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GSFC OPERATIONS CONTROL CENTER

SATELLITE SITUATION REPORT

VOL. 9, NO. 22

NOVEMBER 30, 1969

GODDARD SPACE FLIGHT CENTER

GREENBELT, MD.

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1958 LAUNCHES									
ALPHA 1	EXPLORER 1	4	US	1 FEB	94.6	3.1	690	305	
BETA 1		16	US	17 MAR	138.3	34.2	4307	652	
BETA 2	VANGUARD 1	5	US	17 MAR	133.8	34.2	3929	650	
BETA 3		1576	US	17 MAR	132.1	34.2	3772	660	
1959 LAUNCHES									
ALPHA 1	VANGUARD 2	11	US	17 FEB	125.1	32.8	3256	556	
ALPHA 2		12	US	17 FEB	129.3	32.9	3630	555	
ETA 1	VANGUARD 3	20	US	18 SEP	129.4	33.3	3680	512	
IOTA 1	EXPLORER 7	22	US	13 OCT	100.9	50.3	1052	550	
IOTA 2		23	US	13 OCT	100.3	50.3	1006	545	
MU 1	LUNIK 1	112	USSR	2 JAN	HELIOCENTRIC ORBIT				
NU 1	PIONEER 4	113	US	3 MAR	HELIOCENTRIC ORBIT				
1960 LAUNCHES									
ALPHA 1	PIONEER 5	27	US	11 MAR	HELIOCENTRIC ORBIT				
BETA 1		28	US	1 APR	98.8	48.3	726	683	
BETA 2	TIROS 1	29	US	1 APR	99.1	48.3	740	691	
BETA 3		101	US	1 APR	97.5	48.5	677	602	
BETA 4		115	US	1 APR	99.7	48.1	800	694	
GAMMA 4		99	US	13 APR	95.8	51.2	659	462	
ZETA 1	MIDAS 2	43	US	24 MAY	93.4	33.0	446	432	
ETA 1	TRANSIT 2A	45	US	22 JUN	101.5	66.7	1052	611	
ETA 2	GREB	46	US	22 JUN	101.4	66.7	1047	609	
ETA 3		47	US	22 JUN	101.2	66.6	1031	609	
ETA 4		840	US	22 JUN	101.2	66.6	1032	607	
ETA 5		841	US	22 JUN	101.2	66.6	1030	605	
IOTA 2		50	US	12 AUG	118.0	47.2	1684	1501	
IOTA 3		51	US	12 AUG	118.2	47.2	1687	1515	
IOTA 4		52	US	12 AUG	CURRENT ELEMENTS NOT MAINTAINED				
IOTA 5		53	US	12 AUG	118.4	47.2	1685	1535	
NU 1	COURIER 1B	58	US	4 OCT	107.0	28.3	1210	962	

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1960 LAUNCHES (CONT'D)									
NU 2		59	US	4 OCT	106.5	28.1	1207	922	
XI 1	EXPLORER 8	60	US	3 NOV	111.2	49.9	2149	416	
XI 2		62	US	3 NOV	109.5	49.9	1999	412	
XI 3		69	US	3 NOV	95.4	49.3	728	349	
XI 4		105	US	3 NOV	102.6	50.4	1367	400	
PI 1	TIROS 2	63	US	23 NOV	98.0	48.5	719	614	
PI 2		64	US	23 NOV	97.6	48.5	692	598	
PI 3		74	US	23 NOV	97.8	48.5	702	609	
PI 4		75	US	23 NOV	98.0	48.5	714	612	
1961 LAUNCHES									
ALPHA 1	SAMOS 2	70	US	31 JAN	93.7	97.2	486	431	
ALPHA 2		79	US	31 JAN	92.7	97.3	427	393	
GAMMA 1	VENUS PROBE	80	USSR	12 FEB	HELIOCENTRIC ORBIT				
DELTA 2		82	US	16 FEB	118.4	38.8	2582	641	
DELTA 3		85	US	16 FEB	117.5	38.8	2500	637	
DELTA 5		3738	US	16 FEB	117.4	38.8	2482	643	
DELTA 6		3927	US	16 FEB	117.5	38.8	2498	638	
DELTA 7		4026	US	16 FEB	116.9	38.8	2446	639	
NU 1	EXPLORER 11	107	US	27 APR	107.5	28.7	1740	483	
NU 2		3739	US	27 APR	106.3	28.7	1628	480	
OMICRON 1	TRANSIT 4A	116	US	29 JUN	103.7	66.8	998	878	
OMICRON 2	INJUN-SR-3	117	US	29 JUN	103.8	66.8	999	879	
OMICRON 3 -	232		US	29 JUN	SEE NOTE	1*			1*
RHO 1	TIROS 3	162	US	12 JUL	100.3	47.9	812	737	
RHO 2		165	US	12 JUL	100.1	47.9	801	732	
RHO 3		166	US	12 JUL	98.6	47.9	776	606	
RHO 4		167	US	12 JUL	101.9	47.8	929	771	
SIGMA 1	MIDAS 3	163	US	12 JUL	100.4	91.1	3544	3346	
SIGMA 3		188	US	12 JUL	161.1	91.1	3549	3313	
SIGMA 4		196	US	12 JUL	161.8	91.1	3569	3353	
A DELTA 1	MIDAS 4	192	US	21 OCT	165.9	95.8	3753	3500	
A DELTA 3		194	US	21 OCT	165.5	95.8	3754	3467	
A DELTA 4		195	US	21 OCT	166.3	95.8	3812	3473	
A DELTA 5		2009	US	21 OCT	165.7	95.8	3733	3500	
A DELTA 6		2371	US	21 OCT	165.6	95.8	4108	3116	

OBJECTS IN ORBIT

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1961 LAUNCHES (CONT'D)									
A ETA 1	TRANSIT 4B	202	US	15 NOV	105.7	32.4	1105	951	
A ETA 2	TRAAC	205	US	15 NOV	105.7	32.4	1106	953	
A ETA 3		204	US	15 NOV	105.6	32.4	1096	948	
1962 LAUNCHES									
ALPHA 1	RANGER 3	221	US	26 JAN	HELIOCENTRIC ORBIT				
ALPHA 2		222	US	26 JAN	HELIOCENTRIC ORBIT				
BETA 1	TIROS 4	226	US	8 FEB	100.3	48.3	838	707	
BETA 2		227	US	8 FEB	101.2	48.1	937	699	
BETA 3		228	US	8 FEB	99.3	48.4	755	698	
BETA 4		229	US	8 FEB	100.1	48.3	825	702	
ZETA 1	OSO 1	255	US	7 MAR	95.6	32.8	561	535	
ZETA 2		257	US	7 MAR	93.4	32.8	447	435	
KAPPA 1		271	US	9 APR	152.9	86.6	3411	2784	
KAPPA 3		273	US	9 APR	152.6	86.6	3392	2772	
KAPPA 4		274	US	9 APR	153.3	86.6	3453	2770	
MU 2		282	US	23 APR	HELIOCENTRIC ORBIT				
OMICRON 1	ARIEL 1	285	US/UK	26 APR	97.9	53.8	940	378	
OMICRON 2		288	US	26 APR	96.3	53.8	799	368	
A ALPHA 1	TIROS 5	309	US	19 JUN	100.3	58.1	961	591	
A ALPHA 2		311	US	19 JUN	100.0	58.0	933	585	
A ALPHA 3		312	US	19 JUN	101.5	58.2	1066	600	
A ALPHA 4		313	US	19 JUN	98.8	58.0	830	573	
A EPSILON 1	TELSTAR 1	340	US	10 JUL	157.7	44.7	5636	951	
A EPSILON 2		341	US	10 JUL	157.6	44.7	5622	951	
A OMICRON 1		369	US	23 AUG	99.4	98.5	848	616	
A OMICRON 2		370	US	23 AUG	97.5	98.5	702	583	
A OMICRON 3		378	US	23 AUG	100.4	98.8	946	617	
A OMICRON 4		388	US	23 AUG	99.2	98.5	838	614	
A RHO 1	MARINER 2	374	US	27 AUG	HELIOCENTRIC ORBIT				
A RHO 2		375	US	27 AUG	HELIOCENTRIC ORBIT				
A PSI 1	TIROS 6	397	US	18 SEP	98.6	58.3	697	690	
A PSI 2		398	US	18 SEP	98.3	58.3	683	673	
A PSI 3		399	US	18 SEP	99.2	58.4	763	681	
A PSI 4		400	US	18 SEP	97.7	58.2	668	632	
B ALPHA 1	ALOUETTE 1	424	CANADA	29 SEP	105.4	80.4	1033	999	136.591,136.078, 2* 136.980 2*

OBJECTS IN ORBIT

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1962 LAUNCHES (CONT'D)									
B ALPHA 2		426	US	29 SEP	105.4	80.4	1027	1002	
B ALPHA 3		510	US	29 SEP	105.3	80.5	1022	1000	
B ALPHA 4		511	US	29 SEP	105.4	80.4	1040	993	
B GAMMA 1	EXPLORER 14	432	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B GAMMA 2		NNA	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B ETA 1	RANGER 5	439	US	18 OCT	HELIOCENTRIC ORBIT				
B ETA 2		440	US	18 OCT	HELIOCENTRIC ORBIT				
B LAMBDA 1	EXPLORER 15	445	US	27 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B LAMBDA 2		NNA	US	27 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B MU 1	ANNA 1B	446	US	31 OCT	107.9	50.1	1182	1075	
B MU 2		447	US	31 OCT	107.6	50.1	1165	1067	
B NU 3		450	USSR	1 NOV	HELIOCENTRIC ORBIT				
B UPSILON 1	RELAY 1	503	US	13 DEC	185.0	47.5	7433	1324	
B UPSILON 2		515	US	13 DEC	184.8	47.5	7415	1324	
B CHI 1	EXPLORER 16	506	US	16 DEC	104.3	52.0	1177	749	
B PSI 1	TRANSIT 5A	509	US	19 DEC	98.7	90.6	717	683	
B PSI 3		519	US	19 DEC	98.7	90.6	721	682	
B PSI 4		523	US	19 DEC	99.5	90.5	802	678	
1963 LAUNCHES									
1963 004A	SYNCOM 1	553	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 004B		532	US	14 FEB	456.3	32.7	26202	305	
1963 005A		534	US	19 FEB	97.2	100.4	760	495	
1963 005B		533	US	19 FEB	96.8	100.4	727	487	
1963 005D		536	US	19 FEB	97.0	100.4	735	502	
1963 008B		566	USSR	2 APR	BARYCENTRIC ORBIT				
1963 013A	TELSTAR 2	573	US	7 MAY	225.3	42.7	10797	974	
1963 013B		575	US	7 MAY	225.0	42.7	10780	974	
1963 014A		574	US	9 MAY	166.4	87.3	3670	3620	
1963 014B		579	US	9 MAY	165.9	87.1	4623	2627	
1963 014C		608	US	9 MAY	166.4	87.3	3751	3538	
1963 014D - 014CL			US	9 MAY	SEE NOTE 3*				3*
1963 022A		594	US	16 JUN	99.4	89.9	748	717	
1963 022B		603	US	16 JUN	99.4	89.9	751	721	
1963 022C		610	US	16 JUN	100.9	90.2	873	734	
1963 022D		611	US	16 JUN	96.1	89.7	634	514	

