LEVEL II

12

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Sounding Rocket Flight Data Summary 1966-1976

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15 May 1978

AEROSPACE INSTRUMENTATION DIVISION PROJECT 7659
AIR FORCE GEOPHYSICS LABORATORY
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AIR FORCE SYSTEMS COMMAND, USAF

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FOR THE COMMANDER

John Howard

Chief Scientist

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Launch summary
Vehicle performance

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

This report is a summary listing of all AFGL sounding rockets launched from 1966 to 1976. Listed data includes the launch time, date, place, and number; the type of rocket launched; the name of the project scientist; the impact time, range, azimuth, apogee time, and altitude; payload weight and length; the recovery, ACS type, and performance; experiments flown; support systems; remarks; and total vehicle performance.

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Sounding Rocket Flight Data Summary 1966—1976

1. INTRODUCTION

Sounding rockets have become the standard workhorse for carrying scientific experiments to the upper atmosphere and beyond for exploration and investigation.

Our first sounding rocket was a German V-2, launched from the White Sands Missile Range on 22 August 1946. Thirty years have passed and the need for sounding rockets still continues.

This report is a summary of the sounding rockets flown by the Air Force Geophysics Laboratory from 1966 through 1976.

Those flown before this period are listed in Summary of AFCRL Rocket and Satellite Experiments (1946-1966), McIntyre, A., AFCRL-66-868, Special Reports, No. 54, December 1966.

(Received for publication 10 May 1978)

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1966				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ. (DEG)	ALT. (KM)	TIME (SEC)						
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
1	AC15.732	23 Jan	CRR	570	-	-	298	-	174	-	ESA Leaky Ion Chamber		No ASE HI Voltage Coupled 42-60 Sec	F
	Astrobee 200	0606	-	-	-	-	301	-	103	-				
2	AC15.733	28 Jan	CRR	570	-	-	298	-	175	-	ESA Leaky Ion Chamber		No ASE HI Voltage Coupled @ 42 Sec Flat Spin	F
	Astrobee 200	0648	-	477	57	67	61	-	103	-				
3	AFS.502	19 Feb	PR	-	-	-	169	-	-	-	Chemical Release		Late Release	P
	Nike/ Javelin	0105	-	-	-	-	-	-	-	-				
4	AFS.504	20 Feb	PR	-	86	330	169	-	-	-			Pitch-Roll 1/2 Sec into 2nd Stage	F
	Nike/ Javelin	0030	-	-	8	360	-	-	-	-				
5	AFS.505	20 Feb	PR	-	-	-	169	-	-	-				S
	Nike/ Javelin	0645	-	-	-	-	-	-	-	-				
6	AFS.508	20 Feb	PR	-	-	-	169	-	-	-			No 2nd Stage Ignition	F
	Nike/ Javelin	1108	-	-	-	-	-	-	-	-				
7	AF7.327	10 Mar	APGC	433	174	180	185	-	79	-	Bremstralung Background		One of 4 Doors Hung Up Partial on Bremstr.	P
	NIRO	0845	-	444	167	192	205	-	67	-				
8	AF3.524	30 Mar	WSMR	493	101	355	243	-	191	-	CUV Monochromator			S
	Aerobee	1830	-	487	113	347	229	-	102	-				

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1966				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	AD3.723	29 Apr	WSMR	439	84	360	193	-	276	-	IR Horizon	ACS		S
	Aerobee	0349	-	-	89	322	160	-	115	-				
10	AB19.286	1 May	CRR	900	484	70	679	-	182	-	Magnetometer, Particle Detector			S
	Javelin	0630	-	903	422	106	710	-	-	-				
11	AF6.501	18 Jun	APGC	368	61	160	217	-	65	-	Chemical Release			S
	Nike/ Cajun	0025	-	-	-	-	217	-	62	-				
12	AF7.621	23 Jun	APGC	-	77	160	158	-	127	-	Chemical Release TMA, SPX			S
	NIRO	0853	-	-	74	161	158	-	94	-				
13	AF7.509	25 Jun	APGC	-	65	160	130	-	159	-	No			S
	NIRO	0236	-	-	71	157	140	-	106	-				
14	AF7.620	25 Jun	APGC	-	67	160	130	-	157	-	No		No Track Coned	S
	NIRO	0715	-	362	-	-	-	-	106	-				
15	AF7.506	25 Jun	APGC	-	91	160	179	-	100	-	Ba Vapor		Limited Data Small Coning	S
	NIRO	0030	-	-	-	-	-	-	83	-				
16	AF7.507	25 Jun	APGC	-	88	154	179	-	101	-	Ba Vapor		Limited Data Small Coning	S
	NIRO	0857	-	-	-	-	-	-	83	-				

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AIR FORCE GEOPHYSICS LABORATORY

1966				IMPACT			APOGEE		PAY-LOAD					
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	TIME (SEC) PRED. / ACT.	RANGE (KM) PRED. / ACT.	AZ (DEG) PRED. / ACT.	ALT (KM) PRED. / ACT.	TIME (SEC) PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
17	AC19.191	28 Jun	WOPS	-	966	90	547	-	-	-	Ret Potential	Nose Cone Release		S
	Javelin	1723	-	-	-	-	546	-	-	-				
18	AF3.525	22 Jul	WSMR	-	93	360	243	-	189	-	Extreme Ultra-Violet 1300-2500A RPA	Ball Pointing Control		S
	Aerobee 150	2102	-	-	113	356	247	-	-	-				
19	AE3.734	8 Aug	CRR	1278	80	160	134	-	347	-	Emulsion Packs Vibration, 3 Axis	Recovery Despin 4 Door Nose	Low Performance Recovery Failure	S
	Aerobee 150	1820	-	580	68	167	118	-	131	-				
20	AC3.364	11 Aug	CRR	476	161	110	210	-	225	-	Spectrograph Photometer	Recovery	Water Impact - No Retrieval	S
	Aerobee 150	1732	-	470	171	105	186	-	133	-				
21	AC17.604D	28 Sep	CRR	-	-	-	114	-	497	-	Disturbed Ionosphere 10 of 11 Sensors	Aspect	B. Arcas Failed 1.6 db Absorption	S
	Black Brant	1816	-	332	55	118	116	-	-	-				
22	AF7.348	10 Oct	APGC	-	58	160	183	-	86	-	Expandable Sphere		Low Performance Limited Data	S
	NIRO	1657	-	463	62	-	179	-	-	-				
23	AF7.349	10 Oct	APGC	-	58	160	185	-	84	-	Expandable Sphere		Vehicle Failure Coupled @ 27 Sec	F
	NIRO	1720	-	330	251	8	48	-	-	-				
24	AE7.813	14 Oct	APGC	403	121	165	153	-	95	-	VLF Balloon	Balloon Ejection		S
	NIRO	1720	-	577	98	160	138	-	66	-				

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1966				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
25	AC6.710	30 Oct	APGC	362	48	160	85	-	87	-	Optics			S
	Yike Cajun	1406	-	310	43	154	80	-	72	-				
26	AF3.267	16 Nov	WSMR	938	80	360	173	-	318	-	Meteoric Dust Rocket Vibrations	Gyro Recovery	Meteor. Dust Failure Trapped Gas in Above	F
	Aerobee 150	1315	-	935	90	359	173	-	139	-				
27	AG3.357	27 Nov	CRR	1130	64	165	171	-	266	-	Lunar IR	Lunar Pointer Recovery		S
	Aerobee 150	0216	-	1070	137	137	169	-	143	-				
28	AE3.724	6 Dec	WSMR	1000	97	355	198	-	260	-	IR Horizon	ACS Recovery	Hard Landing	S
	Aerobee 150	0335	-	850	-	-	188	-	111	-				
29	AF3.615	14 Dec	CRR	490	101	107	190	-	252	-	Many Pulse Phase Delay - 502			S
	Aerobee 150	0816	-	446	114	115	177	-	113	-				
30	AC15.735	14 Dec	CRR	521	251	118	246	-	237	-	Many Cosmic Radiation - 41			S
	Astrobee 200	0816	-	490	248	107	212	-	116	-				

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				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
1	AF7.500	11 Jan	APGC	536	92	160	192	-	92	-	Chemical Release Barium		No Second Stage Ignition	F
	NIKO	2231	-	125	-	-	-	-	159	-				
2	AF7.654	16 Jan	APGC	380	82	160	217	-	117	-	Chemical Release Heated TMA		2nd Stage Ignition at 24 Sec	S
	NIRO	1048	-	378	116	172	217	-	95	-				
3	AF7.503	16 Jan	APGC	-	95	160	192	-	90	-	Chemical Release BA		21.5 Sec Delay	S
	NIRO	2248	-	436	132	174	193	-	89	-				
4	AF7.653	16 Jan	APGC	-	79	160	157	-	117	-	Chemical Release Heated TMA		22 Sec Delay	S
	NIRO	2300	-	403	109	170	155	-	94	-				
5	AG3.526	17 Jan	WSMR	493	85	360	243	-	193	-	EUV		No Recovery	S
	Aero 150	1900	-	500	89	359	243	-	98	-				
6	AF7.655	19 Jan	APGC	327	124	160	113	-	193	-	Chemical Release Smoke Turbulence		23.5 Sec - 2nd Stage Ignition	S
	NIRO	2322	-	329	127	165	107	-	112	-				
7	AF7.656	19 Jan	APGC	-	124	160	124	-	193	-			Inadvertent Firing No Second Stage	F
	NIRO	2322	-	-	-	-	-	-	110	-				
8	AF7.582	4 Mar	APGC	-	97	160	195	-	88	-	Expandable Balloon		21 Sec Ignition	S
	NIRO	2005	-	466	110	169	196	-	87	-				

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1967				IMPACT			APOGEE		PAY. LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV. ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	AF7.583	6 Mar	APGC	-	108	180	195	-	88	-	Expandable Balloon		26 Sec Ignition	S
	NIRO	0205	-	440	122	184	175	-	87	-				
10	AA7.168	12 Apr	APGC	355	87	180	131	-	146	-	Mass Spect. Ion Trap			S
	NIRO	2301	-	-	79	175	144	-	76	-				
11	AF7.385	12 Apr	APGC	356	89	180	138	-	132	-	Mass Spect. Ion Trap			S
	NIRO	2349	-	403	97	185	148		76	-				
12	AF7.622	12 Apr	APGC	404	154	180	17'		112	-	TMA Trail			S
	NIRO	2356	-	403	180	180	167	-	95	-				
13	AF7.623	12 Apr	APGC-D3	97	141	270	169	-	114	-	TMA Trail		No Radar Track	S
	NIRO	2357	-	-	-	-	-	-	96	-				
14	AF6.561	13 Apr	APGC	352	52	179	109	-	67	-	Ion Trap			S
	Nike/ Cajun	0622	-	316	49	194	116	-		-				
15	AF8.647	13 Apr	APGC	515	146	196	283	-	176	-	Falling Sphere TMA	Despin	LO Altitude on Chem. Portion	P
	Nike/ Tomahawk	0612	-	425	84	195	175	-		-				
16	AF7.384	18 Apr	APGC	344	95	182	123	-	162	-	Mass Spect. Ion Trap		Good Sized Cone	S
	NIRO	0920	-	375	68	170	135	-	76	-				

