.54	6.9	15.5	25.7	0.062	65.9	3.5
75	12.8	7.6	0.78	3.52	7.2	16.2	27.1	0.061	70.6	3.9
80	13.4	7.9	0.77	3.50	7.6	17.0	28.4	0.060	75.2	4.2
85	14.1	8.3	0.77	3.49	7.9	17.9	29.7	0.059	79.9	4.5
90	14.7	8.6	0.76	3.47	8.2	18.9	31.0	0.058	84.5	4.9
95	15.3	9.0	0.76	3.46	8.6	19.9	32.3	0.057	89.1	5.3
100	15.9	9.3	0.75	3.45	8.9	20.8	33.6	0.056	93.7	5.7
110	17.1	10.0	0.74	3.42	9.5	22.6	36.1	0.054	102.9	6.4
120	18.3	10.6	0.73	3.39	10.2	24.1	38.7	0.053	112.1	7.1
130	19.4	11.3	0.72	3.37	10.8	25.4	41.2	0.051	121.3	7.9
140	20.6	11.9	0.71	3.34	11.4	26.7	43.7	0.050	130.6	8.6
150	21.7	12.5	0.70	3.32	12.0	27.8	46.2	0.049	139.8	9.4
160	22.9	13.1	0.69	3.30	12.6	29.0	48.6	0.047	149.0	10.1
170	24.0	13.7	0.68	3.28	13.2	30.1	51.1	0.046	158.3	10.9
180	25.2	14.3	0.67	3.26	13.8	31.2	53.5	0.045	167.5	11.7
190	26.3	14.9	0.66	3.24	14.4	32.3	56.0	0.044	176.7	12.5
200	27.4	15.5	0.66	3.22	15.0	33.6	58.4	0.044	185.8	13.3
210	28.6	16.1	0.65	3.20	15.6	34.8	60.8	0.043	194.9	14.2
220	29.7	16.7	0.64	3.18	16.2	36.1	63.2	0.042	203.9	15.1
230	30.8	17.3	0.63	3.16	16.7	37.5	65.7	0.041	212.9	16.0
240	31.9	17.9	0.62	3.15	17.3	38.9	68.1	0.040	221.9	17.0
250	33.0	18.5	0.62	3.13	17.9	40.3	70.5	0.040	230.8	18.0
260	34.2	19.0	0.61	3.11	18.4	41.7	72.9	0.039	239.7	19.0
270	35.3	19.6	0.60	3.10	19.0	43.2	75.3	0.038	248.6	20.0
280	36.4	20.2	0.60	3.08	19.6	44.6	77.7	0.037	257.5	21.0
290	37.5	20.7	0.59	3.07	20.2	46.1	80.1	0.037	266.4	22.1
300	38.6	21.3	0.58	3.05	20.7	47.5	82.5	0.036	275.3	23.1
310	39.7	21.8	0.58	3.04	21.3	48.9	84.9	0.036	284.2	24.2
320	40.8	22.4	0.57	3.02	21.8	50.3	87.3	0.035	293.1	25.3
330	41.9	22.9	0.57	3.01	22.4	51.7	89.7	0.034	302.0	26.3
340	43.0	23.5	0.56	3.00	23.0	53.1	92.1	0.034	310.9	27.4
350	44.1	24.0	0.55	2.98	23.5	54.5	94.5	0.033	319.8	28.5
360	45.2	24.6	0.55	2.97	24.1	55.8	96.9	0.033	328.7	29.6
370	46.3	25.1	0.54	2.96	24.6	57.2	99.3	0.032	337.7	30.8
380	47.4	25.7	0.54	2.94	25.2	58.6	101.7	0.032	346.6	31.9
390	48.5	26.2	0.53	2.93	25.7	59.9	104.1	0.031	355.5	33.0
400	49.7	26.7	0.53	2.92	26.3	61.3	106.5	0.031	364.4	34.2

*U.S.Government Printing Office: 1989 — 648-059/00388