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OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1963 LAUNCHES (CONT'D)										
1963 024A	TIROS 7	604	US	19 JUN	97.2	58.2	633	619		
1963 024B		605	US	19 JUN	96.5	58.2	599	585		
1963 024C		606	US	19 JUN	97.5	58.3	655	629		
1963 024D		607	US	19 JUN	96.2	58.1	610	550		
1963 025B		614	US	27 JUN	129.8	82.1	3891	341		
1963 026A	RESEARCH SATELLITE FOR GEOPHYSICS	612	US	28 JUN	100.9	49.7	1191	411		
1963 030A		622	US	18 JUL	167.8	88.3	3734	3670		
1963 030B		635	US	18 JUL	167.8	88.3	3741	3663		
1963 030C		630	US	18 JUL	167.4	88.3	3736	3639		
1963 030D		624	US	18 JUL	165.3	85.9	5858	1349		
1963 030E		631	US	18 JUL	168.2	88.3	3793	3645		
1963 030F		3121	US	18 JUL	167.8	88.3	3735	3669		
1963 030G		3132	US	18 JUL	161.5	84.6	6255	642		
1963 031A	SYNCOM 2	634	US	26 JUL	1436.2	29.5	35815	35762		
1963 031B		625	US	26 JUL	278.7	32.7	15299	210		
1963 038A		669	US	28 SEP	107.0	89.8	1112	1073		
1963 038B		670	US	28 SEP	107.3	89.8	1138	1071		
1963 038C	SN-39	671	US	28 SEP	107.3	89.8	1136	1071	136.653	2*
1963 038D		672	US	28 SEP	107.2	89.9	1125	1073		
1963 038E		745	US	28 SEP	107.0	89.9	1108	1071		
1963 038F		2097	US	28 SEP	107.2	89.9	1131	1066		
1963 038G		3166	US	28 SEP	107.3	89.9	1138	1070		
1963 039A		674	US	17 OCT	6481.8	37.4	125961	91597		
1963 039B		675	US	17 OCT	CURRENT ELEMENTS NOT MAINTAINED					
1963 039C		692	US	17 OCT	6518.3	36.7	119068	99355		
1963 043A	POLYOT 1	683	USSR	1 NOV	100.7	58.9	1246	340		
1963 047A	CENTAUR 2	694	US	27 NOV	107.4	30.3	1737	473		
1963 047B		696	US	27 NOV	106.5	30.0	1556	574		
1963 047C		697	US	27 NOV	106.4	30.0	1544	576		
1963 047D		698	US	27 NOV	107.8	29.9	1641	610		
1963 047E		699	US	27 NOV	107.4	30.4	1640	572		
1963 047F		700	US	27 NOV	108.5	30.4	1742	575		
1963 047G		701	US	27 NOV	107.6	29.9	1629	602		
1963 047H		739	US	27 NOV	105.7	30.4	1570	486		
1963 047J		1994	US	27 NOV	107.6	30.5	1660	567		
1963 047K		2886	US	27 NOV	108.8	29.8	1677	663		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1963 LAUNCHES (CONT'D)									
1963 047L		3741	US	27 NOV	108.4	29.9	1654	652	
1963 047M		3922	US	27 NOV	107.2	29.9	1590	602	
1963 049A		703	US	5 DEC	106.7	89.9	1092	1065	
1963 049B		704	US	5 DEC	107.1	89.9	1120	1068	
1963 049C		705	US	5 DEC	107.0	89.9	1117	1069	
1963 049D		706	US	5 DEC	106.9	89.9	1110	1067	
1963 049E		715	US	5 DEC	106.9	89.9	1111	1063	
1963 049F		753	US	5 DEC	107.0	89.9	1116	1067	
1963 049G		2432	US	5 DEC	107.0	89.9	1117	1069	
1963 049H		2620	US	5 DEC	106.7	89.9	1087	1067	
1963 049J		2930	US	5 DEC	106.2	89.9	1109	994	
1963 053A	EXPLORER 19	714	US	19 DEC	112.5	78.9	1787	903	
1963 053B		72[illegible]	US	19 DEC	115.7	78.6	2383	597	
1963 053C		722	US	19 DEC	115.1	78.6	2262	660	
1963 053D		723	US	19 DEC	114.8	78.6	2265	638	
1963 053E		724	US	19 DEC	115.0	78.6	2270	645	
1963 053F		725	US	19 DEC	114.7	78.6	2269	621	
1963 053G		726	US	19 DEC	114.5	78.6	2242	629	
1963 053H		732	US	19 DEC	114.9	78.6	2261	646	
1963 053J		3750	US	19 DEC	114.6	78.6	2250	634	
1963 054A	TIROS 8	716	US	21 DEC	99.2	58.5	743	706	
1963 054B		717	US	21 DEC	99.0	58.4	728	697	
1963 054C		720	US	21 DEC	100.9	58.4	916	694	
1963 054D		736	US	21 DEC	97.2	58.5	677	576	
1964 LAUNCHES									
1964 001A		727	US	11 JAN	103.4	69.9	932	911	
1964 001B	GRAVITY GRADIENT 1	728	US	11 JAN	103.4	69.9	933	909	
1964 001C	EGRS 1	729	US	11 JAN	103.4	69.9	933	909	
1964 001D	SOLAR RAD.	730	US	11 JAN	103.4	69.9	934	909	
1964 001E		731	US	11 JAN	103.4	69.9	933	910	
1964 002A		733	US	19 JAN	101.2	99.0	847	790	
1964 002B		734	US	19 JAN	101.2	99.0	830	806	
1964 002C		735	US	19 JAN	101.2	99.0	833	806	
1964 003A	RELAY 2	737	US	21 JAN	194.7	46.3	7442	2057	
1964 003B		738	US	21 JAN	194.7	46.3	7450	2054	

1964 LAUNCHES (CONT'D)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1964 004B		741	US	25 JAN	108.8	81.4	1308	1046	
1964 004C		742	US	25 JAN	108.8	81.4	1306	1040	
1964 004D		743	US	25 JAN	108.8	81.5	1309	1036	
1964 006A	ELEKTRON 1	746	USSR	30 JAN	168.3	60.9	7030	414	
1964 006B	ELEKTRON 2	748	USSR	30 JAN	1356.2	58.5	63849	4569	
1964 006C		750	USSR	30 JAN	164.1	60.8	6693	411	
1964 006D		751	USSR	30 JAN	1384.0	58.4	64729	4792	
1964 016D		785	USSR	2 APR	HELIOCENTRIC ORBIT				
1964 026A		801	US	4 JUN	102.9	90.4	947	855	
1964 026B		805	US	4 JUN	103.6	90.2	970	899	
1964 026C		806	US	4 JUN	102.0	90.8	934	781	
1964 026D		809	US	4 JUN	103.0	90.5	947	858	
1964 026E		2986	US	4 JUN	103.0	90.4	947	857	
1964 031A		812	US	18 JUN	101.5	99.7	837	828	
1964 031B		813	US	18 JUN	101.5	99.7	837	830	
1964 031C		815	US	18 JUN	101.5	99.7	840	824	
1964 038A	ELEKTRON 3	829	USSR	10 JUL	167.1	60.8	6937	411	
1964 038B	ELEKTRON 4	830	USSR	10 JUL	1313.7	58.9	65126	1589	
1964 038C		831	USSR	10 JUL	164.1	60.8	6697	412	
1964 038D		832	USSR	10 JUL	1341.2	58.9	66207	1610	
1964 040A		836	US	17 JUL	6024.2	37.8	105225	101362	
1964 040B		837	US	17 JUL	6004.6	38.0	141686	64425	
1964 040C		838	US	17 JUL	CURRENT ELEMENTS NOT MAINTAINED				
1964 041B		843	US	28 JUL	BARYCENTRIC ORBIT				
1964 045B		851	US	14 AUG	116.9	95.6	2818	267	
1964 047A	SYNCOM 3	858	US	19 AUG	1436.6	3.1	35811	35783	
1964 047B		862	US	19 AUG	CURRENT ELEMENTS NOT MAINTAINED				
1964 049D	COSMOS 41	869	USSR	22 AUG	714.7	68.3	38079	2125	
1964 049E		898	USSR	22 AUG	718.5	68.3	38263	2131	
1964 051A	EXPLORER 20	870	US	25 AUG	103.8	79.9	1020	867	
1964 051B		871	US	25 AUG	103.7	79.9	1012	865	
1964 052A	NIMBUS 1	872	US	28 AUG	96.3	98.6	757	411	
1964 052B		878	US	28 AUG	96.5	98.6	773	414	
1964 053A	COSMOS 44	876	USSR	28 AUG	99.4	65.0	848	613	
1964 053B		877	USSR	28 AUG	99.5	65.0	785	688	
1964 054A	OGO 1	879	US	5 SEP	3841.4	58.5	107058	42685	136.200,400.250, 2* 400.850 2*