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LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
17	AF7.624	18 Apr	APGC	404	163	163	172	-	115	-	TMA Langmuir Probe		No Data TMA on Horizon	F
	NIRO	0925	-	251	47	162	58	-	95	-				
18	AF7.625	18 Apr	APGC-D3	404	151	270	159	-	106	-	TMA		No Second Stage Ignition	F
	NIRO	0925	-	-	-	-	-	-	96	-				
19	AF7.386	18 Apr	APGC	344	95	182	122	-	162	-	Mass Spect. Ion Trap		Nike Roll High (X2) 1 2 RPS No Cone	S
	NIRO	1021	-	378	69	172	138	-	76	-				
20	AF7.560	18 Apr	APGC	404	126	180	170	-	117	-	Falling Sphere Ion Trap		Little Coning	S
	NIRO	1040	-	435	130	182	169	-	94	-				
21	AF8.650	19 Apr	APGC	496	127	180	262	-	195	-	Barium Trails			S
	Nike/ Tomahawk	2340	-	497	132	180	261	-	240	-				
22	AF8.651	28 Apr	APGC	496	161	186	264	-	199	-	Barium Trails		2 of 3 Trails Good	S
	Nike/ Tomahawk	0012	-	462	164	188	254	-	240	-				
23	AG7.272	7 Jun	APGC	-	66	149	163	-	127	-	Meteoritic Dust	Water Recovery	Met. Dust - OK In Flight, but not Recovered	F
	NIRO	1320	-	609	57	155	154	-	100	-				
24	AD21.860	28 Jun	WOPS	-	-	-	-	-	74	-	Plasma Struct. Antenna Breakdown		17,700 FPS Re-entry (Pred.) 16,000 (Act.)	S
	Trail Blazer	2032	-	-	-	-	-	-	28	-				

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1967				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
25	AE3.582	5 Jul	CRR	-	-	-	-	-	175	-	Aurora, IM	Aspect Solar-Mag	Radar Trouble Trat. from Mags.	S
	Aerobee 150	1842	-	-	-	-	-	-	118	-				
26	AH3.529	8 Aug	WSMR	-	87	0	237	-	196	-	EUV Monochromator			S
	Aerobee 150	2145	-	-	72	356	235	-	108	-				
27	AG3.528	15 Aug	WSMR	538	93	358	240	-	191	-	EUV Monochromator			S
	Aerobee 150	1845	-	729	103	350	243	-	100	-				
28	AF7.320	26 Aug	APGC	419	101	161	175	-	104	-	Density (Bremstrahlung) Instrumentation		Payload Instrumentation Failure Vehicle Good	F
	NIRO	0635	-	415	109	152	177	-	174	-				
29	AG7.176	6 Sept	APGC	338	74	-	121	-	184	-	Density Light Scatter		Experiment Failure Pitch-Roll Coupled During Burning	F
	NIRO	0500	-	318	63	164	101	-	215	-				
30	AD6.842	2 Oct	WOPS	316	-	61	106	-	105	-	Antenna Breakdown			S
	Nike/ Cajun	2000	-	-	-	-	108	-	81	-				
31	AH8.645	4 Oct	WOPS	486	-	165	266	-	188	-	BA Release (3)		Beacon Failure @ 30-40 Sec	S
	Nike/ Tomahawk	0020	-	-	-	-	251	-	81	-				
32	AH8.646	5 Oct	WOPS	486	-	165	267	-	187	-	BA Release			S
	Nike/ Tomahawk	0018	-	-	-	-	249	-	81	-				

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				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
33	AG7.637	24 Oct	Puerto Rico	408	98	310	167	-	102	-	Spherical Electrostatic Analyzer	GMD	Vehicle Coning	S
	NIRO	1814	-	407	80	313	180	-	77	-				
34	AG7.638	24 Oct	Puerto Rico	408	98	310	167	-	102	-	Spherical Electrostatic Analyzer	GMD	Vehicle Coning	S
	NIRO	2400	-	407	82	318	180	-	77	-				
35	AG7.639	26 Oct	Puerto Rico	408	98	310	167	-	102	-	Spherical Electrostatic Analyzer	GMD	Coupled During Burning Arithmatic Error	F
	NIRO	1809	-	-	-	-	26	-	77	-				
36	AG7.640	27 Oct	Puerto Rico	408	98	310	167	-	102	-	Spherical Electrostatic Analyzer	GMD		S
	NIRO	1814	-	407	105	320	180	-	77	-				
37	AG7.641	28 Oct	Puerto Rico	408	98	310	167	-	102	-	Spherical Electrostatic Analyzer	GMD		S
	NIRO	1015	-	406	114	291	179	-	77					
38	AD3.530	7 Nov	WSMR	528	105	5	229	-	200	-	Monochromator RPA	Pointing Control	No RPA Data	F
	Aerobee 150	1745	-	540	105	1	243	-	98	-				
39	AD3.365	15 Nov	Brazil	-	190	75	229	-	169	-	Day Air-Glow Monochromator		PM Tube Failed 20% Data Return on Exper.	F
	Aerobee 150	2130	-	588	126	59	227	-	117	-				
40	AG7.314	19 Nov	Brazil	-	65	108	124	-	175	-		Recovery	Only Flotation Bag Recovered	S
	NIRO	1008	-	-	61	106	119	-	100	-				

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1967				IMPACT			APOGEE		PAY. LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
41	AG7.319	22 Nov	Brazil	-	65	108	124	-	175	-		ACS Recovery	Chute Only Found Recovery Failed	S
	NIRO	1007	-	470	60	114	119	-	100	-				
42	AF7.658	29 Nov	APGC	342	103	165	199	-	190	-	Smoke Trail, Turbulence			S
	NIRO	2151	-	340	161	158	121	-	112	-				
43	AF7.661	29 Nov	APGC-D3	342	116	267	119	-	190	-	Smoke Trail, Turbulence			S
	NIRO	2151	-	-	113	265	122	-	112	-				
44	AF7.662	3 Dec	APGC-D3	342	129	262	119	-	190	-	Smoke Trail, Turbulence			S
	NIRO	2153	-	-	116	255	124	-	112	-				
45	AF7.657	3 Dec	APGC	342	126	162	119	-	190	-	Smoke Trail, Turbulence			S
	NIRO	2153	-	344	142	160	119	-	112	-				
46	AG7.880	4 Dec	CRR	374	56	110	134	-	164	-	Mass. Spec. Langmuir Probe		Flat Spin After Tip Eject	S
	NIRO	2220	-	395	42	123	148	-	92	-				
47	AF7.387	4 Dec.	CRR	330	82	114	114	-	200	-	Mass Spec. Langmuir Probe		Flat Spin After Tip Eject	S
	NIRO	2244	-	362	63	113	121	-	92	-				
48	AF7.388	6 Dec	CRR	366	55	110	134	-	162	-	Mass Spec. Langmuir Probe		Ignition @ 28 Sec Little Coning	S
	NIRO	1825	-	383	89	110	134	-	92	-				

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.
2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1967				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
49	AF17.750D	6 Dec	CRR	328	63	88	114	-	505	-	Impedance Probe, Proton Detector, Langmuir Probe			S
	Black Brant	1630	-	357	53	-	137	-	180	-				
50	AF3.268	13 Dec	WSMR	461	82	360	164	-	334	-	Particle Collectors	Recovery	Payload Failure G-Switch Failure Recovery Failed	F
	Aerobee	1259	-	459	92	004	164	-	161	-				
51	AG7.627	13 Dec	EGTR	-	84	179	-	-	106	-	Chemical (TMA)			S
	NIRO	0743	-	-	137	179	187	-	71	-				
52	AG7.630	13 Dec	EGTR	182	182	202	159	-	115	-	Chemical (TMA and Grenide)			S
	NIRO	0823	-	196	315	196	164	-	98	-				
53	AH8.665	14 Dec	APGC	534	140	178	296	-	150	-	Chemical Release	CW Oscillator	Pitch-Roll Coupled Possible Fin Leading Edge Malalignment	F
	Nike/ Tomahawk	0837	-	490	35	-	103	-	90	-				
54	AH8.665	14 Dec	APGC	391	185	200	161	-	115	-	Chemical Release Grenades			S
	Nike/ Tomahawk	0858	-	-	201	201	161	-	98	-				
55	AF7.663	16 Dec	APGC-D3	342	74	-	122	-	190	-	Smoke Trail - Turbulence			S
	NIRO	2158	-	-	-	-	127	-	112	-				
56	AF7.659	16 Dec	APGC	342	72	-	122	-	190	-	Smoke Trail - Turbulence			S
	NIRO	2158	-	370	60	-	126	-	112	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1968				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED	PRED.	PRED.	PRED.	PRED.	WT (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
1	AG7.634	17 Jan	CRR	428	116	76	193	-	100	-	TMA, Diborane		No Track	S
	NIRO	2308	-	-	-	-	-	-	87	-				
2	AG7.633	19 Jan	CRR	428	122	72	192	-	100	-	TMA, Diborane		No Track	S
	NIRO	2308	-	-	-	-	-	-	87	-				
3	AG8-648	22 Jan	CRR	381	100	76	153	-	287	-	Nitric Oxide			F
	Tomahawk	1215	-	413	98	80	169	-	137	-				
4	AG7.635	22 Jan	CRR	428	116	76	188	-	106	-	TMA, Diborane		No Track	S
	NIRO	1320	-	428	150	75	-	-	59	-				
5	AH3.531	19 Feb	WSMR	528	124	356	230	-	200	-	EUV			S
	Aero	1855	-	-	126	356	203	-	98	-				
6	AE7.290	15 Mar	CRR	394	80	127	154	-	145	-	Mag., Elec. & Proton Detectors - Good, ESA Failed			S
	NIRO	0710	-	388	80	134	161	-	-	-				
7	AE3.154	29 Mar	WSMR	804	60	355	121	-	350	-	Spectrograph	Recovery - Partial Success	First Severance Did Not Occur - Film Recovered - OK	P
	Aero	0829	-	402	64	356	122	-	165	-				
8	AH7.177	1 May	APGC	456	126	173	204	-	77	-	7" Falling Sphere		Best Yet!	S
	NIRO	2025	-	495	158	151	217	-	61	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1968				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	AH7.178	2 May	APGC	456	125	170	204	-	77	-	7" Falling Sphere		No Sphere Separation	F
	NIRC	0525	-	459	167	151	216	-	61	-				
10	AE7.325	2 May	APGC	446	121	170	198	-	85	-	Density - Electron Backscatter		Experiment Failed No Data	F
	NIRO	0600	-	453	114	180	212	-	69	-				
11	AG7.644	2 May	Puerto Rico	459	142	310	217	-	82	-	Chemical Release			S
	NIRO	0515L	-	457	-	296	206	-	50	-				
12	AG7.643	7 May	Puerto Rico	459	142	301	222	-	83	-	Chemical Release		Release 4 Sec Late	S
	NIRO	0500L	-	467	-	285	217	-	73	-				
13	AH8.670	12 May	Puerto Rico	-	153	293	214	-	247	-	Chemical Release		No Release - Explosions at 300 Sec	F
	Tomahawk	0506L	-	-	153	301	198	-	114	-				
14	AH8.666	13 May	Puerto Rico	-	151	299	214	-	240	-	BA Release			S
	Tomahawk	0506L	-	-	-	299	198	-	125	-				
15	AG7.571	16 May	Kauai	433	-	345	193	-	92	-	Expanding Sphere			S
	NIRO	2300L	-	465	-	325	201	-	87	-				
16	AH7.572	23 May	Kauai	433	-	345	193	-	89	-	Expanding Sphere			S
	NIRO	1100L	-	469	-	355	201	-	87	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1968				IMPACT			APOGEE		PAY LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV. ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG (IN)	ACS[1,2]				
17	AF17.751D	10 Jun	CRR	346	76	110	127	-	510	-	PCA - Absorption Event - Many Experiments		Rocket Failure at 13,000 ft	F
	BB	1757	-	-	-	-	-	-	181	-				
18	AG7.881	18 Jul	APGC	334	71	-	121	-	197	-	Mass Spectrometer		Experiment out During 2nd Stage Burn	F
	NIRO	0130	-	363	58	178	125	-	92	-				
19	AG7.642	19 Jul	APGC	Accidental Launch While Checking Firing Circuit										F
	NIRO	1833	-	-										
20	AG7.628	23 Jul	APGC	-	87	193	161	-	135	-	TMA Puffer	CW OSC		S
	NIRO	0418	-	-	-	-	-	-	90	-				
21	AG7.629	23 Jul	APGC	-	92	164	198	-	85	-	TMA Trail	CW OSC		S
	NIRO	0419	-	-	67	163	201	-	67	-				
22	AF7.389	23 Jul	APGC	357	80	-	132	-	153	-	Mass Spectrometer			S
	NIRO	0423	-	410	60	160	142	-	87	-				
23	AG7.632	23 Jul	APGC	-	-	194	151	-	140	-	TMA Puffer	CW OSC		S
	NIRO	0428	-	382	55	230	150	-	104	-				
24	AG7.642A	23 Jul	APGC	-	80	164	200	-	89	-	TMA Trail	CW OSC		S
	NIRO	0428	-	-	90	164	200	-	71	-				

