

HEV

C. D.	L	Type I HEV	T	Type II HEV	T	Type III HEV	T
DEC. 1963							
2738391		—		331.882	43.3098	500.0	NONE
JAN. 1964							
638401		—		322.575	41.4402	500.0	
1638411		—		315.027	39.5772	520.0	
2638421		—		307.483	37.6867	540.0	
FEB.							
538431		—		299.951	35.7800	560.0	
1538441		—		292.442	33.8670	580.0	
2538451		—		284.962	31.9554	600.0	
MAR.							
638461		—		277.519	30.0514	620.0	
1638471		—		270.118	28.1604	640.0	
2638481		—		263.614	26.2849	670.0	
APR.							
538491		—		255.449	24.4323	680.0	
1538501		NONE		248.182	22.6023	700.0	
2538511				240.960	20.8005	720.0	
MAY							
538521				232.938	19.0308	730.0	
1538531				224.958	17.3028	740.0	
2538541				217.013	15.6259	750.0	
JUN.							
438551				209.097	14.0224	760.0	
1438561	178.260	16.8481	500.0	201.203	12.5259	770.0	
2438571	177.336	12.3395	590.0	193.322	11.1926	780.0	
JUL.							
438581	178.788	10.2239	710.0	187.100	10.1450	810.0	
1438591	173.421	9.4084	750.0	188.206	9.6219	930.0	
2438601	169.664	9.0847	810.0	190.717	9.4466	1070.0	
AUG.							
338611	168.270	9.2137	960.0	193.776	9.4205	1220.0	
1338621	167.541	9.6347	1000.0	196.604	9.4533	1370.0	
2338631	168.230	10.1897	1120.0	199.240	9.5030	1520.0	
SEP.							
238641	167.956	10.7827	1230.0	200.971	9.5513	1660.0	
1238651	168.294	11.3654	1350.0	203.358	9.5915	1810.0	
2238661	168.483	11.9061	1470.0	204.932	9.6226	1950.0	
OCT.							
238671	168.547	12.3885	1590.0	206.493	9.6468	2090.0	
1238681	168.513	12.8063	1710.0				
2238691	169.161	13.1467	1840.0				
NOV.							
138701	169.776	13.4113	1970.0				
1138711						NONE	
2138721							
DEC.							
138731							
1138741							
2138751							
3138761				358.938	45.7953	500.0	

EARTH-JUPITER 1965

HEV

2	C.D.	L.	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
	JAN.										
		1038771		—		349.586	47.4395	500.0		NONE	
		2038781		—		340.241	45.5686	500.0			
		3038791		—		330.913	43.6883	500.0			
	FEB.										
		938801		—		322.446	41.8124	510.0			
		1938811		—		314.843	39.9081	530.0			
	MAR.										
		138821		—		308.100	37.9805	560.0			
		1138831		—		300.566	36.0405	580.0			
		2138841		—		293.074	34.0990	600.0			
		3138851		—		286.445	32.1632	630.0			
	APR.										
		1038861		—		279.043	30.2388	650.0			
		2038871		—		271.688	28.3314	670.0			
		3038881		—		264.376	26.4440	690.0			
	MAY										
		1038891		—		257.104	24.5789	710.0			
		2038901		NONE		249.866	22.7393	730.0			
		3038911				242.657	20.9283	750.0			
	JUN.										
		938921				234.676	19.1492	760.0			
		1938931				226.712	17.4118	770.0			
		2938941				219.550	15.7283	790.0			
	JUL.										
		938951				211.597	14.1226	800.0			
		1938961	172.740	17.8877	500.0	203.638	12.6403	810.0			
		2938971	174.909	13.0746	560.0	197.235	11.3763	840.0			
	AUG.										
		838981	172.575	11.0435	640.0	194.689	10.4778	920.0			
		1838991	168.554	9.8513	700.0	195.129	9.9568	1040.0			
		2839001	164.447	9.3934	760.0	196.195	9.6864	1170.0			
	SEP.										
		739011	162.591	9.5360	850.0	197.894	9.5540	1310.0			
		1739021	163.687	10.0203	980.0	199.498	9.4927	1450.0			
		2739031	165.373	10.6018	1120.0	201.048	9.4670	1590.0			
	OCT.										
		739041	166.158	11.1726	1250.0	202.585	9.4602	1730.0			
		1739051	167.596	11.6820	1390.0	204.152	9.4645	1870.0			
		2739061	168.222	12.1134	1520.0	205.017	9.4776	2000.0			
	Nov.										
		639071	169.584	12.4540	1660.0						
		1639081	170.215	12.7029	1790.0						
		2639091	171.680	12.8498	1930.0						
	Dec.										
		639101	173.268	12.8935	2070.0					NONE	
		1639111		—							
		2639121		—							

