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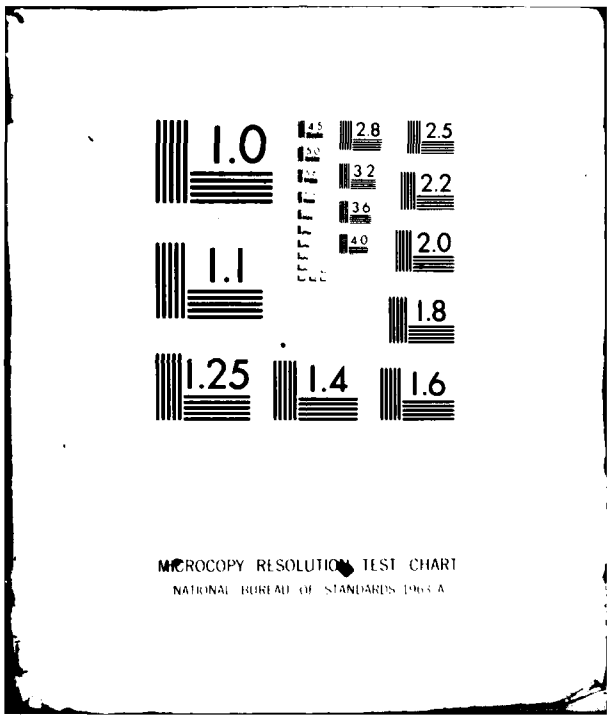
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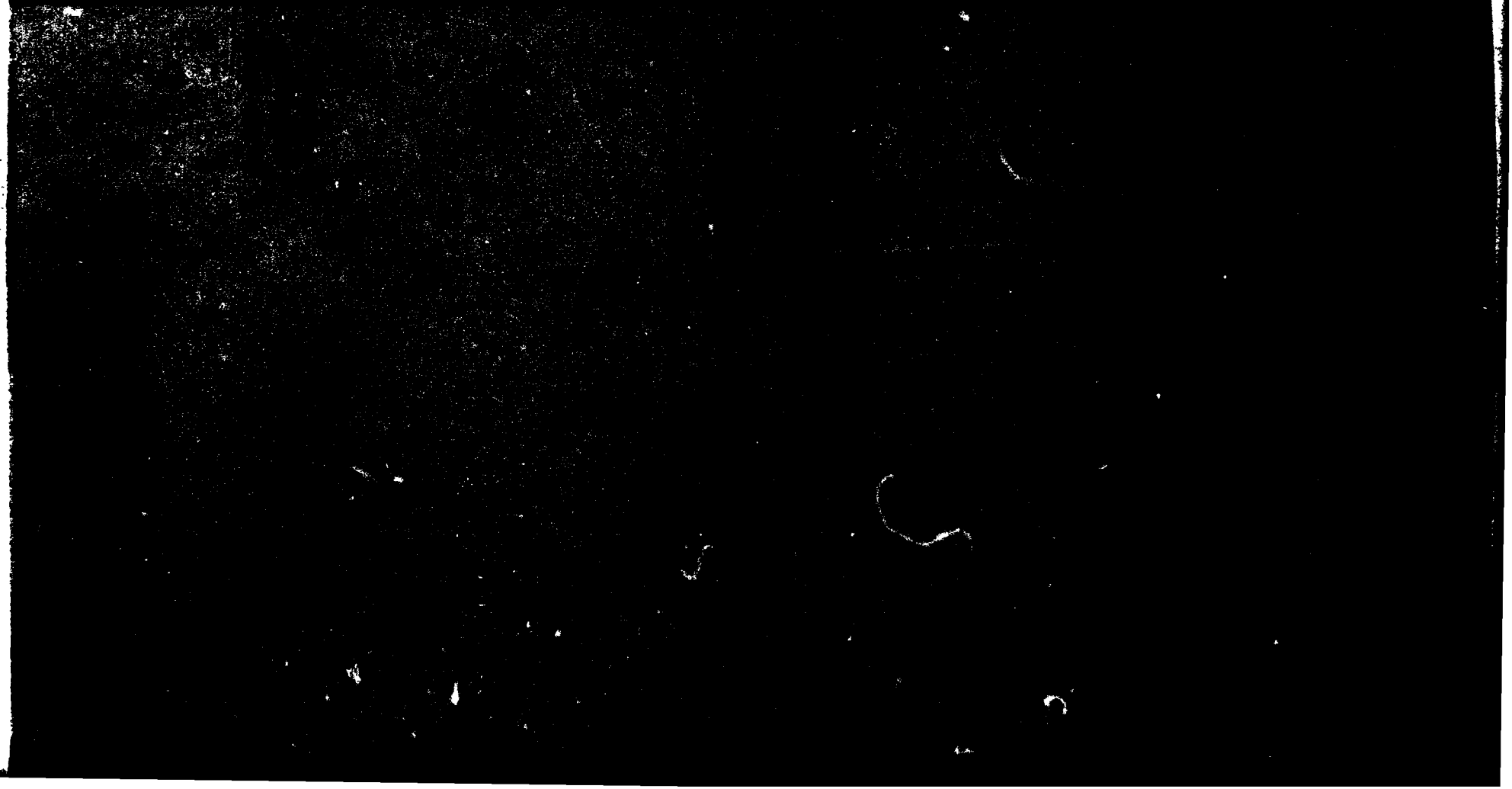

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 43

SEPTEMBER - OCTOBER 1979

Date of Report

April 30, 1980

Vice Director for Foreign Intelligence
Defense Intelligence Agency

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20. ABSTRACT

This is the Soviet Laser Bibliography for September-October 1979 and is No. 43 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is September-October 1979, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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H. LASER MEASUREMENT APPLICATIONS