OBJECTS IN ORBIT

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1964 LAUNCHES (CONT'D)									
1964 063A		893	US	6 OCT	106.3	89.8	1078	1034	
1964 063B		897	US	6 OCT	106.5	89.8	1080	1058	
1964 063C		900	US	6 OCT	106.4	89.8	1078	1049	
1964 063D		901	US	6 OCT	106.5	89.8	1081	1059	
1964 063E		902	US	6 OCT	106.5	89.8	1082	1057	
1964 063F		903	US	6 OCT	106.5	89.8	1078	1053	
1964 064A	EXPLORER 22	899	US	10 OCT	104.7	79.6	1078	886	
1964 064B		907	US	10 OCT	104.7	79.6	1075	889	
1964 064C		976	US	10 OCT	103.9	79.3	1056	837	
1964 064D		977	US	10 OCT	105.4	80.0	1121	910	
1964 073A	MARINER 3	923	US	5 NOV	HELIOCENTRIC ORBIT				
1964 074A	EXPLORER 23	924	US	6 NOV	98.5	51.9	918	456	
1964 074B		3747	US	6 NOV	97.1	51.6	760	487	
1964 076B	EXPLORER 25	932	US	21 NOV	116.0	81.3	2476	531	
1964 076C		933	US	21 NOV	115.9	81.3	2468	532	
1964 076D		934	US	21 NOV	113.8	81.3	2269	535	
1964 076E		935	US	21 NOV	113.7	81.3	2265	532	
1964 076G		937	US	21 NOV	112.8	81.3	2209	511	
1964 076I		940	US	21 NOV	112.5	81.3	2166	525	
1964 076J		941	US	21 NOV	114.3	81.3	2306	546	
1964 076K		960	US	21 NOV	114.1	81.3	2285	554	
1964 076M		4079	US	21 NOV	100.1	81.4	1010	523	
1964 077A	MARINER 4	938	US	28 NOV	HELIOCENTRIC ORBIT				
1964 077B		942	US	28 NOV	HELIOCENTRIC ORBIT				
1964 078C	ZOND 2	945	USSR	30 NOV	HELIOCENTRIC ORBIT				
1964 083A		953	US	13 DEC	106.1	89.8	1070	1025	
1964 083B		956	US	13 DEC	106.2	89.8	1082	1025	
1964 083C		959	US	13 DEC	106.2	89.8	1086	1024	
1964 083D		965	US	13 DEC	106.3	89.8	1087	1025	
1964 083E		966	US	13 DEC	106.2	89.8	1084	1026	
1964 083F		967	US	13 DEC	106.2	89.8	1083	1024	
1964 083G		1099	US	13 DEC	106.2	89.8	1088	1021	
1964 083H		1528	US	13 DEC	106.0	89.8	1080	1010	
1964 083J		1608	US	13 DEC	106.1	89.8	1080	1022	
1964 083K		2798	US	13 DEC	104.8	89.8	1022	956	
1964 086A	EXPLORER 26	963	US	21 DEC	CURRENT ELEMENTS NOT MAINTAINED				

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1965 LAUNCHES									
1965 003A		973	US	19 JAN	96.5	98.7	743	445	
1965 004A	TIROS 9	978	US	22 JAN	119.1	96.3	2581	705	
1965 004B		979	US	22 JAN	119.2	96.4	2589	706	
1965 004C		1312	US	22 JAN	117.9	96.3	2507	675	
1965 004D		1313	US	22 JAN	120.3	96.4	2660	734	
1965 007A	OSO 2	987	US	3 FEB	96.2	32.8	606	544	
1965 007B		988	US	3 FEB	95.6	32.8	581	518	
1965 008A		1001	US	11 FEB	145.3	32.1	2794	2761	
1965 008B		1000	US	11 FEB	145.6	32.1	2799	2778	
1965 008C		1002	US	11 FEB	145.7	32.1	2807	2778	
1965 009A	PEGASUS 1	1085	US	16 FEB	96.0	31.7	652	477	
1965 009B		1088	US	16 FEB	96.6	31.7	707	489	
1965 010B		1087	US	17 FEB	BARYCENTRIC ORBIT				
1965 011D		1092	USSR	21 FEB	91.5	55.9	483	219	
1965 014A	COSMOS 58	1097	USSR	21 FEB	96.5	65.0	637	553	
1965 014B		1098	USSR	26 FEB	96.5	65.0	692	495	
1965 016A	GREB	1271	US	9 MAR	103.4	70.0	941	906	
1965 016B	GRAVITY GRADIENT 2	1244	US	9 MAR	103.4	70.0	941	906	
1965 016C	GRAVITY GRADIENT 3	1292	US	9 MAR	103.4	70.0	940	905	
1965 016D	SOLAR RAD.	1291	US	9 MAR	103.4	70.0	941	906	
1965 016E	EGRS 3	1208	US	9 MAR	103.4	70.0	940	906	
1965 016F	OSCAR 3	1293	US	9 MAR	103.4	70.0	938	903	
1965 016G	SURCAL	1310	US	9 MAR	102.8	70.1	906	880	
1965 016H	DODECAHEDRON	1272	US	9 MAR	103.4	70.0	941	905	
1965 016J		1245	US	9 MAR	103.4	70.0	940	903	
1965 020D - 020EZ			USSR	15 MAR	SEE NOTE 4*				4*
1965 021A		1273	US	18 MAR	97.2	98.9	733	521	
1965 021C		1289	US	18 MAR	96.7	98.9	698	510	
1965 021E		1376	US	18 MAR	92.0	98.9	382	370	
1965 021F		1463	US	18 MAR	97.5	99.0	775	511	
1965 023B		1298	US	21 MAR	HELIOCENTRIC ORBIT				
1965 027A		1314	US	3 APR	111.5	90.2	1319	1274	
1965 027B	EGRS 4	1315	US	3 APR	111.4	90.2	1317	1271	
1965 027C		1316	US	3 APR	111.3	90.2	1316	1262	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1965 LAUNCHES (CONT'D)									
1965 027D		1389	US	3 APR	111.3	90.2	1313	1269	
1965 027E		1399	US	3 APR	111.5	90.2	1322	1272	
1965 028A	EARLY BIRD	1317	US	6 APR	1435.5	3.3	35853	35698	
1965 028B		1318	US	6 APR	CURRENT ELEMENTS NOT MAINTAINED				
1965 030A	MOLNIYA 1	1324	USSR	23 APR	720.1	65.7	38334	2140	
1965 030D		1967	USSR	23 APR	702.5	65.9	37485	2118	
1965 032A	EXPLORER 27	1328	US	29 APR	107.8	41.1	1310	940	
1965 032B		1358	US	29 APR	107.8	41.1	1311	937	
1965 032C		1995	US	29 APR	106.6	41.0	1260	876	
1965 032D		2011	US	29 APR	108.9	41.1	1291	1063	
1965 034A		1359	US	6 MAY	157.0	32.1	3744	2778	
1965 034B		1360	US	6 MAY	309.8	32.1	14957	2617	
1965 034C		1361	US	6 MAY	145.5	32.1	2800	2774	
1965 034D		2529	US	6 MAY	309.7	32.1	14802	2771	
1965 038A		1377	US	20 MAY	99.7	98.4	948	552	
1965 038B		1378	US	20 MAY	99.7	98.4	942	549	
1965 038C		1379	US	20 MAY	99.4	98.4	917	551	
1965 038E		1461	US	20 MAY	100.4	98.4	1016	548	
1965 038F		1462	US	20 MAY	98.1	98.4	804	541	
1965 038G		1475	US	20 MAY	99.6	98.3	941	547	
1965 039A	PEGASUS 2	1381	US	25 MAY	96.3	31.7	670	492	
1965 039B		1385	US	25 MAY	96.8	31.7	713	502	
1965 044A	LUNIK 6	1393	USSR	8 JUN	HELIOCENTRIC ORBIT				
1965 048A		1420	US	24 JUN	106.8	89.9	1138	1030	
1965 048B		1428	US	24 JUN	106.5	89.9	1113	1025	
1965 048C		1425	US	24 JUN	106.8	89.9	1136	1030	
1965 048D		1435	US	24 JUN	106.8	89.9	1137	1024	
1965 048E		2701	US	24 JUN	106.5	89.9	1110	1024	
1965 048F		3592	US	24 JUN	106.5	89.9	1111	1026	
1965 051A	TIROS 10	1430	US	2 JUL	100.6	98.4	835	743	
1965 051B		1433	US	2 JUL	100.6	98.5	835	743	
1965 051C		1440	US	2 JUL	99.0	98.5	823	610	
1965 051D		1529	US	2 JUL	101.9	98.5	883	823	
1965 053A	COSMOS 71	1441	USSR	16 JUL	93.2	56.0	439	425	
1965 053B	COSMOS 72	1442	USSR	16 JUL	95.2	56.0	551	513	
1965 053C	COSMOS 73	1443	USSR	16 JUL	94.6	56.0	508	493	
1965 053D	COSMOS 74	1444	USSR	16 JUL	95.6	56.0	579	518	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1965 LAUNCHES (CONT'D)									
1965 053E	COSMOS 75	1445	USSR	16 JUL	95.8	56.0	603	516	
1965 053F		1448	USSR	16 JUL	96.1	56.0	623	529	
1965 056A	ZOND 3	1454	USSR	18 JUL	HELIOCENTRIC ORBIT				
1965 058A		1458	US	20 JUL	6706.7	32.1	130320	92536	
1965 058B		1459	US	20 JUL	6706.1	31.1	141993	80849	
1965 058C		1460	US	20 JUL	CURRENT ELEMENTS NOT MAINTAINED				
1965 060B		1468	US	30 JUL	94.3	28.8	493	480	
1965 063A	EGRS 5	1506	US	10 AUG	122.2	69.2	2419	1141	
1965 063B		1502	US	10 AUG	122.2	69.2	2418	1143	
1965 064A	CENTAUR 6	1503	US	11 AUG	BARYCENTRIC ORBIT				
1965 065A		1504	US	13 AUG	108.0	90.0	1190	1086	
1965 065B		1508	US	13 AUG	107.8	89.9	1163	1096	
1965 065C		1510	US	13 AUG	107.8	90.0	1179	1077	
1965 065D		1511	US	13 AUG	108.0	89.9	1194	1085	
1965 065E		1512	US	13 AUG	108.0	90.0	1193	1086	
1965 065F		1514	US	13 AUG	108.1	90.0	1194	1086	
1965 065G		1515	US	13 AUG	107.9	89.9	1187	1081	
1965 065H		1520	US	13 AUG	108.0	90.0	1195	1085	
1965 065J		1521	US	13 AUG	108.0	90.0	1193	1086	
1965 065K		1577	US	13 AUG	108.0	90.0	1193	1087	
1965 065L		1522	US	13 AUG	108.1	90.0	1196	1085	
1965 065M		2335	US	13 AUG	108.0	90.0	1185	1086	
1965 065N		3809	US	13 AUG	107.8	89.9	1175	1080	
1965 065P		3810	US	13 AUG	107.1	90.0	1153	1042	
1965 070A	COSMOS 80	1570	USSR	3 SEP	114.9	56.0	1547	1361	
1965 070B	COSMOS 81	1571	USSR	3 SEP	115.3	56.0	1550	1390	
1965 070C	COSMOS 82	1572	USSR	3 SEP	115.6	56.0	1556	1415	
1965 070D	COSMOS 83	1573	USSR	3 SEP	116.0	56.0	1564	1442	
1965 070E	COSMOS 84	1574	USSR	3 SEP	116.4	56.0	1572	1468	
1965 070F		1575	USSR	3 SEP	114.5	56.1	1515	1358	
1965 070G		3045	USSR	3 SEP	116.0	55.4	1744	1261	
1965 072A		1580	US	10 SEP	101.8	98.5	1047	650	
1965 072D		1583	US	10 SEP	101.8	98.5	1041	649	
1965 072E		1931	US	10 SEP	103.1	98.6	1169	650	
1965 072F		1932	US	10 SEP	100.5	98.4	924	646	
1965 073A	COSMOS 86	1584	USSR	18 SEP	115.0	56.0	1634	1281	
1965 073B	COSMOS 87	1585	USSR	18 SEP	115.4	56.0	1644	1308	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1965 LAUNCHES (CONT'D)										
1965 073C	COSMOS 88	1586	USSR	18 SEP	115.8	56.0	1657	1329		
1965 073D	COSMOS 89	1587	USSR	18 SEP	116.2	56.0	1670	1353		
1965 073E	COSMOS 90	1588	USSR	18 SEP	116.6	56.0	1681	1380		
1965 073F		1589	USSR	18 SEP	116.8	56.0	1692	1382		
1965 073G		1590	USSR	18 SEP	116.4	56.0	1669	1371		
1965 073H		1591	USSR	18 SEP	116.6	56.0	1685	1374		
1965 073J		1617	USSR	18 SEP	117.4	56.1	1756	1376		
1965 073K		1618	USSR	18 SEP	117.6	56.1	1760	1391		
1965 073L		2647	USSR	18 SEP	116.1	56.0	1662	1350		
1965 078A		1613	US	5 OCT	124.7	144.2	3364	412		
1965 078B		1616	US	5 OCT	124.4	144.2	3345	412		
1965 081A	OGO 2	1620	US	14 OCT	102.8	87.3	1371	415		
1965 081B		1625	US	14 OCT	103.0	87.3	1390	416		
1965 082A	TITAN 3 C-4	1624	US	15 OCT	98.4	32.3	712	652		
1965 082B -	082SU		US	15 OCT	SEE NOTE	5*				5*
1965 089A	EXPLORER 29	1726	US	6 NOV	120.3	59.3	2276	1115		
1965 089B		1729	US	6 NOV	120.3	59.3	2272	1116		
1965 089C		2700	US	6 NOV	119.1	59.6	2218	1071		
1965 089D		2888	US	6 NOV	121.3	59.1	2329	1152		
1965 091A	VENERA 2	1730	USSR	12 NOV	HELIOCENTRIC ORBIT					
1965 092D		1736	USSR	16 NOV	HELIOCENTRIC ORBIT					
1965 093A	EXPLORER 30	1738	US	19 NOV	100.7	59.7	899	685		
1965 093B		1739	US	19 NOV	100.6	59.7	871	711		
1965 093C		2013	US	19 NOV	100.1	59.6	841	690		
1965 093D		2088	US	19 NOV	101.2	59.7	915	725		
1965 096A	A-1	1778	FRANCE	26 NOV	108.5	34.2	1789	527		
1965 096B		1805	FRANCE	26 NOV	108.4	34.2	1785	525		
1965 096D		1996	FRANCE	26 NOV	107.9	34.2	1737	526		
1965 098A	ALOUETTE 2	1804	CANADA	29 NOV	121.0	79.8	2948	507	136.080,136.590,	2*
									136.980	2*
1965 098B	EXPLORER 31	1806	US	29 NOV	121.2	79.8	2969	507	136.380	2*
1965 098C		1807	US	29 NOV	121.0	79.8	2952	508		
1965 098D		1808	US	29 NOV	119.7	79.8	2822	517		
1965 098E		1944	US	29 NOV	119.6	79.8	2818	517		
1965 098F		1948	US	29 NOV	120.4	79.8	2887	515		
1965 098G		1951	US	29 NOV	120.3	79.7	2881	510		
1965 098H		2092	US	29 NOV	121.0	79.8	2950	508		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1965 LAUNCHES (CONT'D)									
1965 098J		2153	US	29 NOV	120.9	79.7	2939	506	
1965 101A	FR-1	1814	FRANCE	6 DEC	99.8	75.8	757	743	
1965 101B		1815	US	6 DEC	99.9	75.8	763	747	
1965 101C		1934	US	6 DEC	99.5	76.4	767	708	
1965 101D		1935	US	6 DEC	99.0	75.2	746	678	
1965 105A	PIONEER 6	1841	US	16 DEC	HELIOCENTRIC ORBIT				
1965 106A	COSMOS 100	1843	USSR	17 DEC	97.4	65.0	648	624	
1965 106B		1844	USSR	17 DEC	97.5	65.0	733	552	
1965 108A	TITAN 3 C-8	1863	US	21 DEC	267.0	26.5	14529	186	
1965 108B	LES 4	1870	US	21 DEC	CURRENT ELEMENTS NOT MAINTAINED				
1965 108C	OSCAR 4	1902	US	21 DEC	CURRENT ELEMENTS NOT MAINTAINED				
1965 109A		1864	US	22 DEC	104.9	89.0	1085	906	
1965 109B		1865	US	22 DEC	105.0	89.0	1084	907	
1965 109C		2086	US	22 DEC	103.5	89.1	969	884	
1965 109D		2226	US	22 DEC	107.1	89.0	1296	898	
1965 109E		2353	US	22 DEC	105.4	89.4	1138	892	
1965 112A	COSMOS 103	1868	USSR	28 DEC	96.7	56.0	624	582	
1965 112B - 112Q			USSR	28 DEC	SEE NOTE	6*			6*
1966 LAUNCHES									
1966 000A		2428	UNKN	UNKN	145.1	35.1	5332	203	7*
1966 000B		2429	UNKN	UNKN	161.6	84.5	6236	669	7*
1966 000C		2430	UNKN	UNKN	161.1	84.2	6171	695	7*
1966 005A		1952	US	28 JAN	105.8	89.7	1212	861	
1966 005B		1953	US	28 JAN	105.8	89.7	1211	863	
1966 005C		2140	US	28 JAN	107.8	89.9	1386	867	
1966 005D		2141	US	28 JAN	104.3	89.7	1086	844	
1966 005E		2889	US	28 JAN	109.6	89.5	1342	1079	
1966 005F		2989	US	28 JAN	104.3	89.6	1069	864	
1966 006D		2001	USSR	31 JAN	BARYCENTRIC ORBIT				
1966 008A	ESSA 1	1982	US	3 FEB	100.2	97.8	840	702	
1966 008B		1983	US	3 FEB	100.4	97.8	862	700	
1966 008C		2085	US	3 FEB	99.0	97.7	748	684	
1966 008D		2118	US	3 FEB	101.2	97.9	948	691	
1966 008E		2154	US	3 FEB	100.2	97.7	825	713	
1966 013A	D-1A	2016	FRANCE	17 FEB	118.3	34.1	2705	502	