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2 List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1968				IMPACT			APOGEE		PAY LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT	ACT	LG. (IN)	ACS[1,2]				
25	AG3.532	6 Aug	WSMR	488	85	355	211	-	232	-	EUV - Partial Data RPA - Partial Data		6 D. at 48 Sec	S
	Aero 150	1845	-	-	-	-	127	-	98	-				
26	AG7.273	8 Aug	Natal	-	-	-	158	-	138	-	Meteorite Dust		Water Recovery	S
	NIRO	0700L	-	998	51	121	158	-	100	-				
27	AG7.274	11 Aug	Natal	-	-	-	98	-	200	-	Meteorite Sensor		Recovery Failed	F
	NIRO	0704L	-	569	43	113	98	-	105	-				
28	AG7.275	12 Aug	Natal	-	-	-	154		138	-	Meteorite Sensor	TM Failed at 180 Sec Returned at 300 Sec		S
	NIRO	0700L	-	961	66	114	153	-	100	-				
29	AE3.725	15 Aug	CRR	494	135	109	179	-	235	-	IR Horizon		Lost Beacon Track	S
	Aero 150	0859	-	680	141	110	179	-	120	-				
30	AG7.276	15 Aug	Natal	-	-	-	97	-	200	-	Meteorite Sensor		Sensor Failed	F
	NIRO	0700L	-	958	53	119	95	-	105	-				
31	AG7.636	19 Aug	CRR	410	163	90	177	-	110	-	Chemical Release Diborane - TMA		Radar Lost Track at 139 Sec 513K Ft	S
	NIRO	1017	-	418	129	95	-	-	87	-				
32	AH8.649	20 Aug	CRR	195	95	90	148	-	257	-	Chemical Release			S
	Tomahawk	0900	-	220	124	97	193	-	123	-				

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2 List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1968				IMPACT			APOGEE		PAY. LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT	ACT	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
33	AH7.685	20 Aug	CRR	410	161	79	175	-	110	-	Chemical Release No/TMA			S
	NIRO	1010	-	401	161	80	-	-	87	-				
34	AH7.667	27 Aug	CRR	408	-	-	174	-	107	-	Chemical Release Diborane - TMA		Radar Lost Track at 89 Sec	S
	NIRO	^334	-	417	135	112	-	-	87	-				
35	AH8.668	27 Aug	CRR	446	124	-	195	-	245	-	Chemical Release			S
	Tomahawk	0444	-	459	105	94	201	-	122	-				
36	A07.913-1	4 Sep	Eglin	467	100	241	220	-	80	-	Density 7" Sphere			S
	NIRO	0104	-	508	122	238	227	205	61	-				
37	A07.913-2	4 Sep	Eglin	467	100	242	220	-	80	-	Density 7" Sphere		No Sphere Separation	F
	NIRO	0129	-	503	114	240	232	-	61	-				
38	AT3.170	16 Sep	WSMR	-	3.7	-	11.4	-	90	-	Rail Launch Inert Sustainer	Diagnostic Payload		S
	Aero 170	1650	-	-	4.8	-	11.7	-	104	-				
39	AB19.287	9 Nov	CRR	864	486	070	196	-	592	-	Magnetometer Particle Counters		Lost Radar Track Over the Horizon	S
	Javelin	0855	-	867	451	041	-	-	-	-				
40	AF7.292	9 Nov	CRR	400	-	070	150	-	145	-	Magnetometer Particle Counter		No 2nd Stage Ignition	F
	BB	0859	-	127	5.5	083	16	-	103	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1968				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT	ACT	LG. (IN)	ACS[1,2]				
41	AG17.757	19 Nov	CRR	328	63	-	116	-	588	-	PCA - Several Experiments			S
	BB	0800	-	382	-	-	124	-	-	-				
42	AT3.533	21 Nov	WSMR	520	-	-	240	-	198	-	EUV RPA - Partial Data			S
	Nero 150	1830	-	-	-	-	244	-	98	-				
43	AF7.660	9 Dec	ADTC	344	77	-	119	-	190	-	Smoke Trail			S
	NIRO	2155	-	-	60	-	124	-	112	-				
44	AF7.664	9 Dec	ADTC	344	76	270	119	-	190	-	Smoke Trail			S
	NIRO	2155	-	350	89	274	117	-	112	-				
45	AG7.883	10 Dec	WOPS	338	124	-	119	-	181	-	Mass Spectrometer Neg Ion Langmuir Probes			S
	NIRO	1832	-	364	-	-	122	-	92	-				
46	AH7.887	12 Dec	WOPS	337	-	-	119	-	185	-	Mass Spectrometer Langmuir Probes			S
	NIRO	0245	-	357	-	-	117	-	92	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1969				IMPACT			APOGEE		PAY LOAD						
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)							
LINE NO.	NUMBER TYPE	DATE (UT) TIME (UT)	PLACE SCIENTIST	PRED. ACT.	PRED ACT.	PRED. ACT	PRED. ACT.	PRED. ACT	WT (LBS) LG. (IN)	RECOVERY[1,2] ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
1	AH7.671	6 Jan	Eglin	431	187	178	202	-	78	-	Chemical Release BA		No Radar Track	S
	NIRO	2341	-	-	-	-	-	-	53					
2	AG7.626	7 Jan	Eglin	378	97	176	146	-	144	-	Chemical Release TMA	Strobe Lights	Visual Track Over the Top	S
	NIRO	0035	-	385	74	200	153	-	116	-				
3	AH7.672	7 Jan	Eglin	450	185	176	208	-	80	-	Chemical Release BA			S
	NIRO	2338	-	459	188	220	217	-	52	-				
4	AG7.652	12 Jan	Eglin	378	103	174	146	-	143	-	Chemical Release TMA			S
	NIRO	0132	-	391	79	165	158	-	116	-				
5	AH7.673	13 Jan	Eglin	431	167	175	208	-	80	-	Chemical Release BA			S
	NIRO	2343	-	465	171	165	220	-	52	-				
6	AH7.891	31 Jan	WOPS	355	135	114	134	-	157	-	Mass Spect (+) Langmuir Probe			S
	NIRO	1730	-	-	132	-	134	-	89	-				
7	AH7.573	31 Jan	WOPS	431	117	-	193	-	90	-	Inflatable Sphere			I
	NIRO	1836	-	-	-	-	-	-	87	-				
8	AH7.576	31 Jan	WOPS	431	117	-	193	-	90	-	Inflatable Sphere			S
	NIRO	2153	-	-	-	-	-	-	87	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1969				IMPACT			APOGEE		PAY. LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT	ACT	A.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	AT3.727	7 Mar	Natal	-	-	-	189	-	220	S	Minute of Arc Probe			S
	Aero 150	2240	-	792	163	-	194	-	107	S				
10	AT3.756	21 Mar	CRR	458	-	079	153	-	306	S	Aurora Input - Output			S
	Aero 150	0453	-	-	129	079	155	-	111	S				
11	AT3.759	30 Mar	CRR	462	85	148	159	-	291	S	Auroral Input - Output			S
	Aero 150	0333	-	-	90	147	151	-	111	S				
12	AG3.527	4 Apr	WSMR	520	80	357	245	-	196	-	EUV	Pointing Control		S
	Aero 150	1935	-	530	82	354	246	-	110	-				
13	A.3.534	4 Apr	WSMR	525	89	355	233	-	199	-	EUV	Pointing Control		S
	Aero 150	1950	-	530	113	356	220	-	110	-				
14	AT8.288	18 Apr	CRR	650	190	127	298	-	160	-	Magnetics			S
	N/T	0547	-	640	180	127	298	-	115	-				
15	AH7.297	18 Apr	CRR	463	79	120	161	-	137	-	Magnetics			S
	NIRO	0548	-	393	39	123	151	-	110	-				
16	AH7.678	13 May	Eglin	420	126	165	182	-	98	-	Chemical Release			S
	NIRO	0104	-	429	153	163	192	-	80	-				

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2. List Type of Recovery and Type or Brand of ACS

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

LINE NO.	1969 NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	IMPACT TIME (SEC) PRED. / ACT.	IMPACT RANGE (KM) PRED. / ACT	IMPACT AZ (DEG) PRED. / ACT.	APOGEE ALT (KM) PRED. / ACT.	APOGEE TIME (SEC) PRED. / ACT.	PAY LOAD WT (LBS) / LG (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
17	AH7.674	13 May	Eglin	-	124	165	196	-	95	-	Chemical Release			S
	NIRO	0123	-	429	179	162	192	-	59	-				
18	AH7.686	14 May	Kauai	415	145	034	175	-	110	-	Chemical Release			S
	NIRO	1510	-	415	145	337	175	-	96	-				
19	AH7.679	15 May	Eglin	-	98	179	185	-	96	-	Chemical Release			S
	NIRO	0105	-	445	79	166	204	-	80	-				
20	AH7.675	15 May	Eglin	-	98	178	198	-	94	-	Chemical Release			S
	NIRO	0128	-	444	101	140	204	-	59	-				
21	AC19.289	16 May	CRR	960	811	063	766	-	146	-	Magnetometer		TM Out @ 320 Sec	P
	Javelin	0353	-	955	822	074	779	-	52	-				
22	AH7.687	22 May	Kauai	415	146	345	175	-	110	-	Chemical Release			S
	NIRO	0546	-	415	130	340	179	-	96	-				
23	AH8.669	22 May	Kauai	417	217	345	182	-	252	-	Atomic Oxygen Photometers			S
	N/T	0737	-	417	217	345	177	-	123	-				
24	A08.919-1	22 May	Kauai	415	121	345	179	-	265	-	No Trails Photometers - Failed		Sandia Fins	P
	N/T	1300	-	415	121	315	156	-	142	-				

1. Use Letter to Show Performance. S – Success, P – Partial Success, F – Failure, N – None Used.
2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1969				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
25	A07.918-1	22 May	Kauai	415	146	345	175	-	110	-	Chemical Release			S
	NIRO	1503	-	415	146	343	171	-	96	-				
26	AF19.291	30 May	CRR	980	502	108	824	-	146	-	Magnetometer			S
	Javelin	0851	-	978	496	104	-	-	52	-				
27	A16.010-1	15 Jun	Natal	808	340	90	605	-	198	-	VLF Propagation - Failed			F
	88 IV	1105	-	763	480	109	582	-	84	-				
28	AD21.861	18 Jun	WOPS	-	-	-	299	-	65	-	Reentry Physics 301		17,350 FPS	S
	TB	0156	-	-	-	-	-	-	26	-				
29	AT3.535	24 Jun	WSMR	1020	82	349	217	-	225	-	EUV	BPC		S
	Aerobee	1900	-	900+	-	-	214	-	113	-				
30	AH7.888	1 Jul	Eglin	346	76	158	130	-	171	-	Mass Spectrometer Neutral - No Data			F
	NIRO	2200	-	384	66	154	138	-	87	-				
31	A07.902-1	7 Aug	CRR	335	76	110	119	-	200	-	Mass Spec - Failed Langmuir Probes - Good		Burn Through at Iroquois Throat 1 Sec before B.O.	P
	NIRO	0530	-	310	39	112	84	-	90	-				
32	AT7.179	7 Aug	CRR	-	-	-	193	-	-	-	7" Falling Sphere BA Puff			S
	NIRO	0435	-	-	-	-	195	-	-	-				