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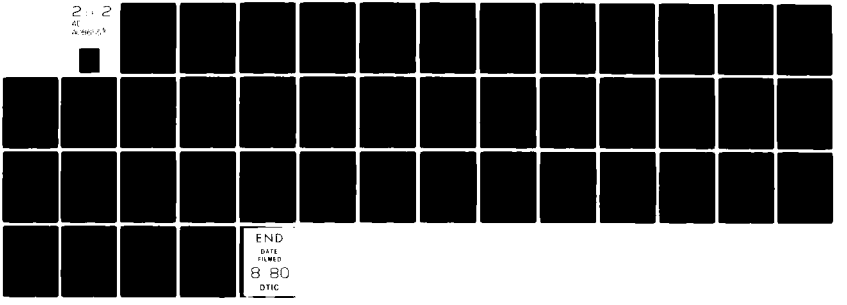

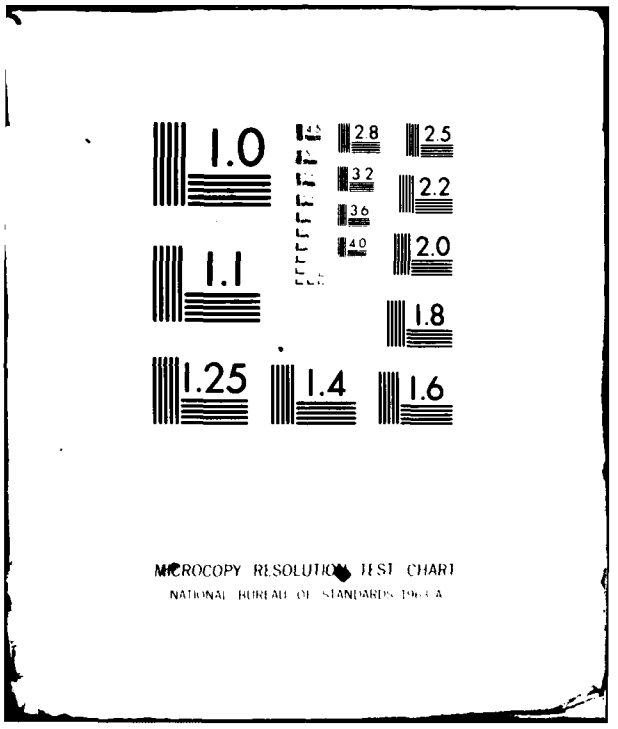
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J. BEAM-TARGET INTERACTION

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IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Seriya A. Fizyko-matematychni ta tekhnichni nauky
EOM	(EOBMA)	Elektronnaya obrabotka materialov
ETP	(EXPPA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya Fiziko-matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Khim	(IASKA)	Akademiya nauk SSSR. Izvestiya. Seriya khimicheskaya
IAN Lat	(LZFTA)	Akademiya nauk Latviyskoy SSR. Izvestiya.
IAN Tadzh	(IATOA)	Akademiya nauk Tadzhikskoy SSR. Izvestiya. Otdeleniye fiziko-matematicheskikh i geologokhimicheskih nauk
IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Geod	(IVZAA)	Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka

IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
JTP	(JTPHD)	Journal of Technical Physics [Poland]
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
Kristal	(KRISA)	Kristallografiya
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOV)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
Opt app	(OPAPB)	Optica applicata [Poland]
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RRP	(RRPQA)	Revue roumaine de physique
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(GZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
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Sb7 Molodoy nauchnyy rabotnik. Yestestvennyye nauki, no. 2(28), 1978.

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TKiT	(TKTEA)	Tekhnika kino i televedeniya
Tr1	Trudy	Moskovskoye vyssheye tekhnicheskoye uchilishche. Trudy, no. 269, 1979.
Tr2		Belorusskiy universitet. Vestnik. Seriya 1, no. 2, 1979.
Tr3		Moskovskiy energeticheskiy institut. Trudy, no. 397, 1979.
Tr4		Moskovskiy fiziko-tekhnicheskiy institut. Trudy. Radiotekhnika i elektronika, no. 13, 1978.
Tr5		Leningradskiy institut aviatsionnogo priborostroyeniya. Trudy, no. 126, 1978.
Tr6		Glavnaya geofizicheskaya observatoriya. Trudy, no. 415, 1979.
Tr7		Fizicheskiy institut AN SSSR. Trudy, no. 114, 1979.
Tr8		Kiyevskiy universitet. Vestnik. Fizika, no. 20, 1979.
Tr9		Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 225(285), 1977.
Tr10		Ni tsentr izucheniya prirodnykh resursov. Trudy, no. 5, 1979.
Tr11		NI kinofotoinstitut. Trudy, no. 94, 1978.
Tr12		Fizicheskiy institut AN SSSR. Trudy, no. 112, 1979.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UAM	(-----)	Uniwersytet Adama Mickiewicza, Poznan. Seria fizyka
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

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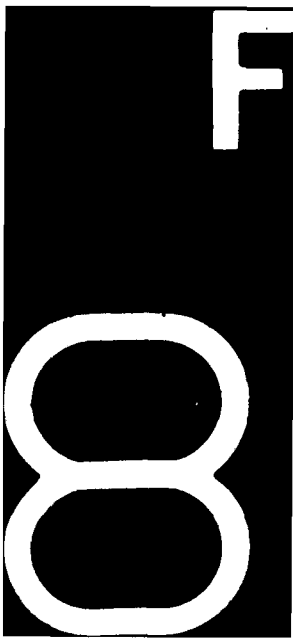
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