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1966 LAUNCHES (CONT'D)										
1966 013B		2017	FRANCE	17 FEB	118.3	34.0	2704	502		
1966 013F		2023	FRANCE	17 FEB	116.0	34.0	2521	485		
1966 013G		2161	FRANCE	17 FEB	118.4	34.1	2701	516		
1966 013J		3970	FRANCE	17 FEB	116.5	34.0	2543	500		
1966 016A	ESSA 2	2091	US	28 FEB	113.4	100.8	1415	1358	136.770,137.500	2*
1966 016B		2096	US	28 FEB	113.4	100.8	1418	1357		
1966 016C		2223	US	28 FEB	111.9	100.7	1388	1243		
1966 016D		2224	US	28 FEB	115.0	101.0	1570	1349		
1966 024A		2119	US	26 MAR	105.2	89.7	1122	894		
1966 024B		2120	US	26 MAR	105.2	89.7	1122	896		
1966 024C		2386	US	26 MAR	105.1	90.0	1108	896		
1966 024D		3590	US	26 MAR	104.3	89.7	1049	881		
1966 025A	OV1-4	2121	US	30 MAR	104.0	144.5	1011	886		
1966 025B	OV1-5	2122	US	30 MAR	105.6	144.6	1059	985		
1966 025C		2123	US	30 MAR	105.6	144.6	1056	987		
1966 025D		2124	US	30 MAR	104.0	144.5	1010	886		
1966 025E		3611	US	30 MAR	105.4	144.5	1072	953		
1966 025F		4007	US	30 MAR	104.3	144.2	979	946		
1966 026A		2125	US	31 MAR	100.4	98.4	932	628		
1966 026B		2129	US	31 MAR	100.3	98.4	924	626		
1966 026D		2177	US	31 MAR	102.2	98.5	1101	627		
1966 026E		2178	US	31 MAR	98.3	98.4	748	617		
1966 026F		2179	US	31 MAR	100.0	98.4	893	627		
1966 027A	LUNA 10	2126	USSR	31 MAR	SELENOCENTRIC ORBIT					
1966 027D		2130	USSR	31 MAR	HELIOCENTRIC ORBIT					
1966 027E		2131	USSR	31 MAR	BARYCENTRIC ORBIT					
1966 027F		2132	USSR	31 MAR	BARYCENTRIC ORBIT					
1966 031A	OAO 1	2142	US	8 APR	100.8	35.0	800	793		
1966 031B		2144	US	8 APR	100.7	35.0	801	785		
1966 031C		2145	US	8 APR	100.3	35.0	780	769		
1966 034A	OV3-1	2150	US	22 APR	149.8	82.4	5580	355		
1966 034B		2167	US	22 APR	148.2	82.4	5445	354		
1966 034C		2208	US	22 APR	149.3	82.4	5525	373		
1966 034D		2209	US	22 APR	145.3	82.4	5221	337		
1966 035A	3RD MOLNIYA 1	2151	USSR	25 APR	705.6	65.1	38020	1734		
1966 035F		3222	USSR	25 APR	702.7	65.0	37897	1715		
1966 038A	COSMOS 118	2168	USSR	11 MAY	96.8	65.0	621	596		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1966 LAUNCHES (CONT'D)									
1966 038B		2169	USSR	11 MAY	96.7	65.0	660	546	
1966 039B		2172	US	14 MAY	93.5	109.9	464	431	
1966 040A	NIMBUS 2	2173	US	15 MAY	108.0	100.3	1182	1097	
1966 040B		2174	US	15 MAY	107.8	100.3	1174	1085	
1966 041A		2176	US	19 MAY	103.3	89.8	978	858	
1966 041B		2180	US	19 MAY	103.3	89.8	985	855	
1966 041C		2225	US	19 MAY	101.1	89.8	853	775	
1966 041D		2644	US	19 MAY	105.5	89.8	1196	848	
1966 041E		3591	US	19 MAY	103.3	89.8	978	859	
1966 044A	EXPLORER 32	2183	US	25 MAY	112.5	64.6	2409	280	
1966 045B		2187	US	20 MAY	BARYCENTRIC ORBIT				
1966 049A	OGO 3	2195	US	7 JUN	2912.6	70.5	111901	10462	136.200,400.250, 2* 400.850 2*
1966 052A		2201	US	10 JUN	143.1	40.8	4729	640	
1966 052B		2206	US	10 JUN	143.0	40.8	4725	639	
1966 052C		2498	US	10 JUN	140.9	40.6	4599	584	
1966 052D		2516	US	10 JUN	145.1	41.0	4845	698	
1966 053A		2207	US	16 JUN	1333.9	3.1	33880	33642	
1966 053B		2215	US	16 JUN	1334.5	2.7	33905	33644	
1966 053C		2216	US	16 JUN	1335.3	2.6	33889	33689	
1966 053D		2217	US	16 JUN	1336.5	2.7	33917	33710	
1966 053E		2218	US	16 JUN	1338.6	2.3	34019	33692	
1966 053F		2219	US	16 JUN	1340.9	2.8	34093	33710	
1966 053G		2220	US	16 JUN	1343.9	2.8	34244	33679	
1966 053H		2221	US	16 JUN	1347.5	2.7	34367	33702	
1966 053J		2222	US	16 JUN	CURRENT ELEMENTS NOT MAINTAINED				
1966 056A	PAGEOS 1	2253	US	24 JUN	179.8	84.5	5958	2393	
1966 056B		2255	US	24 JUN	181.1	86.9	4279	4180	
1966 056C		2256	US	24 JUN	181.3	86.8	4270	4202	
1966 056D		2511	US	24 JUN	181.5	87.0	4252	4231	
1966 057A	COSMOS 122	2254	USSR	25 JUN	96.8	64.9	621	593	
1966 057B		2257	USSR	25 JUN	96.7	65.0	672	532	
1966 058A	EXPLORER 33	2258	US	1 JUL	70673.0	56.7	852493	267229	136.020 2*
1966 058C		2260	US	1 JUL	CURRENT ELEMENTS NOT MAINTAINED				
1966 063A	OV1-8	2324	US	14 JUL	102.5	144.1	922	834	
1966 063B		2327	US	14 JUL	105.1	144.2	1008	989	
1966 063C		2328	US	14 JUL	105.2	144.2	1011	997	