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1969				IMPACT TIME (SEC)	IMPACT RANGE (KM)	IMPACT AZ (DEG)	APOGEE ALT (KM)	APOGEE TIME (SEC)	PAY-LOAD					
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED. / ACT	PRED / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
33	A07.902-2	13 Aug	CRR	335	76	110	119	-	112	-	Mass Spectrometer Langmuir Probe			S
	NIRO	0523	-	-	-	-	114	-	-	-				
34	A03.903-1	15 Aug	WSMR	526	77	354	209	-	235	-	IUV			S
	Aero 150	2155	-	-	-	-	212	-	109	-				
35	A16.010-2	6 Sep	Natal	808	340	80	605	-	198	-	VLF Propagation			S
	BB IV	1110L	-	788	418	110	623	-	84	-				
36	A07.890	11 Oct	CRR	335	76	110	119	-	198	-	Mass Spect Langmuir Probe			S
	NIRO	0200	-	-	-	-	117	-	90	-				
37	A03.910-2	23 Oct	CRR	510	93	165	180	-	248	-	IR		12 Sec of Good Data then Sensor Saturated	S
	Aero 150	0500	-	1120	106	159	180	-	113	-				
38	AJ17.602	2 Nov	CRR	328	63	070	114	-	600	-	Polarcap - 814			S
	BB V	2020	-	334	68	052	119	-	187	-				
39	AJ17.758	3 Nov	CRR	328	63	108	114	-	600	-	Aurora Input Output - 621			S
	BB V	1205	-	341	55	115	127	-	187	-				
40	A07.902-3	3 Nov	CRR	335	76	110	119	-	200	-	Polarcap - 814			S
	NIRO	0629	-	352	84	110	117	-	90					

1. Use Letter to Show Performance: S Success, P - Partial Success, F - Failure, N None Used.
2. List Type of Recovery and Type or Brand of ACS

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1969				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED	PRED.	PRED	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
41	AT7.396	3 Nov	CRR	402	103	110	169	-	-	-	Density - 8"			S
	NIRO	0642	-	423	121	112	209	-	-	-				
42	AG7.882	3 Nov	CRR	379	84	110	140	-	160	-	Mass Spect. - 609			S
	NIRO	0730	-	388	84	122	140	-	87	-				
43	AT7.397	3 Nov	CRR	402	103	110	169	-	-	-	Density 8"		Radar Lost	P
	NIRO	1232	-		-	117	167	-	-	-				
44	AJ17 616	3 Nov	CRR	328	63	118	114	-	600	-	Polar Cap - 814		No Door Ejection	P
	BB V	1352	-	333	64	116	122	-	187	-				
45	AJ17.906-1	3 Nov	CRR	328	63	110	114	-	600	-	Polar Ionosphere			S
	BB V	1711	-	470	56	108	127	-	187	-				
46	AH7.885	3 Nov	CRR	379	84	108	140	-	160	-	Mass Spect - 701			S
	NIRO	1730	-	393	95	116	143	-	87	-				
47	A07.902-4	3 Nov	CRR	335	76	114	119	-	200	-	Mass Spect			S
	NIRO	1747	-	360	79	123	122	-	90	-				
48	AT7.395	3 Nov	CRR	402	103	108	169	-	110	-	Density - 811		Pieces at 45 Sec	F
	NIRO	1840	-	239	19	116	47	-	-	-				

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.

2 List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1969				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED	PRED.	PRED	PRED.	WT (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT	ACT	ACT	ACT	ACT.	LG (IN)	ACS[1,2]				
49	AJ17.611	3 Nov	CRR	328	63	110	114	-	600	-	Polar Cap - 814		Payload Broke off at 13 Sec. One Boom out @ 9 Sec	F
	BB V	2245	-	283	26	112	82	-	187	-				
50	AT7.398	3 Nov	CRR	402	103	108	169	-	-	-	Density 8'			S
	NIRO	2308	-	456	111	120	192	-	-	-				
51	AH7.893	4 Nov	CRR	379	84	110	140	-	160	-	Mass Spect - 701			S
	NIRO	2250	-	392	101	116	143	-	87	-				
52	AJ17 617	4 Nov	CRR	328	63	109	114	-	600	-	Polar Cap - 814			S
	BB V	2308	-	342	53	115	127	-	187	-				
53	AH7.889	5 Nov	CRR	335	76	110	119	-	200	-	Mass Spect - 701	TM/Beacon - Good	MS Failed	F
	NIRO	-	-	360	76	117	122	-	87	-				
54	AH7.892	7 Nov	CRR	335	76	110	119	-	200	-	Mass Spect - 701	TM/Beacon - Good	MS Failed	F
	NIRO	0251	-	36	85	114	122	-	87	-				
55	AH7.680	5 Dec	Eglin	394	100	184	156	-	136	-	Chemical Release TMA - Water, Failed			F
	NIRO	0930	-	388	106	181	158	-	113	-				
56	AH7.681	5 Dec	Eglin	394	100	184	167	-	133	-	Chemical Release TMA Trail	Flashing Light		S
	NIRO	1000	-	384	113	183	154	-	79	-				

1 Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1969				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT	ACT.	ACT.	LG. (IN)	ACS[1,2]				
57	AH7.676	5 Dec	Eglin	380	92	183	153	-	142	-	Chemical Release BA			S
	NIRO	1056	-	382	114	174	151	-	89	-				
58	A07.907-1	10 Dec	CRR	-	-	-	158	-	-	-	Polar Disturbance			S
	NIRO	0431	-	-	-	-	166	-	-	-				
59	AH7.682	12 Dec	Eglin	394	100	173	166	-	131	-	Chemical Release TMA - Water			S
	NIRO	0230	-	390	126	160	156	-	106	-				

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2 List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1970				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
1	A13.726	7 Feb	WSMR	994	80	359	148	-	379	S	IR-Good			S
	Aero 150	0531	Walker	900+	77	359	142	-	-	S				
2	A07.015-1	7 Mar	APGC-D3	414	89	172	177	-	83	-	10" Falling Sphere			S
	NIRO	1651	Faire	405	69	149	167	-	64	-				
3	A07.024-1	7 Mar	APGC-D3	370	103	177	158	-	134	-	O_2 - OH Soft X-ray			S
	NIRO	1809	Weeks	400	103	158	158	-	98	-				
4	A07.016-1	7 Mar	APGC-D3	408	96	229	183	-	118	-	7" Sphere - Good NA Dispenser - UNK	TM, Beacon - Good	Partial Data Low	P
	NIRO	1810	Faire	355	37	235	111	-	98	-				
5	A07.902-9	7 Mar	WOPS	-	-	-	116	-	-	-	Mass Spectrometer Neg. Ion - Partial	Beacon - Intermittent	Partial Data Lost Track Off and On	P
	NIRO	1837	Philbrick	-	-	-	122	-	-	-				
6	A07.902-5	7 Mar	WOPS	-	-	-	116	-	-	-	Mass Spectrometer Neg. Ion - Good			S
	NIRO	1839	Philbrick	-	-	-	122	-	-	-				
7	A07.902-10	7 Mar	WOPS	-	-	-	116	-	-	-	Mass Spectrometer Neutral - Good			S
	NIRO	1846	Philbrick	-	-	-	122	-	-	-				
8	A07.016-2	7 Mar	APGC-3D	454	106	155	225	-	68	-	7" Sphere - Good			S
	NIRO	1925	Faire	531	39	134	246	-	54	-				

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2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1970				IMPACT			APOGEE		PAY LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED	PRED	WT (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT	ACT	ACT	LG. (IN)	ACS[1,2]				
9	A07.024-2	7 Mar	APGC-3D	370	80	201	150	-	134	-	Atmos. Composition Soft X-ray			S
	NIRO	1944	Weeks	410	68	157	158	-	98	-				
10	AT8.298	9 Mar	CRR	540	224	140	298	-	150	-	Magnetic Field Particle Detector			S
	A/T	0314	VanCour	529	220	146	296	-	120	-				
11	A07.907-2	9 Mar	CRR	-	-	-	158	-	118	-	Elec Field and Structure			S
	NIRO	0321	Sagalyn	-	-	-	166	-	-	-				
12	A03.006-1	13 Mar	CRR	1200	-	180	203	-	224	-	Electron Beam			S
	Aero 150	0618	O'Neill	1745	85	182	200	-	-	-				
13	A07.907-3	25 Mar	CRR	-	-	109	159	-	118	-	Elec Field - N G Elec Structure - Good	Door not Released		S
	NIRO	0701	Sagalyn	405	-	110	167	-	-	-				
14	A07.907-4	25 Mar	CRR	-	-	-	-	-	-	-	Electric Field and Structure			S
	NIRO	0320	Sagalyn	405	-	-	163	-	-	-				
15	A18.903.3	4 Apr	Eglin	602	362	170	357	-	319	-	EUV - No Data	TM - Los @ 31 6 Sec Bea-Los @ 30 Sec	Skin Track Lost Antennas?	F
	BB VS	1628	-	608	-	-	354	-	113	-				
16	A07.913-3	12 Apr	Eglin	358	153	170	132	-	132	-	10" Falling Sphere O_2, O_3		No Sphere Release	F
	NIRO	1914	Faire/ Weeks	356	-	174	127	-	90	-				

1. Use Letter to Show Performance S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1970				IMPACT			APOGEE		PAY LOAD						
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)							
LINE NO	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED / ACT	PRED / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
17	AH7.677	7 May	Eglin	392	84	160	158	-	135	-	Chemical Release Diborane			S
	NIRO	0105	Rosenberg	581	87	160	159	-	88	-				
18	A07.901-2	7 May	Eglin	378	95	161	153	-	141	-	Chemical Release			S
	NIRO	0145	Rosenberg	383	95	150	153	-	106	-				
19	A07.901-4	21 May	Eglin	350	76	165	130		188	-	Chemical Release BA-AL-BA Putts			S
	NIRO	0207	Rosenberg	352	79	173	130	-	95	-				
	A07-901-3	21 May	Eglin	391	100	164	156	-	136	-	Chemical Release TMA	Strobe Lights		S
	NIRO	1035	Rosenberg	387	132	161	151	-	100	-				
21	A07 901-1	21 May	Eglin	405	109	165	164	-	126	-	Chemical Release NA			S
	NIRO	1106	Rosenburg	350	124	158	156	-	79	-				
22	A07.901-5	22 May	Eglin	362	77	165	137	-	169	-	Chemical Release 2 BA			S
	NIRO	1112	Rosenburg	373	71	160	140	-	[illegible]	-				
23	A04.004-1	27 Jul	WSMR	470	82	354	186	-	376	-	Map II, 18		4 Sec Short Burn	S
	Aero 170	0638	Wallace	-	79	357	143	-	151	S				
24	A03.903-2	12 Aug	WSMR	1000	80	355	225	-	216	S	EUV	SRFC - N.G	No Data	F
	Aero 150	1826	Hinter-egger	991	82	-	223	-	106	-				

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used

2 List Type of Recovery and Type or Brand of ACS

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1970				IMPACT			APOGEE		PAY LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED	PRED	WT (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT	ACT.	ACT	ACT.	LG. (IN)	ACS[1,2]				
25	A04.002-1	12 Aug	WSMR	1040	80	356	259	-	244	F	EUV	BBPC		S
	Aero 170	1902	Hinter-egger	1000	84	002	246	-	110	-				
26	A16.010-3	21 Aug	CRR	-	-	-	629	-	-	-				F
	BB IV	0117	-	-	-	-	56	-	-	-				
27	A07.901-6	20 Nov	Eglin	380	92	150	153	-	148	-	Chemical Release TMA & Lithium			S
	NIRO	2219	Rosenberg	-	82	140	151	-	117	-				
28	A07.917-1	20 Nov	Eglin	406	103	190	174	-	121	-	Chemical Release TMA & Lithium			S
	NIRO	2219	Rosenberg	-	86	197	169	-	97	-				
29	AT7.895	20 Nov	Eglin	348	76	175	126	-	176	-	Neutral Mass Spec O_2 Photometer - Sensor Saturated			S
	NIRO	2223	Philbrick	369	58	173	121	-	109					
30	AT7.396	20 Nov	Eglin	356	80	175	132	-	160	-	Ion Mass Spec Langmuir Probe Secondary			S
	NIRO	2223	Philbrick	387	71	182	137	-	89					
31	A07.917-3	20 Nov	Eglin	404	103	150	153	-	122	-	Chemical Release TMA & Lithium O_2 Singlet Delta			S
	NIRO	2226	Rosenberg	-	85	142	158	-	82	-				
32	A07.917-2	20 Nov	Eglin	396	100	200	166	-	128	-	Chemical Release TMA & Lithium			S
	NIRO	2226	Rosenberg	405	84	200	171	-	92	-				