## HEV

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C. D.	L.	TYPE I	HEV	T	TYPE II	HEV	T	TYPE III	HEV	T
JAN.										
5	39131		—			NONE			NONE	
15	39141		—							
25	39151		—							
FEB.										
4	39161		—		359.088	46.2611	540.0			
14	39171		—		346.946	47.2850	500.0			
24	39181		—		337.668	45.4154	500.0			
MAR.										
6	39191		—		329.223	43.5413	510.0			
16	39201		—		322.404	41.6312	540.0			
26	39211		—		314.840	39.6912	560.0			
APR.										
5	39221		—		307.325	37.7368	580.0			
15	39231		—		300.640	35.7783	610.0			
25	39241		—		293.218	33.8203	630.0			
MAY										
5	39251		—		285.841	31.8738	650.0			
15	39261		—		279.278	29.9423	680.0			
25	39271		—		271.974	28.0282	700.0			
JUN.										
4	39281		—		264.699	26.1347	720.0			
14	39291	0.565	43.9524	2080.0	257.444	24.2648	740.0			
24	39301		NONE		250.202	22.4201	760.0			
JUL.										
4	39311				242.965	20.6044	780.0			
14	39321				234.962	18.8212	790.0			
24	39331				226.948	17.0816	800.0			
AUG.										
3	39341				219.678	15.4010	820.0			
13	39351				211.619	13.8113	830.0			
23	39361	177.199	19.3171	500.0	204.290	12.3734	850.0			
SEP.										
2	39371	172.302	13.5980	550.0	199.194	11.1940	900.0			
12	39381	168.787	11.2639	620.0	197.819	10.3650	1000.0			
22	39391	165.178	9.9773	690.0	197.131	9.8502	1110.0			
OCT.										
2	39401	161.480	9.5573	760.0	197.903	9.5496	1240.0			
12	39411	161.481	9.7887	880.0	198.660	9.3826	1370.0			
22	39421	164.404	10.2979	1040.0	199.440	9.2976	1500.0			
NOV.										
1	39431	166.516	10.8164	1190.0	201.055	9.2655	1640.0			
11	39441	167.873	11.2606	1330.0	201.998	9.2690	1770.0			
21	39451	170.042	11.5787	1480.0	203.072	9.2934	1900.0			
DEC.										
1	39461	171.549	11.8276	1620.0	204.308	9.3489	2030.0			
11	39471	173.196	11.9337	1760.0						
21	39481	175.834	11.8964	1910.0						
31	39491	177.902	11.7619	2050.0						