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1966 LAUNCHES (CONT'D)										
1966 063D		2329	US	14 JUL	105.3	144.2	1012	1006		
1966 063E		2337	US	14 JUL	105.2	144.2	1010	1002		
1966 070A	OV3-3	2389	US	4 AUG	135.1	81.4	4333	357		
1966 070B		2404	US	4 AUG	133.1	81.4	4161	356		
1966 070C		2521	US	4 AUG	119.2	81.4	3013	282		
1966 070D		2800	US	4 AUG	137.9	81.4	4512	420		
1966 073B		2395	US	10 AUG	BARYCENTRIC ORBIT					
1966 074B		2397	US	16 AUG	91.9	93.1	375	371		
1966 075A	PIONEER 7	2398	US	17 AUG	HELIOCENTRIC ORBIT					
1966 075C		2402	US	17 AUG	HELIOCENTRIC ORBIT					
1966 076A		2401	US	18 AUG	106.7	88.8	1102	1053		
1966 076B		2413	US	18 AUG	106.7	88.8	1104	1052		
1966 076C		2580	US	18 AUG	105.3	89.1	1089	931		
1966 076D		2702	US	18 AUG	108.3	88.5	1219	1084		
1966 077A		2403	US	19 AUG	167.5	90.0	3703	3674		
1966 077B	EGRS 7	2411	US	19 AUG	167.5	90.0	3704	3673		
1966 077C	ERS-15	2412	US	19 AUG	167.6	90.0	3702	3684		
1966 078A	LUNA 11	2406	USSR	24 AUG	SELENOCENTRIC ORBIT					
1966 082A		2418	US	16 SEP	100.7	98.3	898	695		
1966 082B		2422	US	16 SEP	100.7	98.3	899	694		
1966 084B		2426	US	20 SEP	BARYCENTRIC ORBIT					
1966 087A	ESSA 3	2435	US	2 OCT	114.5	101.0	1488	1387		
1966 087B		2436	US	2 OCT	114.5	101.0	1488	1386		
1966 087C		2518	US	2 OCT	115.9	100.7	1565	1432		
1966 087D		2775	US	2 OCT	113.3	101.3	1475	1283		
1966 089A		2481	US	5 OCT	167.5	90.2	3699	3685		
1966 089B	EGRS 8	2520	US	5 OCT	167.6	90.2	3700	3687		
1966 094A	LUNA 12	2508	USSR	22 OCT	SELENOCENTRIC ORBIT					
1966 095B		2513	US	25 OCT	BARYCENTRIC ORBIT					
1966 096A	INTELSAT 2 F-1	2514	US	26 OCT	717.8	18.4	37124	3230	136.440,136.980	2*
1966 097A	OV3-2	2517	US	28 OCT	98.4	81.9	1067	302		
1966 097B		2519	US	28 OCT	93.1	81.9	581	274		
1966 097D		2614	US	28 OCT	101.8	81.9	1329	367		
1966 101AS		2931	USSR	2 NOV	96.4	49.0	691	486		
1966 110A	ATS-1	2608	US	7 DEC	1436.1	1.9	35789	35787	136.470,137.350	2*
1966 110B		2609	US	7 DEC	342.6	30.9	19513	169		
1966 111A	OV1-9	2610	US	11 DEC	141.9	99.1	4798	479		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1966 LAUNCHES (CONT'D)									
1966 111B	OV1-10	2611	US	11 DEC	98.6	93.4	759	635	
1966 111C		2621	US	11 DEC	98.7	93.4	764	636	
1966 111D		2622	US	11 DEC	141.9	99.1	4795	476	
1967 LAUNCHES									
1967 001A	INTELSAT 2 F-2	2639	US	11 JAN	1436.2	0.3	35811	35766	
1967 001D		2643	US	11 JAN	652.8	26.1	36809	288	
1967 003A		2645	US	18 JAN	1329.4	2.0	33834	33509	
1967 003B		2649	US	18 JAN	1329.9	2.2	33809	33553	
1967 003C		2650	US	18 JAN	1330.6	2.3	33830	33561	
1967 003D		2651	US	18 JAN	1332.0	2.2	33920	33529	
1967 003E		2652	US	18 JAN	1334.1	2.3	33921	33610	
1967 003F		2653	US	18 JAN	1336.4	2.3	33887	33739	
1967 003G		2654	US	18 JAN	1339.4	2.3	34125	33620	
1967 003H		2655	US	18 JAN	1064.3	2.2	30583	25720	
1967 003J		2660	US	18 JAN	CURRENT ELEMENTS NOT MAINTAINED				
1967 006A	ESSA 4	2657	US	26 JAN	113.4	101.9	1442	1327	
1967 006B		2661	US	26 JAN	113.6	101.8	1444	1343	
1967 006C		2706	US	26 JAN	114.2	102.0	1451	1395	
1967 006D		2707	US	26 JAN	112.6	101.8	1464	1233	
1967 010A		2669	US	8 FEB	101.4	98.8	870	788	
1967 010B		2741	US	8 FEB	101.4	98.8	869	790	
1967 011A	DIADEME 1	2674	FRANCE	8 FEB	104.0	39.9	1330	563	
1967 011B		2671	FRANCE	8 FEB	104.1	39.9	1339	564	
1967 011G		2688	FRANCE	8 FEB	102.8	40.0	1239	547	
1967 011H		2689	FRANCE	8 FEB	104.4	39.9	1390	539	
1967 011L		2692	FRANCE	8 FEB	102.6	39.9	1220	550	
1967 011M		2900	FRANCE	8 FEB	102.9	39.9	1246	549	
1967 011N		2990	FRANCE	8 FEB	102.7	39.9	1230	548	
1967 011P		3742	FRANCE	8 FEB	103.1	39.9	1259	549	
1967 011Q		4009	FRANCE	8 FEB	109.3	39.4	1830	563	
1967 014A	DIADEME 2	2680	FRANCE	15 FEB	110.0	39.4	1868	584	
1967 014B		2682	FRANCE	15 FEB	110.1	39.3	1880	586	
1967 014C		2684	FRANCE	15 FEB	109.8	39.9	1857	580	
1967 014E		2683	FRANCE	15 FEB	109.0	39.4	1800	566	
1967 014F		2685	FRANCE	15 FEB	109.6	38.9	1847	574	