1. Use Letter to Show Performance. S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1970				IMPACT			APOGEE		PAY LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED	PRED	PRED.	PRED.	PRED.	WT (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT	ACT.	ACT	ACT.	ACT	LG. (IN)	ACS[1,2]				
33	AD21.862	21 Nov	WOPS	-	-	-	301	-	62	-	Plasma Diagnostics Electron Density		Reentry Velocity ≈ 17,000 FPS	S
	TB II	2356	-	-	-	-	301	-	27	-				
34	A04.004-3	2 Dec	WSMR	980	80	358	200	-	343	S	IR Horizons		ACS Out 0 225 Sec 110 Sec Good Data	S
	Aero	0832	-	950	82	349	190	-	-	S				

1. Use Letter to Show Performance S – Success, P – Partial Success, F – Failure, N – None Used

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

LINE NO	1971 NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	IMPACT TIME (SEC) PRED / ACT	IMPACT RANGE (KM) PRED / ACT	IMPACT AZ (DEG) PRED. / ACT	APOGEE ALT (KM) PRED / ACT	APOGEE TIME (SEC) PRED / ACT	PAYLOAD WT. (LBS) / LG (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
1	A07.016-3	5 Jan	WSMR	498	134	345	260	-	71	-	Density - 7" Sphere			S
	NIRO	2141	Faire	696	-	-	278		53					
2	A07.015-2	8 Jan	WSMR	498	134	345	260	-	71	-	Density - 7" Sphere			S
	NIRO	2231	Faire	610	-	-	277	-	53	-				
3	A07.015-3	12 Mar	WSMR	498	134	348	261	-	66	-	Density - 7" Sphere			S
	NIRO	0413	Faire	-	105	-	280	-	53	-				
4	A07.913-3	12 Mar	WSMR	498	134	356	259	-	68	-	Density 7" Sphere		Unclean Payload Separation Effected Quality of Data	P
	NIRO	0655	Faire	-	129	355	261	-	53	-				
5	A04.002-2	16 Mar	WSMR	1060	76	356	259	-	240	F	EUV	[illegible]	[illegible] Data [illegible]	S
	Aero 170	1900	Hinteregger	1000+	82	351	270	-	-	-				
6	A08.019-1	19 Mar	CRR	562	-	150	336	-	120	-	Ru Mag Electron and Proton Detectors		Strong Magnetic Event Occurred During Launch	S
	N/T	1744	Vancour	595	85	157	336	-	-	-				
7	A07.019-2	19 Mar	CRR	393	79	150	164	-	130	-	[illegible] Mag Electron and Proton Detectors		Beacon Loss [illegible] 320 sec [illegible] FM Skin Track to Impact	S
	NIRO	1745	Vancour	397	90	145	-	-	-					
8	A18.006-3	24 Mar	CRR	-	209	110	389	-	-	-	IR-Airglow			S
	BBV	0526	Vancour	683	225	117	367	-	-	S				

1. Use Letter to Show Performance S Success, P Partial Success, F Failure, N None Used

2. List Type of Recovery and Type or Brand of ACS

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1971				TIME (SEC)	IMPACT RANGE (KM)	AZ (DEG)	APOGEE ALT (KM)	APOGEE TIME (SEC)	PAY LOAD					
LINE NO	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED / ACT	PRED / ACT	PRED / ACT	PRED / ACT	PRED / ACT	WT (LBS) / LG (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
9	A04 004-2 / Aero 170	3 Apr / 0950	WSMR / Walker	[illegible] / 600+	[illegible] / 84	359 / 359	[illegible] / 159	- / -	463 / 184	[illegible] / -	IR-Stellar Sources		Heaviest Aerobee Payload Success - Fully Recovered	[illegible]
10	A07 902-7 / NIRO	6 May / 0116	ADTC / Narcisi	[illegible] / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	116 / 121	- / -	[illegible] / 96		Mass Spec - Good; Short Path Length Mass Spec No Data			[illegible]
11	A07 90[illegible] / NIRO	[illegible] May / [illegible]	ADTC / Narcisi	[illegible] / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	- / -	[illegible] / [illegible]	- / -	Quadrupole Mass Spec - Good; SPL MS-No Data			
12	A07.91[illegible] / NIRO	1[illegible] May / 0024	ADTC / [illegible]	[illegible]	4 / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]		[illegible] / 49	- / -	Density - Sphere [illegible]		Beacon [illegible] Degraded data from Sphere	[illegible]
13	A07.91[illegible] / NIRO	1[illegible] May / 01[illegible]	ADTC / -	[illegible] / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	-	[illegible] / 41	-	TMA, NA, LI - Spectacular			[illegible]
14	A07 91[illegible]-2 / NIRO	1[illegible] May / 01[illegible]	ADTC / -	[illegible] / 350	[illegible] / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	-	14 / [illegible]	- / -	TMA, NA, LI - Good	S Band Antenna Test - Good		[illegible]
15	A07 921-1 / NIRO	18 May / 0206	ADTC / -	400 / -	[illegible] / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	- / -	[illegible] / [illegible]	-	Density - [illegible] Sphere; TMA - Good			[illegible]
16	A07 91[illegible]-4 / NIRO	18 May / 0221	ADTC / -	- / [illegible]	- / [illegible]	[illegible] / [illegible]	[illegible] / [illegible]	-	[illegible] / 4	-	Density [illegible] - Sphere		[illegible]	[illegible]

1 Use Letter to Show Performance S Success P Partial Success F Failure N None Used

2 List Type of Recovery and Type or Brand of ACS

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1971				IMPACT			APOGEE		PAY LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED / ACT	PRED / ACT	PRED / ACT	PRED / ACT	PRED / ACT	WT (LBS) / LG (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
17	A08 919-2	18 May	ADTC	-	130	159	186	-	238	-	Chemical - No Good Spectro Good			S
	N/T	0241	-	460	97	159	203		122	-				
18	A07 918-4	18 May	ADTC	384	93	176	156	-	148	-	Chemical - $FeCO_4$ - Good			S
	NIRO	0305	-	537	69	184	158	-	101	-				
19	A07 917-6	18 May	ADTC	-	-	-	149	-	145	-	TMA, NA, CI Good			S
	NIRO	1009	-	-	-	-	-	-	82	-				
20	A07 918-3	19 May	ADTC	368	97	175	143	-	138		Chemical Grenade TMA Good			S
	NIRO	0114	-	-	90	172	137	-	96	-				
21	A07 917-4	21 May	ADTC	200	101	175	148	-	126	-	Chemical $FeCO_4$			S
	NIRO	0115	-	-	-	-	-	-	95	-				
22	A16 108-1	7 Jun	CRR	-	340	-	-	-	165	-	VLF Propagation		Radar LOS at 70 Sec Indicated performance above predicted	S
	68 IV A	1935	Harvey Lewis	-	-	-	-	-	-	-				
23	A04.116-1	29 Jun	WTR	-	-	-	163	-	-	S	Chaser Radio - eters		Rail Launch	S
	Aero 170	1310	-	-	-	-	161	-	-	S				
24	A04 004-4	29 Jun	WSMR	980	-	-	158	-	453	S	HI Star		1st foamed Firing	S
	Aero 170	0910	-	975	69	355	156	-	-	S				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1971				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOV-ERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
25	A07.017-1	21 Sep	WSMR	403	88	356	172	-	148	-	Density - No Good Bremsstrahlung	TM LOS @ 270 Sec	Lost Experiment Power - Successful Payload Functions and Separation	F
	NIRO	1030	-	570	89	345	164	-	112	-				
26	A07.914-1	27 Sep	WSMR	403	88	356	172	-	148	-	Density - Good Bremsstrahlung			S
	NIRO	1030	-	570	90	005	169	-	112	-				
27	A08.103-2	5 Oct	WOPS	550	291	153	280	-	160	-	Density - Photometers			S
	N/I	2030	Weeks	518	256	151	275	-	120	-				
28	A07.913-6A	6 Oct	WOPS	425	187	151	177	-	84	-	Density - Optical			S
	NIRO	0032	Weeks	430	200	-	187	-	83	-				
29	A07.101-5	6 Oct	WOPS	-	119	098	112	-	-	-	Neutral Atmosphere			S
	NIRO	0033	Philbrick	355	114	-	116	-	-	-				
30	A07.102-4	6 Oct	WOPS	-	220	106	211	-	-	-	Density-7" Sphere		Partial Data	P
	NIRO	0042	Faire	492	208	-	230	-	-	-				
31	A07.913-6	6 Oct	WOPS	-	220	110	211	-	-	-	Density-7" Sphere		Nominal Vehicle Through 2nd Stage	F
	NIRO	0103	Faire	268	31	-	52	-	-	-				
32	A07.101-6	6 Oct	WOPS	-	121	098	113	-	-	-	Neutral Atmosphere			S
	NIRO	0245	Philbrick	360	109	-	119	-	-	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1971				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
33	A07.902-6	6 Oct	WOPS	-	121	096	113	-	-	-	Mass Spec - Negative Ion			S
	NIKO	1200	Narcisi	355	92	-	119	-	-	-				
34	A07.101-3	6 Oct	WOPS	-	124	110	117	-	-	-	Mass Spectrometer			S
	NIKO	1231	Narcisi	353	109	104	114	-	-	-				
35	A07.101-4	6 Oct	WOPS	-	124	107	117	-	-	-	Mass Spectrometer			S
	NIKO	1244	Narcisi	356	109	-	116	-	-	-				
36	A07 101-2	6 Oct	WOPS	-	124	106	117	-	-	-	Mass Spectrometer		Partial Data	S
	NIKO	1305	Narcisi	352	79	-	114	-	-	-				
37	A03.910-1	16 Oct	WSMR	960	80	360	208	-	235	S	IR Airglow			S
	Aero 150	0331	O'Neil	900+	68	357	214	-	-	-				
38	A04.004-5	29 Oct	WSMR	980	80	360	158	-	442	S	IR - HI Star			S
	Aero 170	1109	Walker	900+	98	358	158	-	-	S				
39	A04.012-1	3 Nov	WSMR	1011	89	360	219	-	296	F	Atmos. OH - Good, Sky Radiance - Good	BBPC - Failed Recovery - No 1st Sequence		P
	Aero 170	1230	Fenn	-	84	350	249	-	-	-				
40	A03.002-3	9 Nov	WSMR	990	89	355	214	-	228	S	UV - Good	BPC - Good		S
	Aero 150	1900	Manson	1000	82	350	217	-	-	-				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1971				IMPACT			APOGEE		PAY-LOAD					
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	TIME (SEC) PRED. / ACT.	RANGE (KM) PRED. / ACT.	AZ (DEG) PRED. / ACT.	ALT (KM) PRED. / ACT.	TIME (SEC) PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
41	A03.002-3	9 Nov	WSMR	990	89	355	212	-	229	S	XUV - Good	BPC - Good		S
	Aero 150	1900	Higgins	1000	82	349	213	-	-	-				
42	A09.106-5	16 Nov	ADTC	440	-	165	164	-	187	-	Chemical Release Vehicle Diagnostics			S
	U/T	2218	Vickery	530	145	172	166	-	100	-				
43	A04.116-2	24 Nov	WTR	-	-	-	161	-	-	-	Chaser 2 - OK			S
	Aero 170	0615	Huffman	-	-	-	145	-	-	-				
44	A07.102-3	10 Dec	CRR	508	166	110	253	-	77	-	Density-7"Sphere			S
	NIRO	1446	-	482	175	112	251	-	53	-				
45	A08.102-2	10 Dec	CRR	539	170	139	298	-	136	-	Density-10" Sphere	Tip @ 49 Sec - N.G. Sphere @ 52 Sec - OK	No Tip Release	F
	N/T	1624	-	523	143	150	290	-	89	-				
46	A07.216-1	10 Dec	CRR	509	142	140	255	-	77	-	Density-7" Sphere			S
	NIRO	1800	-	477	151	150	246	-	53	-				