HEV

4	C.D.	L	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
	JAN.										
		1039501		—			NONE			NONE	
		2039511		—							
		3039521		—							
	FEB.										
		939531		—							
		1939541		—							
	MAR.										
		139551		—							
		1139561		—		357.542	46.8686	570.0			
		2139571		—		343.276	46.6332	500.0			
		3139581		—		334.919	44.7721	510.0			
	APR.										
		1039591		—		328.135	42.8693	540.0			
		2039601		—		320.637	40.9351	560.0			
		3039611		—		313.188	38.9824	580.0			
	MAY										
		1039621		—		306.543	37.0221	610.0			
		2039631		—		299.178	35.0595	630.0			
		3039641		—		291.849	33.1043	650.0			
	JUN.										
		939651		—		285.305	31.1619	680.0			
		1939661		—		278.023	29.2335	700.0			
		2939671		—		270.755	27.3240	720.0			
	JUL.										
		939681	0.674	39.5156	1980.0	263.490	25.4345	740.0			
		1939691	1.320	47.7803	2090.0	256.976	23.5677	770.0			
		2939701		NONE		248.939	21.7219	780.0			
	AUG.										
		839711		}		241.636	19.9061	800.0			
		1839721				233.549	18.1239	810.0			
		2839731				226.181	16.3877	830.0			
	SEP.					218.017	14.7188	840.0			
		1739741				210.562	13.1571	860.0			
		2739751									
		2739761	174.145	16.7216	500.0	203.815	11.7752	890.0			
	OCT.										
		739771	170.418	12.9426	570.0	199.293	10.6791	950.0			
		1739781	167.349	10.7672	650.0	197.014	9.9228	1040.0			
		2739791	163.459	9.7179	720.0	196.256	9.4543	1150.0			
	NOV.										
		639801	161.780	9.5461	820.0	196.307	9.1914	1270.0			
		1639811	164.635	9.8757	980.0	196.436	9.0691	1390.0			
		2639821	168.340	10.2806	1150.0	197.474	9.0438	1520.0			
	DEC.										
		639831	170.652	10.6000	1300.0	198.676	9.0836	1650.0			
		1639841	173.945	10.7870	1460.0	200.905	9.1620	1790.0			
		2639851	176.688	10.7881	1610.0	202.529	9.2589	1920.0			

HEV

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C.D.	L	TYPE I	HEV	T	TYPE II	HEV	T	TYPE III	HEV	T
JAN.	539861	178.030	10.7973	1740.0	204.376	9.3619	2050.0		NONE	
	1539871	176.206	11.4616	1830.0		—				
	2539881	174.510	12.0406	1920.0		—				
FEB.	439891	172.952	12.5647	2010.0		—				
	1439901		—			NONE				
	2439911		—							
MAR.	539921		—							
	1539931		—							
	2539941		—							
APR.	439951		—		357.252	49.2667	500.0			
	1439961		—		348.446	47.4809	500.0			
	2439971		—		340.225	45.6445	510.0			
MAY	439981		—		332.793	43.7677	530.0			
	1439991		—		325.403	41.8576	550.0			
	2440001		—		318.809	39.9256	580.0			
JUN.	340011		—		311.493	37.9791	600.0			
	1340021		—		304.205	36.0288	620.0			
	2340031		—		296.937	34.0812	640.0			
JUL.	340041		—		290.439	32.1404	670.0			
	1340051		—		283.187	30.2112	690.0			
	2340061		—		275.929	28.2968	710.0			
AUG.	240071		—		268.658	26.3981	730.0			
	1240081	10.846	46.8839	2080.0	261.365	24.5176	750.0		—	
	2240091	1.035	48.3271	2060.0	254.042	22.6558	770.0		—	
SEP.	140101		NONE		246.684	20.8162	790.0		NONE	
	1140111				238.517	19.0045	800.0			
	2140121				231.070	17.2273	820.0			
OCT.	140131				222.804	15.5005	830.0			
	1140141				214.484	13.8510	840.0			
	2140151	178.589	38.5318	500.0	206.885	12.3245	860.0			
	3140161	172.297	14.5512	530.0	200.015	11.0053	890.0			
NOV.	1040171	169.903	11.5019	620.0	196.227	9.9969	960.0			
	2040181	167.494	9.8651	710.0	193.234	9.3353	1040.0			
	3040191	165.091	9.2783	800.0	191.870	8.9685	1140.0			
DEC.	1040201	168.197	9.3383	960.0	191.411	8.8282	1250.0			
	2040211	173.131	9.5317	1140.0	191.916	8.8603	1370.0			
	3040221	178.419	9.5402	1320.0	195.994	8.9835	1530.0			