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1967 LAUNCHES (CONT'D)										
1967 014G		3589	FRANCE	15 FEB	109.3	39.4	1824	562		
1967 014H		3935	FRANCE	8 FEB	109.1	39.4	1809	566		
1967 018A	COSMOS 144	2695	USSR	28 FEB	96.5	81.2	620	571		
1967 018B		2696	USSR	28 FEB	96.7	81.2	688	516		
1967 018C		3095	USSR	28 FEB	95.5	81.2	562	531		
1967 020A	OSO 3	2703	US	8 MAR	95.3	32.8	546	525	136.290	2*
1967 020B		2704	US	8 MAR	93.1	32.8	428	421		
1967 020C		2987	US	8 MAR	91.7	32.8	366	354		
1967 026A	INTELSAT 2 F-3	2717	US	23 MAR	1436.1	0.4	35796	35775		
1967 027A	COSMOS 151	2720	USSR	24 MAR	96.9	56.0	636	590		
1967 027B		2721	USSR	24 MAR	96.9	56.0	636	588		
1967 027D		2797	USSR	24 MAR	95.2	56.0	542	514		
1967 034A		2754	US	14 APR	106.4	90.2	1079	1051		
1967 034B		2755	US	14 APR	106.5	90.2	1080	1053		
1967 034C		2777	US	14 APR	104.2	90.2	1074	843		
1967 034D		2778	US	14 APR	108.7	90.1	1266	1071		
1967 035B		2764	US	17 APR	BARYCENTRIC ORBIT					
1967 036A	ESSA 5	2757	US	20 APR	113.5	101.9	1424	1356	136.770,235	2*
1967 036B		2758	US	20 APR	113.5	102.0	1423	1359		
1967 036C		2976	US	20 APR	112.3	102.1	1409	1266		
1967 036D		2977	US	20 APR	114.6	101.7	1485	1394		
1967 039A	COSMOS 156	2762	USSR	27 APR	96.7	81.1	626	577		
1967 039B		2763	USSR	27 APR	96.9	81.2	695	535		
1967 040A		2765	US	28 APR	6686.0	34.7	115242	107127		
1967 040B		2766	US	28 APR	6713.9	35.0	118369	104654		
1967 040C	ERS 18	2767	US	28 APR	CURRENT ELEMENTS NOT MAINTAINED					
1967 040D	ERS 20	2768	US	28 APR	CURRENT ELEMENTS NOT MAINTAINED					
1967 040E	ERS 27	2769	US	28 APR	CURRENT ELEMENTS NOT MAINTAINED					
1967 040F		2770	US	28 APR	CURRENT ELEMENTS NOT MAINTAINED					
1967 042A	ARIEL 3	2773	UK	5 MAY	94.0	80.1	505	443		
1967 042B		2774	US	5 MAY	94.1	80.1	513	441		
1967 043B		2780	US	9 MAY	98.1	84.9	791	552		
1967 045A	COSMOS 158	2801	USSR	15 MAY	100.4	74.0	821	738		
1967 045B		2802	USSR	15 MAY	100.6	74.0	846	731		
1967 045C		2823	USSR	15 MAY	100.5	74.0	834	734		
1967 045D		3737	USSR	15 MAY	100.5	74.0	840	729		
1967 046A	COSMOS 159	2805	USSR	17 MAY	1174.2	53.0	58530	2451		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ. (MC/S)	
1967 LAUNCHES (CONT'D)										
1967 046F		2924	USSR	17 MAY	1171.1	53.1	58421	2430		
1967 048A		2807	US	18 MAY	106.9	89.6	1102	1073		
1967 048B		2811	US	18 MAY	106.9	89.6	1101	1072		
1967 052A	5TH MOLNIYA 1	2822	USSR	24 MAY	711.6	64.8	39011	1043		
1967 052F		3224	USSR	24 MAY	709.6	64.8	38928	1024		
1967 053A		2826	US	31 MAY	103.4	69.9	924	916		
1967 053B		2825	US	31 MAY	103.4	69.9	933	908		
1967 053C	GRAVITY GRADIENT 4	2828	US	31 MAY	103.4	69.9	928	913		
1967 053D	GRAVITY GRADIENT 5	2834	US	31 MAY	103.4	69.9	925	916		
1967 053E		2847	US	31 MAY	103.3	69.9	925	913		
1967 053F		2872	US	31 MAY	103.3	69.9	926	913		
1967 053G		2873	US	31 MAY	103.4	69.9	927	914		
1967 053H		2874	US	31 MAY	103.4	69.9	925	915		
1967 053J		2909	US	31 MAY	103.2	69.9	922	907		
1967 060A	MARINER 5	2845	US	14 JUN	HELIOCENTRIC ORBIT					
1967 060B		2846	US	14 JUN	HELIOCENTRIC ORBIT					
1967 065A	EGRS 9	2861	US	29 JUN	172.1	89.7	3947	3797		
1967 065B	AURORA 1	2876	US	29 JUN	172.1	89.7	3948	3797		
1967 065C		2877	US	29 JUN	172.1	89.7	3948	3797		
1967 066A	TITAN 3 C-14	2862	US	1 JUL	1309.6	5.0	33538	33009		
1967 066B		2863	US	1 JUL	1310.3	5.3	33555	33020		
1967 066C		2864	US	1 JUL	1311.7	5.2	33559	33070		
1967 066D		2865	US	1 JUL	1313.6	5.2	33610	33097		
1967 066E		2866	US	1 JUL	1316.1	5.1	33586	33221		
1967 066F	DODGE	2867	US	1 JUL	CURRENT ELEMENTS NOT MAINTAINED				136.800	2*
1967 066G		2868	US	1 JUL	CURRENT ELEMENTS NOT MAINTAINED					
1967 068B		2883	US	14 JUL	BARYCENTRIC ORBIT					
1967 070A	EXPLORER 35	2884	US	19 JUL	SELENOCENTRIC ORBIT				136.110	2*
1967 072A	OV1-86	2893	US	27 JUL	94.3	101.7	529	444		
1967 072B		2894	US	27 JUL	93.6	101.7	499	406		
1967 072C		2897	US	27 JUL	94.8	101.6	522	508		
1967 072D	OV1-12	2901	US	27 JUL	95.2	101.6	536	522		
1967 073A	OGO 4	2895	US	28 JUL	96.1	85.9	751	399		
1967 073B		2896	US	28 JUL	96.2	86.0	763	399		
1967 075B		2908	US	1 AUG	BARYCENTRIC ORBIT					
1967 080A		2920	US	23 AUG	102.1	98.8	891	832		
1967 080B		2940	US	23 AUG	102.1	98.8	891	832		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1967 LAUNCHES (CONT'D)										
1967 084B		2938	US	8 SEP	BARYCENTRIC ORBIT					
1967 086F		2958	USSR	12 SEP	101.1	82.2	1260	370		
1967 092A		2965	US	25 SEP	106.7	89.2	1113	1042		
1967 092B		2967	US	25 SEP	106.7	89.2	1112	1042		
1967 092C		2994	US	25 SEP	104.4	89.5	1050	891		
1967 092D		3122	US	25 SEP	109.1	89.0	1335	1045		
1967 094A	INTELSAT 2 F-4	2969	US	28 SEP	1435.8	0.4	35816	35744		
1967 094C		2971	US	28 SEP	CURRENT ELEMENTS NOT MAINTAINED					
1967 096A		2980	US	11 OCT	100.0	99.2	858	667		
1967 096B		2985	US	11 OCT	100.0	99.1	855	669		
1967 100A	OSO 4	3000	US	18 OCT	95.5	32.9	557	525	136.710	2*
1967 100B		3004	US	18 OCT	95.3	32.9	548	520		
1967 101A	7TH MOLNIYA 1	3008	USSR	22 OCT	682.7	64.8	38476	136		
1967 101F		3226	USSR	22 OCT	705.8	64.8	39610	157		
1967 102A	COSMOS 184	3010	USSR	24 OCT	96.9	81.1	629	594		
1967 102B		3011	USSR	24 OCT	97.0	81.1	701	540		
1967 104B		3019	USSR	27 OCT	98.5	64.0	910	465		
1967 108A	COSMOS 189	3021	USSR	30 OCT	95.1	73.9	548	502		
1967 108B		3023	USSR	30 OCT	95.4	74.0	563	515		
1967 111A	ATS-3	3029	US	5 NOV	1435.7	0.1	35781	35778	136.470,137.350	2*
1967 112B		3034	US	7 NOV	BARYCENTRIC ORBIT					
1967 114A	ESSA 6	3035	US	10 NOV	114.8	102.0	1487	1410	136.770,137.500	2*
1967 114B		3036	US	10 NOV	114.8	102.0	1487	1412		
1967 114C		3051	US	10 NOV	114.1	101.6	1487	1348		
1967 114D		3123	US	10 NOV	115.4	102.4	1497	1455		
1967 116A	COSMOS 192	3047	USSR	23 NOV	99.7	74.0	754	743		
1967 116B		3048	USSR	23 NOV	99.8	74.0	757	743		
1967 123A	PIONEER 8	3066	US	13 DEC	HELIOCENTRIC ORBIT					
1967 127A	COSMOS 198	3081	USSR	27 DEC	103.4	65.1	933	912		
1968 LAUNCHES										
1968 001B		3092	US	7 JAN	BARYCENTRIC ORBIT					
1968 002A	EXPLORER 36	3093	US	11 JAN	112.2	105.7	1577	1083	136.320	2*
1968 002B		3094	US	11 JAN	112.1	105.7	1572	1082		
1968 002C		3126	US	11 JAN	112.3	106.0	1587	1087		
1968 002D		3127	US	11 JAN	112.1	105.2	1581	1074		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
1968 LAUNCHES (CONT'D)									
1968 004A		3097	US	17 JAN	92.8	75.1	436	399	
1968 006A	COSMOS 200	3100	USSR	19 JAN	94.5	74.0	502	489	
1968 006B		3102	USSR	19 JAN	94.1	74.0	494	462	
1968 006C		3103	USSR	19 JAN	95.0	73.9	554	491	
1968 008B		3114	US	24 JAN	92.2	81.6	402	374	
1968 011A	COSMOS 203	3129	USSR	20 FEB	109.2	74.0	1204	1185	
1968 011B		3131	USSR	20 FEB	109.3	74.0	1208	1184	
1968 011C		3147	USSR	20 FEB	104.1	74.0	1165	744	
1968 012A		3133	US	2 MAR	106.9	89.9	1143	1029	
1968 012B		3137	US	2 MAR	106.9	89.9	1142	1029	
1968 012C		3213	US	2 MAR	104.9	89.7	1033	951	
1968 012D		3214	US	2 MAR	108.8	90.2	1326	1027	
1968 013A	ZOND 4	3134	USSR	2 MAR	CURRENT ELEMENTS NOT MAINTAINED				
1968 014A	OGO 5	3138	US	4 MAR	3746.5	48.1	134774	12282	136.200,400.250, 2* 400.850 2*
1968 014B		3145	US	4 MAR	CURRENT ELEMENTS NOT MAINTAINED				
1968 017A	EXPLORER 37	3141	US	5 MAR	98.4	59.4	870	498	136.410,136.530, 2* 137.590 2*
1968 017B		3146	US	5 MAR	98.3	59.4	857	498	
1968 017D		3328	US	5 MAR	100.2	59.6	902	634	
1968 019A	COSMOS 206	3150	USSR	14 MAR	96.8	81.2	630	591	
1968 019B		3151	USSR	14 MAR	97.1	81.2	707	538	
1968 020B		3153	US	14 MAR	91.4	83.0	353	344	
1968 023A	COSMOS 209	3158	USSR	22 MAR	103.1	65.3	930	886	
1968 026A	OV1-13	3173	US	6 APR	199.5	99.9	9299	572	
1968 026B	OV1-14	3174	US	6 APR	207.8	100.0	9909	583	
1968 026C		3177	US	6 APR	208.1	100.0	9931	582	
1968 026D		3212	US	6 APR	199.5	99.9	9297	571	
1968 027A	LUNA 14	3178	USSR	7 APR	SELENOCENTRIC ORBIT				
1968 035A	8TH MOLNIYA 1	3209	USSR	21 APR	717.7	65.3	39176	1177	
1968 035D		3514	USSR	21 APR	709.3	65.1	38669	1269	
1968 040A	COSMOS 220	3229	USSR	7 MAY	99.0	74.0	754	674	
1968 040B		3230	USSR	7 MAY	99.0	74.0	757	675	
1968 040C		3231	USSR	7 MAY	98.9	74.1	749	666	
1968 041A	IRIS	3233	ESRO	17 MAY	96.5	97.2	869	321	136.050,136.890 2*
1968 041B		3234	US	17 MAY	94.1	97.2	651	304	
1968 042A		3266	US	23 MAY	102.1	98.8	901	820	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1968 LAUNCHES (CONT'D)										
1968 042B		3271	US	23 MAY	102.1	98.8	903	819		
1968 049A	COSMOS 226	3282	USSR	12 JUN	96.7	81.1	632	572		
1968 049B		3283	USSR	12 JUN	96.9	81.2	702	526		
1968 050A		3284	US	13 JUN	1335.2	1.0	33865	33710		
1968 050B		3285	US	13 JUN	1335.6	0.8	33860	33733		
1968 050C		3286	US	13 JUN	1336.4	1.1	33930	33693		
1968 050D		3287	US	13 JUN	1337.8	1.0	33945	33735		
1968 050E		3288	US	13 JUN	1339.8	0.8	33988	33771		
1968 050F		3289	US	13 JUN	1342.4	1.2	34096	33768		
1968 050G		3290	US	13 JUN	1345.4	0.9	34230	33752		
1968 050H		3291	US	13 JUN	1348.7	1.0	34390	33727		
1968 050J		3292	US	13 JUN	CURRENT ELEMENTS NOT MAINTAINED					
1968 052B		3297	US	20 JUN	91.4	85.1	357	333		
1968 055A	EXPLORER 38	3307	US	4 JUL	224.3	120.8	5856	5845	136.350,137.290	2*
1968 055B		3315	US	4 JUL	156.8	120.5	5880	630		
1968 055C		3848	US	4 JUL	224.1	120.8	5863	5825		
1968 057A	9TH MOLNIYA 1	3310	USSR	6 JUL	717.8	65.0	39937	423		
1968 057F		3515	USSR	6 JUL	710.9	65.0	39546	469		
1968 063A		3334	US	6 AUG	CURRENT ELEMENTS NOT MAINTAINED					
1968 066A	EXPLORER 39	3337	US	8 AUG	117.0	80.7	2340	762	136.620	
1968 066B	EXPLORER 40	3338	US	8 AUG	118.3	80.6	2529	682	136.290,400.650	2*
1968 066C		3341	US	8 AUG	118.3	80.6	2530	683		
1968 066D		3342	US	8 AUG	118.0	80.7	2499	693		
1968 066E		3343	US	8 AUG	118.1	80.6	2506	691		
1968 066F		3390	US	8 AUG	118.1	80.6	2499	696		
1968 066G		3391	US	8 AUG	118.2	80.7	2508	701		
1968 066H		3392	US	8 AUG	118.1	80.7	2504	690		
1968 066J		3393	US	8 AUG	117.9	80.6	2489	694		
1968 069A	ESSA 7	3345	US	16 AUG	114.9	101.7	1476	1432	136.770,235,	2*
									1697.500	2*
1968 069B		3346	US	16 AUG	114.8	101.7	1472	1425		
1968 069C		3416	US	16 AUG	113.7	101.8	1490	1305		
1968 069D		3417	US	16 AUG	116.2	101.7	1564	1457		
1968 069E		3974	US	16 AUG	114.9	102.0	1480	1428		
1968 069F		3975	US	16 AUG	114.9	101.6	1484	1422		
1968 070A	COSMOS 236	3347	USSR	27 AUG	96.7	56.0	615	592		
1968 070B		3349	USSR	27 AUG	96.6	56.0	619	573		