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2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1972				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
1	A04.004-6	17 Jan	WSMR	980	50	360	160.9		442	S	HI Star	Recovery, ACS		S
	Aerobee 170	0207	Stark/ Walker	900+	58	356	161			S				
2	A07.217-1	31 Jan	WOPS	452	220	105	220		71		Density - 7" Falling Sphere		High Winds @ Launch 77.6° El for 80° Eff	S
	NIRO	1745	Faire	478	143	110	201		55					
3	AT7.897	31 Jan	WOPS	336	123		117		185		Mass Spect. Neg Ion		Hi Winds @ Launch 77.3° El for 80° Eff No Timer Function	F
	NIRO	2150	Narcisi	340	98		120		98					
4	A07.001-1	6 Feb	WOPS	336	120		117		194		Mass Spect. Neg Ion			S
	NIRO	1715	Narcisi	324	90		95		98					
5	A30.205-3	6 Mar	Poker Flat				74		34		OH Photometer			S
	Astrobee D	1214	Grieder				86							
6	A30.205-4	9 Mar	Poker Flat				90		28		IR-Circular Variable Filter			S
	Astrobee D	1052	Grieder				90							
7	A17.110-3	16 Mar	Poker Flat		71	029	142				IR, VSBL, Ion Comp, Electron Density, Particles			S
	Black Brant V A	1017	Ulwick	379+	49	038	145							
8	A18.109-1	5 Apr	Chill	496	197	110	258		497		Electric Field, Charged Particles		Door & Boom Problems	P
	Black Brant V C	0356	Sagalyn	482	118	135	248							

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1972				IMPACT			APOGEE		PAY. LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	A07.921-3	5 Apr	ADTC		89	180	159		139		Chemical Release			S
	NIRO	2345	Vickery	394	95	180	160		94					
10	A07.106-4	10 Apr	ADTC	394	95	175	159		138		Chemical Release			S
	NIRO	2338	Vickery		103	175	155		84					
11	A07.921-5	12 Apr	ADTC	410	100	175	177		116		Chemical - TMA		No Track	S
	NIRO	2343	Vickery						91					
12	A07.107-1	13 Apr	ADTC	334	70	175	117		192		Mass Spect. - Neutral			S
	NIRO	0100	Philbrick	306	128	187	120		100					
13	AT7.894	13 Apr	ADTC	346	81	175	126		174		Mass Spect.			S
	NIRO	0116		315	82	170	128		103					
14	A08.013-1	13 Apr	ADTC		150	175	202		238		Chemical Release			S
	Nike Tomahawk	0130	Good	463	121	173	214		122					
15	A07.217-2	13 Apr	ADTC		121	175	185		98		Falling Sphere - 7" Tma Trail			S
	NIRO	0145		460	93	191	190							
16	A07.215-1	13 Apr	ADTC		120	175	216		87		7" Falling Sphere			S
	NIRO	0400		496	110	186	219		62					

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2 List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1972				IMPACT			APOGEE		PAY LOAD						
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)							
LINE NO	NUMBER	DATE (UT)	PLACE	PRED	PRED.	PRED	PRED.	PRED	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT	ACT.	ACT.	ACT	ACT	LG (IN)	ACS[1,2]				
17	A07.921-4	13 Apr	ADTC		81	175	155		127		Chemical Release - COS, TMA			S
	NIRO	0415		395		187	164		91					
18	A07.921-2	13 Apr	ADTC	386	97	175	160		133		TMA, Grenades		No Radar	S
	NIRO	0750							77					
19	A07.921-6	13 Apr	ADTC	410	101	175	175		115		TMA		No Radar	S
	NIRO	0930							91					
20	A07.106-2	15 Apr	ADTC	381	101	175	155		145		Chemical Release			S
	NIRO	0045			118	176	148		116					
21	410.005-1	15 Apr	ADTC	440	153	175	224		234		Chemical Release, Photometers	Diagnostics	Long Accel Misfired	S
	Paiute Tomahawk	0104	Mansfield/ Harpel	465	144	172	227.5		122					
22	A04.004-7	15 Apr	WSMR	980	76	341	177		444	S	Celestial Background	Recovery, ACS, Despin		S
	Aerobee 170	0522	Stark/ Walker	968	74.5	343	177			S				
23	A08.113-1	1 May	Chill	484	161	168	249		204		Magnetometer, Electrostatic Analyzer	Aero Roll Despin		S
	Nike Tomahawk	0823	Shuman	465	191	174	231		158.3	S				
24	A08.112-1	1 May	Chill	476	116	165	243		217		Magnetometer, Electric Field	Gyro, Despin	Wire Malfunction	S
	Nike Tomahawk	0824	Vancour	443	97	167	213		167.125	S				

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AIR FORCE GEOPHYSICS LABORATORY

1972				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
25	A04.116-3	20 Jun	SLC-5						360		IR-UV-Chaser		No Aerobee Ignition	F
	Aerobee 170	1645		81	8	269	8							
26	A18.903-4	15 Jul	Eglin		244	176	289		461		UV	SDC Recovery	Break up at 11 Sec. Case Burnthru	F
	Black Brant V B	1712		77			7		154					
27	A21.0011-1	28 Jul	WOPS						75		ditives		Data thru Blackout. Reentry Vel 16,300	S
	Trail Blazer II	1859							27					
28	A04.004-8	18 Aug	WSMR	1009	50		178		438.5		IR Stellar Sources	ACS, Yo-Yo	Extended Expansion Cone	S
	Aerobee 170	1021	Walker	1000+	40		169			S				
29	A04.104-1	23 Aug	WSMR		50		268		242.5	F	Solar XUX	Recovery, SPC	No 1st Sev.	S
	Aerobee 170	2104	Heroux		69		268							
30	A17.110-2	24 Sep	CRR			124	126		560		Impedance & Langmuir Probes-RPA-Gerdien Condenser-Particle Counters		Into Absorption Event	S
	Black Brant V A	1405	Ulwick	345	99	124	126.6							
31	A17.110-1	25 Sep	CRR				125		578		Impedance & Langmuir Probes-RPA-Photometer Gerdien Condenser, Particle Counter		Into Quiet Background	S
	Black Brant V A	1924	Ulwick	350	85	108	126							
32	A04.116-4	11 Oct	WTR				161				Chaser			S
	Aerobee 170	1131	Huffman				151							

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1972				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
33	A07.106-1	31 Oct	ADTC		109	1??	162		140		Chemical Release TMA, BA, Na/Li			S
	NIRO	2332	Rosenberg	444	100	152	152		84					
34	A07.105-6	31 Oct	ADTC		115	152	192		103		Chemical Release, HI Bal Sphere			S
	NIRO	2351	Rosenberg/ Faire		76	155	129							
35	A07.105-5	1 Nov	ADTC		109	154	162		135		Chemical Release COS-NA			S
	NIRO	0104	Rosenberg	426	103	154	157		90					
36	A07.105-4	1 Nov	ADTC	452	123	158	203		90		Chemical Release			S
	NIRO	0130	Rosenberg		132	150	162		80					
37	A07.216-2	1 Nov	ADTC		138	160	203		70		HIBAL Sphere			S
	NIRO	0933	Faire	605	107	161	219							
38	A08.105-10	5 Nov	ADTC			142			230		Chemical Release	TM	Tomahawk Burn thru	F
	Nike Tomahawk	2345	Good				15		122					
39	A08.215-2	6 Nov	ADTC						180		10" Sphere	TM	Sphere not Released	F
	Nike Tomahawk	0004	Faire	465	114	153	200		103					
40	A04 ?94-9	4 Dec	WSMR	1009			177		439		IR Stellar Sources			S
	Aerobee 170	0220	Walker	900+	70	358	179							

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1972				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
41	A18.006-5	5 Dec	CRR	864	226	167	195		700	S	IR Airglow	Recovery, ACS		S
	Black Brant V C	0600	Stair			169	194.4			S				
42	A30.205-1	6 Dec	CRR	244	30		95		32		IR Ionospheric Characteristics		No Data	F
	Astrobee D	0532	Ulwick				27							
43	A09.107-2	7 Dec	CRR	394	128	110	162		200		Mass Spect.	Despin		S
	Ute Tomahawk	0545	Philbrick	410	154	98	171			S				
44	A07.307-3	7 Dec	CRR	436		110	200		81		7" Falling Sphere			S
	NIRO	0707	Faire	484	92	105	210							
45	A30.205-2	9 Dec	CRR	244	30		90		32		IR Ionospheric Characteristics		Partial Data Early Tip Release	P
	Astrobee D	0030	Ulwick				70							
46	A07.107-3	11 Dec	CRR	358	79	104	125		175		Polar Neutral Composition			S
	NIRO	0030	Philbrick	386	73	110	136							
47	A07.301-1	11 Dec	CRR	436	120	110	200		67		7" Falling Sphere			S
	NIRO	0039	Faire	528	107	111	255							

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1973				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
1	A30.205-5	21 Mar	PFRR			340	90		33			S Band	AGI Set at 275°, Tumble After Nose Eject @ 55	S
	Astrobee D	1010				317	78		52					
2	A18.006-2	22 Mar	PFRR		196	47	194		740	S	Auroral Emissions	ACS, TM, Recovery	No Tip Close	S
	Black Brant V	1212			207	56	183		150	S				
3	A10.205-2	24 Mar	PFRR	431	138	047	214		235		Auroral Characteristics			S
	Paiute Tomahawk	0032		462	110	049	213							
4	A18.205-1	26 Mar	PFRR		192	47	188		740	S	Ionospheric Characteristic	ACS-Single Axis, Despin, Recovery		S
	Black Brant V C	2338			214	52	181		160	S				
5	A10.216-3	26 Mar	PFRR		98	47	235		212		10" Falling Sphere TMA Trail		Tip Release Failed	P
	Paiute Tomahawk	2338			57	81	235							
6	A30.205-6	6 Apr	PFRR						33		Enhanced OH			S
	Astrobee D	0845							52					
7	A09.209-1	16 Apr	WSMR	408	100	355	175		205		Photometers - O_3 - O_2		Full Moon	S
	Ute Tomahawk	1004	Weeks		137	344	176		122.9		Photometers - OH			
8	A09.102-1	16 Apr	WSMR	447	114	355	211		165		Photometers - O_3 - O_2		Sunrise	S
	Ute Tomahawk	1158	Weeks	466	103	321	209		131.9		Geiger X-ray			

1. Use Letter to Show Performance. S – Success, P – Partial Success, F – Failure, N – None Used

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1973				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	A03.911-1	27 Apr	WSMR	380	72	356	119		376	S	UV Absorption	Recovery, Early Termination, Despin	UV Absorption Failed	F
	Aerobee 150	0453	LeBlanc		74	357	121		156	S				
10	A44.320-1	25 May	Natal				600		400	S	IR Radiometer	Despin, ACS		S
	Castor Lance	1520	Walker	794	431	103	569		61	S				
11	A09.210-1	12 Jun	CRR	339	106	110	124		270		Mass Spect., Scint, Plasma Probe	Despin		S
	Ute Tomahawk	1609 :0	Narcisi	370	104	110	131		116	S				
12	A09.210-2	13 Jun	CRR	340	100	110.8	125		270		Mass Spect., Plasma Probe, Scint.	Despin		S
	Ute Tomahawk	1617:40	Narcisi	368	99	118.5	131		116	S				
13	A16.000-1	9 Aug	WOFS	837	610	130	625		190		HI Rate Midas Conversion			S
	BB Iv 2 Modi	2012	Mansfield	798	607.5	140	615.5		100					
14	A03.211-1	10 Aug	WSMR	933	80	342	167		288	S	Bremstrahlung	Recovery		S
	Aerobee 150	1052	Cohen	900+	90	355	168		125					
15	A09.214-1	11 Sep	WSMR		80	347	152		237		Vehicle Potential Stabilization		Main Exp. - No Data	F
	Ute Tomahawk	0319	Sherman		80	347	160		125					
16	A09.312-5	18 Sep	FFRF		107	29	117		251	S	Polar Disturbed Ionosphere	Recovery		S
	Ute Tomahawk	1550	Nadile		115	34	128		120					