## HEV

G	C.D.	L	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
	JAN.										
		940231	176.529	9.9831	1410.0	199.543	9.1190	1680.0		NONE	
		1940241	174.756	10.6182	1500.0	202.502	9.2474	1820.0			
		2940251	173.117	11.2197	1590.0	203.910	9.3652	1940.0			
	FEB.										
		840261	171.620	11.7836	1680.0	205.486	9.4709	2060.0			
		1840271	171.148	12.2964	1780.0						
		2840281	170.840	12.7605	1880.0						
	MAR.										
		1040291	169.796	13.1674	1970.0						
		2040301	169.783	13.5181	2070.0					NONE	
		3040311									
	APR.										
		940321									
		1940331									
		2940341									
	MAY										
		940351				358.291	46.6577	560.0			
		1940361				345.125	46.3637	500.0			
		2940371				337.833	44.5299	520.0			
	JUN.										
		840381				330.568	42.6623	540.0			
		1840391				323.329	40.7665	560.0			
		2840401				316.108	38.8525	580.0			
	JUL.										
		840411				308.897	36.9288	600.0			
		1840421				302.465	35.0019	630.0			
		2840431				295.252	33.0749	650.0			
	AUG.										
		740441				288.025	31.1548	670.0			
		1740451				279.208	29.0933	670.0			
		2740461				273.498	27.3457	710.0			
	SEP.										
		640471				266.180	25.4603	730.0			
		1640481	9.893	47.4505	2040.0	258.825	23.5901	750.0			
		2640491	1.605	48.8857	2040.0	251.425	21.7377	770.0			
	OCT.										
		640501		NONE		243.181	19.9064	780.0		NONE	
		1640511				234.884	18.1028	790.0			
		2640521				227.336	16.3357	810.0			
	NOV.										
		540531				218.939	14.6259	820.0			
		1540541				210.496	13.0036	830.0			
		2540551	175.015	16.0101	500.0	202.014	11.5199	840.0			
	DEC.										
		540561	173.515	12.0822	600.0	194.309	10.2599	860.0			
		1540571	172.073	9.9209	700.0	189.032	9.3327	910.0			
		2540581	173.144	8.9613	830.0	184.600	8.7971	970.0			

440711					NONE			NONE
1440721								
2440731								
JUN. 340741								
1340751					359.541	46.4449	600.0	
2340761					343.044	45.3606	500.0	
JUL. 340771					335.105	43.5520	510.0	
1340781					327.967	41.7094	530.0	
2340791					320.831	39.8425	550.0	
AUG. 240801					313.686	37.9570	570.0	
1240811					307.335	36.0603	600.0	
2240821					300.155	34.1575	620.0	
SEP. 140831					292.944	32.2554	640.0	
1140841					285.697	30.3565	660.0	
2140851					278.409	28.4647	680.0	
OCT. 140861					271.078	26.5818	700.0	
1140871					263.701	24.7104	720.0	
2140881	14.905	46.8293	2070.0		255.444	22.8527	730.0	
3140891	4.137	48.9036	2050.0		247.973	21.0109	750.0	
NOV. 1040901		NONE			240.460	19.1924	770.0	NONE
2040911					232.066	17.4017	780.0	
3040921					222.794	15.6554	780.0	
DEC. 1040931					214.333	13.9745	790.0	
2040941					205.853	12.3976	800.0	
3040951	178.939	12.3622	590.0		197.365	10.9920	810.0	