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1968 LAUNCHES (CONT'D)										
1968 081A	OV2-5	3428	US	26 SEP	1418.0	2.1	35785	35079		
1968 081B	ERS-28	3429	US	26 SEP	485.7	25.8	28016	163	136.830	8*
1968 081C	ERS-21	3430	US	26 SEP	1435.8	3.0	35786	35775		
1968 081D	LES-6	3431	US	26 SEP	CURRENT ELEMENTS NOT MAINTAINED					
1968 081E		3432	US	26 SEP	CURRENT ELEMENTS NOT MAINTAINED					
1968 084A	ESRO I	3459	ESRO	3 OCT	102.4	93.8	1492	262	136.170, 136.950	2*
1968 085A	10TH MOLNIYA 1	3469	USSR	5 OCT	716.8	65.4	39924	386		
1968 085D		3513	USSR	5 OCT	707.3	65.4	39485	355		
1968 086A		3472	US	5 OCT	93.9	75.0	475	459		
1968 090A	COSMOS 248	3503	USSR	19 OCT	94.5	2.2	568	429		
1968 091A	COSMOS 249	3504	USSR	20 OCT	112.1	62.3	2147	500		
1968 091B - 091BY			USSR	20 OCT	SEE NOTE 9*					9*
1968 092A		3510	US	23 OCT	101.3	98.9	850	800		
1968 092B		3522	US	23 OCT	101.3	98.9	849	800		
1968 095A	COSMOS 250	3526	USSR	30 OCT	94.9	73.9	528	505		
1968 095B		3527	USSR	30 OCT	94.8	74.0	522	506		
1968 097A	COSMOS 252	3530	USSR	1 NOV	112.4	62.3	2141	537		
1968 097B - 097CE			USSR	1 NOV	SEE NOTE 10*					10*
1968 100A	PIONEER 9	3533	US	8 NOV	HELIOCENTRIC ORBIT					
1968 100B	TETR 2	3534	US	8 NOV	97.3	32.8	895	369	136.860	2*
1968 100C		3546	US	8 NOV	96.6	32.8	827	363		
1968 100D		3547	US	8 NOV	97.2	32.8	883	369		
1968 100E		3548	US	8 NOV	96.6	32.8	827	369		
1968 106A	COSMOS 256	3576	USSR	30 NOV	109.4	74.0	1226	1174		
1968 106B		3577	USSR	30 NOV	109.2	74.0	1220	1169		
1968 109A	HEOS-A	3595	ESRO	5 DEC	6699.7	28.2	222263	421	136.650	2*
1968 110A	OAO-A2	3597	US	7 DEC	100.2	34.9	776	766	136.441,136.259, 400.549	2* 2*
1968 110B		3598	US	7 DEC	100.2	34.9	813	719		
1968 112B		3605	US	12 DEC	114.4	80.3	1476	1386		
1968 112C		3617	US	12 DEC	114.0	80.1	1453	1377		
1968 112D		3618	US	12 DEC	114.7	80.5	1514	1379		
1968 112E		3840	US	12 DEC	114.5	80.6	1459	1410		
1968 114A	ESSA 8	3615	US	15 DEC	114.6	101.8	1467	1414	136.770,137.620	2*
1968 114B		3616	US	15 DEC	114.5	101.8	1461	1412		
1968 114C		3811	US	15 DEC	112.9	101.9	1466	1255		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1968 LAUNCHES (CONT'D)										
1968 114D		3812	US	15 DEC	116.3	101.7	1575	1463		
1968 115A	COSMOS 260	3619	USSR	16 DEC	712.1	65.0	39076	1003		
1968 115D		3622	USSR	16 DEC	708.6	65.0	38901	1001		
1968 116A	INTELSAT 3 F-2	3623	US	19 DEC	1436.3	0.5	35805	35778		
1968 118B		3627	US	21 DEC	HELIOCENTRIC ORBIT					
1969 LAUNCHES										
1969 006A	OSO 5	3663	US	22 JAN	95.4	32.9	550	530	136.290	2*
1969 006B		3664	US	22 JAN	95.6	32.9	556	535		
1969 009A	ISIS-A	3669	CANADA	30 JAN	128.3	88.4	3522	580	136.080,136.410,	2*
									136.590,137.950	2*
									401.750	2*
1969 009B		3670	US	30 JAN	128.1	88.4	3509	579		
1969 010B		3673	US	5 FEB	114.1	80.3	1437	1398		
1969 010C		3841	US	5 FEB	113.7	80.1	1427	1375		
1969 011A	INTELSAT 3 F-3	3674	US	6 FEB	1436.4	1.3	35807	35778		
1969 013A		3691	US	9 FEB	1436.1	0.4	35792	35782		
1969 013B		3692	US	9 FEB	1446.6	0.6	36043	35939		
1969 014A	MARINER 6	3759	US	25 FEB	HELIOCENTRIC ORBIT					
1969 014B		3760	US	25 FEB	HELIOCENTRIC ORBIT					
1969 016A	ESSA 9	3764	US	26 FEB	115.2	101.8	1507	1427	136.770,	2*
									1697.500	2*
1969 016B		3767	US	26 FEB	115.1	101.8	1503	1424		
1969 018B		3770	US	3 MAR	HELIOCENTRIC ORBIT					
1969 018C	LM/ASCENT	3771	US	3 MAR	161.1	28.9	6630	231		
1969 020A	COSMOS 268	3773	USSR	5 MAR	101.3	48.3	1435	203		
1969 020B		3774	USSR	5 MAR	98.6	48.3	1172	211		
1969 021A	COSMOS 269	3775	USSR	5 MAR	95.0	74.0	528	519		
1969 021B -	021X		USSR	5 MAR	SEE NOTE	11*				11*
1969 024A	COSMOS 272	3818	USSR	17 MAR	109.3	73.9	1210	1181		
1969 024B		3819	USSR	17 MAR	109.2	73.9	1198	1183		
1969 025A	OV1-17	3823	US	18 MAR	91.6	99.1	374	341		
1969 025B	OV1-18	3824	US	18 MAR	94.7	98.8	559	452		
1969 025C	OV1-19	3825	US	18 MAR	153.5	104.7	5775	467		
1969 025E		3827	US	18 MAR	153.3	104.6	5756	466		
1969 025F		3828	US	18 MAR	94.9	98.8	571	460		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1969 LAUNCHES (CONT'D)										
1969 026B		3830	US	19 MAR	94.3	83.0	492	487		
1969 029A	METEOR	3835	USSR	26 MAR	97.8	81.1	683	631		
1969 029B - 029AL			USSR	26 MAR	SEE NOTE	12*				12*
1969 030A	MARINER 7	3837	US	27 MAR	HELIOCENTRIC ORBIT					
1969 030B		3845	US	27 MAR	HELIOCENTRIC ORBIT					
1969 031A	COSMOS 275	3846	USSR	28 MAR	92.1	70.9	510	250		
1969 035A	11TH MOLNIYA 1	3885	USSR	11 APR	717.5	65.1	39542	800		
1969 035C		3886	USSR	11 APR	710.3	65.0	39199	787		
1969 036A		3889	US	13 APR	CURRENT ELEMENTS NOT MAINTAINED					
1969 037A	NIMBUS 3	3890	US	14 APR	107.3	99.9	1137	1073	136.500,136.950,	2*
									401.500,466.000	2*
									1702.50	2*
1969 037B	EGRS 13	3891	US	14 APR	107.3	99.9	1132	1073		
1969 037C		3892	US	14 APR	107.4	99.9	1140	1078		
1969 041B		3915	US	2 MAY	92.1	65.7	402	355		
1969 043B		3943	US	18 MAY	HELIOCENTRIC ORBIT					
1969 043C	LM/DESCENT	3948	US	18 MAY	SELENOCENTRIC ORBIT					
1969 043D	LM/ASCENT	3949	US	18 MAY	HELIOCENTRIC ORBIT					
1969 045A	INTELSAT 3 F-4	3947	US	22 MAY	1436.3	0.5	35801	35780		
1969 046A	OV5-5/ERS-29	3950	US	23 MAY	3120.3	33.0	111647	17069	136.650	2*
1969 046B	OV5-6	3951	US	23 MAY	3115.2	32.8	111636	16923	136.380	2*
1969 046C	OV5-9	3952	US	23 MAY	3115.4	32.7	111519	17046	136.530	2*
1969 046D		3954	US	23 MAY	CURRENT ELEMENTS NOT MAINTAINED					
1969 046E		3955	US	23 MAY	CURRENT ELEMENTS NOT MAINTAINED					
1969 046F		3956	US	23 MAY	CURRENT ELEMENTS NOT MAINTAINED					
1969 047A	COSMOS 283	3957	USSR	27 MAY	92.7	81.9	840	183		
1969 051A	OGO 6	3986	US	5 JUN	99.4	82.0	1068	396	136.200,400.250,	2*
									400.850	2*
1969 051B		3987	US	5 JUN	99.3	81.9	1054	407		
1969 053A	EXPLORER 41	3990	US	21 JUN	4842.8	82.8	175672	1208	136.080	2*
1969 053B		3993	US	21 JUN	CURRENT ELEMENTS NOT MAINTAINED					
1969 056A	BIOSAT 3	4000	US	29 JUN	91.0	33.5	331	312		
1969 056B		4001	US	29 JUN	89.9	33.5	279	260		
1969 059B		4040	US	16 JUL	HELIOCENTRIC ORBIT					
1969 059C	LUNAR MODULE	4041	US	16 JUL	SELENOCENTRIC ORBIT					13*
1969 061A	12TH MOLNIYA 1	4043	USSR	22 JUL	717.7	64.9	39808	544		
1969 061D		4049	USSR	22 JUL	707.8	64.8	39314	551		