1. Use Letter to Show Performance. S – Success, P – Partial Success, F – Failure, N – None Used

2 List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1973				IMPACT TIME (SEC)	IMPACT RANGE (KM)	IMPACT AZ (DEG)	APOGEE ALT (KM)	APOGEE TIME (SEC)	PAY-LOAD					
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	PRED / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
17	A09.312-4	18 Sep	PFRF		107	29	117		250	S	Polar Disturbed Ionosphere	Recovery		S
	Ute Tomahawk	1721	Nadile	372	111	32	129		120					
18	A07.306-2	26 Sep	Natal	460	85.3	90	225.5		83		7" Sphere			S
	NIRO	1600	Faire	506	102	81	225		52					
19	A10.306-1	26 Sep	Natal	526	184	90	292		163		O_2, O_3, X-ray		Power & Door Problems	F
	Paiute Tomahawk	1942	Weeks	512	157.5	80.6	287.5		125.5					
20	A07.306-3	27 Sep	Natal	460	85.3	90	225.5		83		7" Sphere			S
	NIRO	0427	Faire	511	67	106.5	232		52					
21	A30.311-1	3 Oct	WSMR	336	72	355	113		32.5		IR Detector, Radiometer		Low Vehicle Perform Poor Radar Track	S
	Astrobee D	0140	Ulwick	240			53.2							
22	A30.311-2	3 Oct	WSMR	336	72	355	113		32.5		IR Detector, Radiometer			S
	Astrobee D	0227	Ulwick	335			107							
23	A30.311-3	3 Oct	WSMR	336	72	355	113		32.5		IR Detector, Radiometer			S
	Astrobee D	0600	Ulwick				105							
24	A07.105-1	18 Oct	ADTC	406	100	160	173		170		Chemical Release, TMA	TM		S
	NIRO	2345	Rosenberg				167		55					

1. Use Letter to Show Performance: S -- Success, P -- Partial Success, F -- Failure, N -- None Used.

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1973				IMPACT			APOGEE		PAY. LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIM. (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV. ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
25	A08.105-11	19 Oct	ADTC		127	160	192		256		No Release, Photometers	TM		S
	Nike Tomahawk	0000	Rosenberg/ Good				206		122					
26	A09.301-3	19 Oct	ADTC		137	160	225		133		Chemical Release, TMA Trail	TM		S
	Ute Tomahawk	0020	Rosenberg				228		74					
27	A07.105-2	19 Oct	ADTC	406	100	160	173		120		Chemical Release, TMA Puffs			S
	NIRO	0050	Rosenberg				173		55					
28	A08.005-2	19 Oct	ADTC		126	160	140		360		Chemical Release, BA			S
	Nike Tomahawk	1125	Rosenberg				146		126					
29	A09.106-3	19 Oct	ADTC	415	158	160	185		170		Chemical Release, 6 Pt Releases - Al Vapor	TM, Gyro		S
	Ute Tomahawk	2342	Rosenberg				176		98					
30	A08.105-12	19 Oct	ADTC		127	160	150		335		Chemical Release, TMA Point	TM		S
	Nike Tomahawk	2353	Rosenberg				160		99					
31	A07.105-3	20 Oct	ADTC	420	135	160	185		107		Chemical Release - Tetra Ethyl Lead, Lithium			S
	NIRO	2343	Rosenberg				184		83					
32	A10.207-3	21 Oct	ADTC	449	118	160	205		262		Chemical Release, Na/Li-Diborane, Density - 7" Sphere		No Tom. Ignition	F
	Paiute Tomahawk	0003	Rosenberg				18		142					

1. *Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.*
2. *List Type of Recovery and Type or Brand of ACS.*

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1973				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV. ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
33	A16.313-1	24 Oct	ADTC		456	180	674		176		VLf Propagation			S
	Black Brant IV A	0305	Lewis	820	471	185	609		86					
34	A16.313-2	25 Oct	ADTC		456	180	674		176		VLf Propagation			S
	Black Brant IV A	0307	Lewis	784					86					
35	A04.104-2	2 Nov	WSMR	1000	87	354	230		273	S	EUV	Recovery, Despin		S
	Aerobee 170	1730	Heroux	900+	87	359	232		126	S				
36	A21.220-1	6 Dec	WOPS						73.5		Reentry Microwave Physics			S
	Trail Blazer	1759	Rotman				304							
37	A09.107-4	10 Dec	CRR						250		Mass Spect., Photometers - O_2, O_3		BCN.& IM Failed at t 0., IM on at 0.8 Sec., Tip came off at Tomk. B.O.	P
	Ute Tomahawk	1930	Philbrick/ Weeks				101							
													Gyro quit at 95 sec.	

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2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1974				IMPACT			APOGEE		PAY-LOAD					
LINE NO.	NUMBER / TYPE	DATE (UT) / TIME (UT)	PLACE / SCIENTIST	TIME (SEC) PRED. / ACT.	RANGE (KM) PRED. / ACT.	AZ (DEG) PRED. / ACT.	ALT (KM) PRED. / ACT.	TIME (SEC) PRED. / ACT.	WT. (LBS) / LG. (IN)	RECOVERY[1,2] / ACS[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
1	A30.311-4	8 Feb	PFRF			040			26		TM & Track Test L Band Test			S
	Astrobee D	0416	Ulwick	291	41	047	91							
2	A18.006-4	14 Feb	PFRF	428		047	190		725	S	CVF, Photometer	Recovery, ACS		S
	Black Brant VC	0707	Ulwick	440		058	200		146	S				
3	A09.307-3	14 Feb	PFRF	426			211		133		Density-HI Bal		No 2nd Stage Ignition	F
	Ute Tomahawk	0744	Faire	153			10							
4	A35.191-2	16 Feb	WSMR	1020	53	350	274		783	S	IR Stellar Sources	Recovery, ACS, Flip-flop	46 Sec Burn	P
	Aerobee 350	0833	Walker	700+	16	355	111		215	S				
5	A09.400-1	16 Feb	WSMR		80	356	181		175		Density	Coherent Beacon		S
	Ute Tomahawk	1003	Geary	455	113	349	190		75					
6	A18.116-1	21 Feb	PFRF	416	196	040	180		840	S	HIRIS	Recovery, ACS		S
	Black Brant V C	0916	Stair	455	142	047	183		172	S				
7	A18.219-1	25 Feb	PFRF		196	047	183			S	MUTI, Mass Spect. No Data	Recovery, ACS		S
	Black Brant V C	0738	Ulwick		99	047	195			S				
8	A09.303-3	28 Mar	CRR	347	111	170	126		272	S	Mass Spect., Langmuir Probe	Recovery, Despin		S
	Ute Tomahawk	0405	Nircist	390	109	173	129		145	S				

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2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1974				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	A09.303-1	3 Apr	CRR	386	63	160	156		210		Switched Mass Spect, Scintillation Counter, Plasma Freq. Probe	Despin		S
	Ute Tomahawk	0347	Narcisi	405	118	172	162		119	S				
10	A09.303-4	3 Apr	CRR		113	170	126		270	S	Neg. Mass Spect., Langmuir Probe	Recovery, Despin	Lost Beacon +2 sec, Skin Track	S
	Ute Tomahawk	1918	Narcisi		105	173	129		145	S				
11	A09.303-2	9 Apr	CRR	386	62	160	162		210		Mass Spect , Scintillation, Plasma Probe	Despin		S
	Ute Tomahawk	0521	Narcisi	412	95	206	169		145	S				
12	A30.413-1	11 Apr	PFRF	288	31	25	80		33		Gerdian Cond , Imp Probe		TM XMTR Failed, Ignition Delay - 14 sec.	F
	Astrobee D	2338	Ulwick	284	49.5	46	83		66					
13	A30.413-2	12 Apr	PFRF	330	42	25	116		14		VLF			S
	Astrobee D	2325	Ulwick	347	42	04	129		52					
14	A10.312-3	18 Apr	PFRF	900	91	25	170			S	Retard Ind Potential, E-Field, Photometer, Electrostatic Analyzer	Recovery		S
	Faiute Tomahawk	0840	Ulwick	925	58	06	185							
15	A04.208-2	22 Apr	WSMR				229			S	CBV	GBPC, Recovery		S
	Arrobee 170	1902	Heroux				212							
16	A07.105-7	29 Jun	WOPS	421	104	123	187				Tel			S
	NIRO	0110	Rosenberg/ Best	474	120	127	184							

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1974				IMPACT			APOGEE		PAY-				
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)	LOAD				
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
17	A04.208-1	29 Jun	WOPS	472	129	140	224		270	S	EUV	Recovery	Flat Spin-Some Data Loss	S
	Aerobee 172	1945	Hall	505	141	135	211							
18	A09.213-2	29 Jun	WOPS	583	162	160	153		211		Neutral Mass Spect . E-Field		TIP Eject @ 28 Sec	P
	Ute Tomahawk	2000	Philbrick	326	111	150	110							
19	A08.306-4	29 Jun	WOPS	437	198	130	201		225		10" Sphere-PZL Photometers			S
	Nike Tomahawk	2033	Faire/ Weeks	450			189							
20	A08.207-2	29 Jun	WOPS				189		257		No Release, Failed Photometers			P
	Nike Tomahawk	2105	Golomb/ Good				186							
21	A09.301-1	30 Jun	WOPS	427	141	146	191		165		BA, TMA			S
	Ute Tomahawk	0106	Rosenberg				203							
22	A09.001-3	30 Jun	WOPS	393	122	110	162		206		Ion Mass Spect.		No 2nd Stage Ignition	F
	Ute Tomahawk	0111	Narcisi											
23	A09.301-2	30 Jun	WOPS	427	141	120	191		165		BA, TMA		Exp. @ 26 Sec.	F
	Ute Tomahawk	0126	Rosenberg											
24	A09 101-5	30 Jun	WOPS		240	130	187		150		Na/Li-Point Discharge, TMA		TMA Failed	F
	Ute Tomahawk	0345	Rosenberg		212	123	201							

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2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1974				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT	ACT	ACT	ACT	ACT	LG. (IN)	ACS[1,2]				
25	A09.207-4	30 Jun	WOPS	440	240	130	188		147		TMA, 7" HISAL Photometers			S
	Ute Tomahawk	0558	Rosenberg/ Faire	422	270	132	188							
26	A08.207-1	30 Jun	WOPS	423	167	90	189		254		Na Release, Photometers			S
	Nike Tomahawk	0 .	Golomb/ Good	435		86	185							
27	A09.301-4	30 Jun	WOPS	427	190	130	186		158		TMA, Photometers, Resonance Flr.		Photometers & Resonance Flr. Failed	P
	Ute Tomahawk	0730	Rose./Gol./ Hend	4??		135	178							
28	A10.301-6	30 Jun	WOPS	437	195	130	202		252		TMA-SA, Photometers			S
	Paiute Tomahawk	0835	Rose./Gol / Good		211		191							
29	A09.001-4	30 Jun	WOPS	393	122	120	162		206		Ion Mass Spect.		Vehicle Malfunction	F
	Ute Tomahawk	0845	Narcisi				17							
30	A10.209-2	30 Jun	WOPS	472	223	130	235		206		7" PZL, Photometers			S
	Paiute Tomahawk	1001	Faire/ Weeks	510			228							
31	A09.105-9	30 Jun	WOPS	424	221	150	187		157		Na-Li			-
	Ute Tomahawk	1255	Rosenberg/ Best	410		131	152							
32	A09.301-7	30 Jun	WOPS	442	150	140			150		Na-Li			S
	Ute Tomahawk	1720	Rosenberg/ Best											

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.