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)	
1969 LAUNCHES (CONT'D)										
1969 062A		4047	US	23 JUL	101.3	98.8	856	786		
1969 062B		4048	US	23 JUL	101.3	98.7	857	787		
1969 064A	INTELSAT 3 F-5	4051	US	26 JUL	146.0	30.3	5348	266		
1969 064B - 064W			US	26 JUL	SEE NOTE	14*				14*
1969 065A		4054	US	31 JUL	94.5	75.0	534	459		
1969 068A	OSO 6	4065	US	9 AUG	95.0	32.9	551	489	136.710	2*
1969 068B	PAC-A	4066	US	9 AUG	94.9	32.9	548	482	136.320	2*
1969 069A	ATS-5	4068	US	12 AUG	1435.9	2.5	35790	35777	136.470,137.350	2*
1969 069B		4069	US	12 AUG	703.2	17.2	37333	2296		
1969 070A	COSMOS 292	4070	USSR	13 AUG	99.9	74.0	764	746		
1969 070B		4071	USSR	13 AUG	99.7	74.0	765	734		
1969 070C		4084	USSR	13 AUG	100.0	74.0	779	744		
1969 073A	COSMOS 295	4076	USSR	22 AUG	89.8	70.9	306	226		
1969 079B		4103	US	22 SEP	94.3	85.1	494	481		
1969 082A		4111	US	30 SEP	93.7	69.6	475	440		
1969 082B - 082DD			US	30 SEP	SEE NOTE	15*				15*
1969 084A	METEOR 2	4119	USSR	6 OCT	97.6	81.2	675	619		
1969 084B		4120	USSR	6 OCT	97.7	81.2	762	546		
1969 088A	INTERCOSMOS 1	4128	USSR	14 OCT	92.2	48.3	518	249		
1969 088B		4129	USSR	14 OCT	91.8	48.3	492	239		
1969 090A	COSMOS 303	4136	USSR	18 OCT	91.4	70.9	428	260		
1969 090B		4137	USSR	18 OCT	90.6	70.9	369	247		
1969 091A	COSMOS 304	4138	USSR	21 OCT	99.8	74.0	761	741		
1969 091B		4139	USSR	21 OCT	99.6	74.0	758	731		
1969 094A	COSMOS 307	4184	USSR	24 OCT	108.4	48.4	2090	215		
1969 094B		4185	USSR	24 OCT	107.6	48.4	2022	212		
1969 096A	COSMOS 308	4219	USSR	4 NOV	91.0	71.0	384	266		
1969 096B		4220	USSR	4 NOV	90.5	71.0	345	262		
1969 097A	GRS-A/AZUR	4221	GERMAN	8 NOV	121.9	102.9	3145	384	136.560,136.740	2*
1969 097B		4222	US	8 NOV	121.9	102.9	3151	386		
1969 099B		4226	US	14 NOV	52374.0	31.6	834000	80000		
1969 101A		4250	US	22 NOV	650.8	28.0	36716	276		
1969 101B		4251	US	22 NOV	657.4	27.7	37071	257		
1969 102A	COSMOS 311	4252	USSR	24 NOV	91.9	71.0	467	272		
1969 102B		4253	USSR	24 NOV	91.8	71.0	456	273		
1969 103A	COSMOS 312	4254	USSR	24 NOV	108.5	74.0	1180	1141		
1969 103B		4255	USSR	24 NOV	108.4	74.0	1169	1138		

FOLLOWING ARE THE INITIAL ELEMENTS OF OBJECTS WHOSE LAUNCH AND ORBIT DECAY OCCURRED WITHIN THE REPORTING PERIOD

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI-NATION	APOGEE KM.	PERIGEE KM.	TRANSMITTING FREQ.(MC/S)
	NONE								

OBJECTS DECAYED WITHIN THE REPORTING PERIOD

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY	
1965 082W		1659	US	15 OCT	20 NOV 69	
1969 021G		3799	USSR	5 MAR	26 NOV 69	
1969 064M		4088	US	26 JUL	21 NOV 69	
1969 064N		4089	US	26 JUL	27 NOV 69	
1969 083A	ESRO-1B	4114	ESRO	1 OCT	23 NOV 69	
1969 098A	COSMOS 309	4223	USSR	12 NOV	20 NOV 69	
1969 098B		4224	USSR	12 NOV	22 NOV 69	
1969 098C		4234	USSR	12 NOV	26 NOV 69	
1969 098D		4235	USSR	12 NOV	25 NOV 69	
1969 098E		4236	USSR	12 NOV	30 NOV 69	
1969 099A	APOLLO 12	4225	US	14 NOV	24 NOV 69	16*
1969 099C	LUNAR MODULE	4246	US	14 NOV	20 NOV 69	17*
1969 100A	COSMOS 310	4232	USSR	15 NOV	23 NOV 69	
1969 100B		4233	USSR	15 NOV	23 NOV 69	

FOOTNOTES

1* 230 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1961 OMICRON 1 AND 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

2* TRANSMITTING ON COMMAND ONLY.

3* 80 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1963 014A, 1963 014B, AND 1963 014C. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

4* 141 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1965 020A, 1965 020B, AND 1965 020C. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

5* 426 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1965 082A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

6* 14 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1965 112A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

7* DEBRIS DISCOVERED IN ORBIT WHICH HAS NOT BEEN IDENTIFIED WITH ANY LAUNCHING OR COUNTRY OF ORIGIN.

8* TRANSMITTING WHEN IN SUNLIGHT ONLY.

9* 70 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1968 091A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

10* 76 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1968 097A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

11* 21 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1969 021A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

12* 34 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1969 029A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

13* A MANNED SPACECRAFT WHICH SUCCESSFULLY LANDED ON THE MOON AND RETURNED TO SELENOCENTRIC ORBIT.

14* 20 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1969 064A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

15* 99 OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1969 082A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LIST.

16* A MANNED SPACECRAFT WHICH SUCCESSFULLY ORBITED THE MOON, LANDED MAN ON THE MOON IN THE LUNAR MODULE, AND WAS RECOVERED.

17* A MANNED SPACECRAFT WHICH SUCCESSFULLY LANDED ON THE MOON, RETURNED TO SELENOCENTRIC ORBIT, THEN WAS DECAYED ON THE SURFACE OF THE MOON.

NNA NO CATALOGUE NUMBER ASSIGNED.