2. List Type of Recovery and Type or Brand of ACS

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1974				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
33	A09.214-2	17 Aug	WSMR		79	360	160				Vehicle Potential Stabilization			S
	Ute Tomahawk	0500	Sherman		73	357	161							
34	A05.391-1	4 Sep	Woomera			325	201		423		IR Sources HI Star II	ACS		S
	Aerobee 200	1024	Walker	660+			193			S				
35	A05.391-2	11 Sep	Woomera				205		423	F	IR Sources HI Star II	ACS, Recovery	Recovery Failed	P
	Aerobee 200	2255	Walker	680			200			S				
36	A05.391-3	17 Sep	Woomera				193		423	S	IR Sources	ACS, Recovery	ACS Failed @ +94 Sec., No Pointing	F
	Aerobee 200	1533	Walker				207			F				
37		17 Oct	WSMR				119				Precede, Photometers		Door not Removed	S
	Nike Hydac	1120					120							
38	A09.407-1	13 Dec	WSMR	455	80.5	360	190		175		10" Falling Sphere		1/2 Sec Short Burn, Some Data	P
	Ute Tomahawk	2225	Geary	392	35		89.6		76					

1. Use Letter to Show Performance: S – Success, P – Partial Success, F – Failure, N – None Used.
2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1975				IMPACT			APOGEE		PAY-LOAD				
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)					
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
1	A09.301-8	14 Jan	WOPS	478	415	134	234	-	80	N	Dummy Chemical, Test of Shroud Exten. Verify Wind Weighting			S
	Ute Tomahawk	2056	Rosenberg	-	400	128	235	-	75	N				
2	A09.105-8	15 Jan	WOPS	416	234	134	179	-	159	N	Exploratory Chemical Test of Shroud Extension Verify Wind Weighting		TM Loss @ 459 Sec No 2nd Chem Sighting	P
	Ute Tomahawk	2246	Rosenberg	459 see Remarks	284	144	159	-	98	N				
3	A09.301-9	17 Jan	WOPS	429	245	141.5	192	-	145	N	7" Hi Ball PCM Sphere, TMA Release	Despin	Veh.TM Loss @ 422 Sec, Sph. TM Loss @ 513 Sec.	S
	Ute Tomahawk	2243	Rosenberg/ Faire	421	282	161.5	190	-	105.5	N				
4	A10.213-1	18 Jan	WOPS	384	92	149/ 160	157	-	350	N	Mass Spec, E Field, Green Line Photom	Gyro Accel Despin to 1:1	TM Loss @ 398 Sec No E Field Booms	P
	Paiute Tomahawk	0435	Narcisi/ Dandekar	396	99	161.5	159	-	141.9	N				
5	A10.301-10	18 Jan	WOPS	430	192	137.4	196	-	254	N	No Release Photometers	Mag Accel	TM Loss @ 428 Sec. NO Release Failed	S
	Paiute Tomahawk	0445	Narcisi/ Dandekar	437	199	143	183	-	129.4	N				
6	A30.413-3	26 Feb	PFRR	323	45	25	111	-	25	N	Gerdian Cond.			S
	Astrobee D	2250	Ulwick	320	47	28	104	-	-	N				
7	A30.311-6	29 Feb	PFRR	335	48	025	119	-	21	N	Chilled Baffle IR-OH			S
	Astrobee D	0100	Ulwick	325	51	022	111	-	-	N				
8	A10.302-3	10 Apr	CRR	490	148	120	220	-	254	N	Chemical Release, HI Bal	Despin to 0.6		S
	Paiute Tomahawk	0954	Rosenberg/ Faire	445	124	128	219	-	-	N				

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2. List Type of Recovery and Type or Brand of ACS.

SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1975				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	A10.302-4	10 Apr	CRR	490	148	150	220	-	255	N	Chemical Release			S
	Paiute Tomahawk	0954:30	Rosenberg	-	-	-	-	-	-	N				
10	A10.403-3	10 Apr	CRR	490	148	150	220	-	254	N	Mass Spect., E Field	Despin to 1.9-Set for .5	Some Boom Problem	S
	Paiute Tomahawk	1000	Narcisi/ Smiddy	517	113	156	211	-	-	N				
11	A10.302-1	21 Apr	CRR	490	140	120	220	-	254	N	Chemical Release, E Field	Despin		S
	Paiute Tomahawk	0907	Rosenberg/ Smiddy	-	-	133	214	-	-	N				
12	A10.302-2	21 Apr	CRR	490	148	150	220	-	250	N	Chemical Release			S
	Paiute Tomahawk	0907:30	Rosenberg	-	-	-	-	-	-	N				
13	A10.403-1	21 Apr	CRR	490	148	150	220	-	246	S(SDC)	Mass Spect.	Despin		S
	Paiute Tomahawk	0912	Narcisi	920	119	170	223	-	-	N				
14	A10.302-5	25 Apr	CRR	490	148	120	220	-	262	N	TMA & BA Release Photometers			S
	Paiute Tomahawk	0413	Rosenberg/ Good	-	-	-	214	-	107	N				
15	A10.302-7	25 Apr	CRR	490	148	150	220	-	250	N	TMA & BA			S
	Paiute Tomahawk	0413:30	Rosenberg	-	-	145	-	-	-	N				
16	A10.403-2	25 Apr	CRR	490	148	142	220	-	246	S(SDC)	Mass Spect.	Despin		S
	Paiute Tomahawk	0418	Narcisi	940	132	146	218	-	-	N				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1975				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
17	A03.103-1	10 Jun	WSMR	408	50	358	156	-	331	S	Density, Laser Backscatter			S
	Aerobee 150	0915	Weeks	895	57	359	158	-	135	N				
18	A04.308-1	7 Aug	WSMR	894	80	353	188	-	366	S(ALRC)	Density - Brehnstrallung			S
	Aerobee 170	0330	Cohen	880	83	357	174	-	155	N				
19	A10.406-2	15 Aug	WTR	518	246	240	283	-	139	N	Density - 10" Spere			S
	Paiute Tomahawk	0521	Faire	-	259	-	272	-	66	N				
20	A10.304-1	18 Sep	WSMR	347	75.8	360	129	-	418	S(SDC)	Neutral Mass Spect.	Despin		S
	Paiute Tomahawk	1947	Philbrick	634	82.5	350	128.4	-	-	S(SVC)				
21	A10.304-2	19 Sep	WSMR	347	82	349	129	-	418	S(SDC)	Neutral Mass. Spect.	Despin		S
	Paiute Tomahawk	0515	Philbrick	-	98	359	128.1	-	-	S(SVC)				
22	A31.320-2	14 Oct	WSMR	-	88	350	272	-	394	S(WI)	Zodiacal IR Flux Discrete IR Sources			S
	Astrobee F	1030	Walker (Cornell)	-	98	358	265	-	152	S(SVC)				
23	A10.000-1	16 Oct	WSMR	500	82	341	263	258	210	S	Dispersion Control System Test		Disp. Control Worked well but Misprogrammed *PAYLOAD	S
	Paiute Tomahawk	1630	Mansfield/ Steeves	823*	72*	068*	251	252	120	N				
24	A30.311-8	2 Dec	WSMR	348	68	351	132	-	22	N	OH-Solar Sensor			S
	Astrobee D	1257	Ulwick	355	58	356	120	-	54	N				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1975				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV-ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
25	A30.311-5	2 Dec	WSMR	348	68.5	354	132	-	22	N	OH-Horizon Sensor			S
	Astrobee D	1350	Ulwick	-	61	357	124	-	54	N				
26	A30.311-7	2 Dec	WSMR	348	68	357	132	-	22	N	OH-Sun Sensor			S
	Astrobee D	1700	Ulwick	-	59	350	125	-	54	N				
27	A30.413-5	3 Dec	WSMR	348	68	352	132	-	22	N	O-Sun Sensor			S
	Astrobee D	0035	Ulwick	-	58	342	124.8	-	54	N				
28	A30.205-7	3 Dec	WSMR	348	68	352	132	-	22	N	OH-Horizon Sensor			S
	Astrobee D	0059	Ulwick	-	89	351	124.5	-	54	N				
29	A30.413-4	3 Dec	WSMR	348	68	352	132	-	22	N	Atomic O-Horizon Sensor			S
	Astrobee D	0200	Ulwick	-	70	354	126.8	-	54	N				
30	A35.191-1	4 Dec	WSMR	-	88	340	288	-	606	F(ALRC)	IR Sources	Despin, Separation	Recovery Failed Early Chute Deployment. Lost Front Half of Payload	S
	Aerobee 350	0322	Walker	-	82	348	286	-	193	S(ALRC)				
31	A09.406-1	12 Dec	WTR	422	260	255	187	-	138	N	Density-HI Bal	Despin (Failed)	Partial Data Due to No Despin	P
	Ute Tomahawk	0509	Faire		[illegible]35	257	164	-	73	N				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1976				IMPACT			APOGEE		PAY-LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOVERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
1	A16.501-1	20 Jan	CRR	-	-	70	-	-	180	N	VLF		Grand Forks Imp. Data No Radar Track	S
	Black Brant IV	0142	Harvey	796	274	53	632	-	-	N				
2	A09.402-2	23 Jan	WOPS	362	65	110	115	-	262	N	Neutral Mass Spect.		Despin OK to .125 rps	S
	Ute Tomahawk	2234	Philbrick	-	-	-	124	-	94	S(SVC)				
3	A08.608-1	23 Jan	WOPS	361	112	110	130	-	354	N	Chem. Release, Mesosphere Dynamics			S
	Nike Tomahawk	2245	Vickery	-	-	-	117	-	126	N				
4	A10.504-1	22 Feb	PFRR	482	182	357	248	-	199	N	Composition, Ozone, UV, X-ray		Zero Delay Ignitor	S
	Paiute Tomahawk	0118	Weeks	488	157	15	247	-	-	N				
5	A04.305-1	24 Feb	WSMR	950			222		302	P(MI)	XUV		Recover: Problem Lost Sensor, Parachute Worked	S
	Aerobee 170	1920	Heroux	950	80	359	221		131	N				
6	A10.507-1	3 Mar	PFRR	-	-	-	-	-	-	N	10" Falling Sphere PZL Photometers		Mag. Storm	S
	Paiute Tomahawk	1744	Faire/ Weeks	-	-	-	209	-	-	N				
7	A10.403-4	26 Apr	CRR	420	65	163	200		242	(SDC)	Mass Spec.		No 2nd Stage Ignition	F
	Paiute Tomahawk	0547	Narcisi	130	5	156	19		142	-				
8	A10.001-2	1 May	CRR	-	160	65	220	-	242	S(SDC)	Mass. Spec.	Despin		S
	Paiute Tomahawk	0435	Narcisi	900+	190	112	218	-	142	N				

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SOUNDING ROCKET FLIGHT DATA SUMMARY

AIR FORCE GEOPHYSICS LABORATORY

1976				IMPACT			APOGEE		PAY. LOAD					
				TIME (SEC)	RANGE (KM)	AZ (DEG)	ALT (KM)	TIME (SEC)						
LINE NO.	NUMBER	DATE (UT)	PLACE	PRED.	PRED.	PRED.	PRED.	PRED.	WT. (LBS)	RECOV. ERY[1,2]	EXPERIMENTS	SUPPORT SYSTEMS	REMARKS	TOTAL PERF.[1]
	TYPE	TIME (UT)	SCIENTIST	ACT.	ACT.	ACT.	ACT.	ACT.	LG. (IN)	ACS[1,2]				
9	A03.410-1	18 May	WSMR	-	-	-	185	-	267	S(WI)	Solar XUV & UV			S
	Aerobee 150	1700	Heroux	1005	80	-	190	223	125	N				
10	A35.191-4	3 Aug	WSMR		86	344.4	269.1	-	738	N	IR Earth Limbs & Zodiacal Light	Despin, Separation	No Recovery System, but Classified Sensor Picked Up	S
	Aerobee 350	1916	Schurin/ Murdock	483	113.1	352.4	256.7	-	208.8	S(ALRC)				
11	A11.605	21 Aug	KMR	-	-	-	-	-	-	N	10" Falling Sphere	C-Band Becon in Sphere	No Second Stage Ignition, Samso Supplied N-Hydac & TM Thru SDC	F
	N-Hydac	0340	Faire	-	-	-	14.6	-	-	N				
12	A11.408-1	31 Aug	KMR	-	-	-	-	-	-	N	10" Falling Sphere	C-Band Becon in Sphere	Samso Supplied N-Hydac & TM thru SDC	S
	N-Hydac	0340	Faire	-	-	-	188	-	-	N				

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