## HEV

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C. D.	L	Type I HEV	T	Type II HEV	T	Type III HEV	T
JAN.							
	940961	176.214	10.2482	670.0	190.588	9.9035	840.0
	1940971	172.742	9.2033	740.0	190.755	9.3433	950.0
	2940981	168.510	8.8201	800.0	192.865	9.1557	1080.0
FEB.							
	840991	166.083	8.9792	880.0	195.195	9.1363	1210.0
	1841001	166.403	9.4457	990.0	197.721	9.1672	1340.0
	2841011	166.918	10.0178	1100.0	199.490	9.2258	1460.0
MAR.							
	1041021	167.616	10.5959	1210.0	201.365	9.2890	1580.0
	2041031	167.579	11.1319	1310.0	202.390	9.3498	1690.0
	3041041	167.672	11.6117	1410.0	203.441	9.4087	1800.0
APR.							
	941051	167.873	12.0272	1510.0	203.583	9.4658	1900.0
	1941061	169.063	12.3700	1620.0	204.599	9.5222	2010.0
	2941071	169.389	12.6464	1720.0			
MAY							
	941081	170.633	12.8539	1830.0			
	1941091	171.846	12.9949	1940.0			
	2941101	172.991	13.0603	2050.0		NONE	
JUN.							
	841111						
	1841121						
	2841131						
JUL.							
	841141				359.867	JUMBLED	500.0
	1841151				351.253	46.5189	500.0
	2841161				342.544	44.7206	500.0
AUG.							
	741171				333.815	42.9268	500.0
	1741181				328.430	40.8187	540.0
	2741191				319.643	39.2841	540.0
SEP.							
	641201				312.512	37.4310	560.0
	1641211				305.344	35.5585	580.0
	2641221				298.133	33.6799	600.0
OCT.							
	641231				290.878	31.7988	620.0
	1641241				283.577	29.9186	640.0
	2641251				276.229	28.0429	660.0
NOV.							
	541261				268.838	26.1742	680.0
	1541271				261.406	24.3169	700.0
	2541281				253.062	22.4710	710.0
DEC.							
	541291				245.564	20.6446	730.0
	1541301		NONE		237.165	18.8403	740.0
	2541311				228.750	17.0727	750.0



## HEV

9	C. D.	L	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
	JAN.	441321		NONE		220.330	15.3555	760.0		NONE	
		1441331		{		211.916	13.7189	770.0			
		2441341	178.880	21.5459	500.0	203.519	12.2190	780.0			
	FEB.	341351	173.987	12.7267	550.0	196.938	10.9768	810.0			
		1341361	170.828	10.6036	620.0	194.896	10.1400	890.0			
		2341371	166.016	9.4259	670.0	195.672	9.6711	1000.0			
	MAR.	441381	162.170	9.0167	730.0	196.569	9.4313	1110.0			
		1441391	161.106	9.2020	820.0	197.558	9.3166	1220.0			
		2441401	162.889	9.6769	940.0	198.606	9.2697	1330.0			
	APR.	341411	164.830	10.2070	1060.0	198.770	9.2606	1430.0			
		1341421	165.977	10.7055	1170.0	199.841	9.2752	1540.0			
		2341431	167.196	11.1412	1280.0	200.872	9.3090	1650.0			
	MAY	341441	168.447	11.5016	1390.0	200.950	9.3561	1750.0			
		1341451	169.692	11.7846	1500.0	201.831	9.4179	1860.0			
		2341461	170.892	11.9895	1610.0	202.601	9.4924	1970.0			
	JUN.	241471	172.893	12.1099	1730.0	203.240	9.5777	2080.0			
		1241481	173.888	12.1446	1840.0						
		2241491	176.457	12.0514	1970.0						
	JUL.	241501					NONE				
		1241511					{				
		2241521									
	AUG.	141531									
		1141541									
		2141551				352.350	46.4726	500.0			
		3141561				343.605	44.6451	500.0			
	SEP.	1041571				334.798	42.8343	500.0			
		2041581				325.939	41.0358	500.0			
		3041591				318.799	39.2288	520.0			
	OCT.	1041601				311.611	37.3947	540.0			
		2041611				304.374	35.5443	560.0			
		3041621				297.091	33.6817	580.0			
	NOV.	941631				289.761	31.8127	600.0			
		1941641				282.391	29.9428	620.0			
		2941651				274.986	28.0761	640.0			
	DEC.	941661				267.554	26.2169	660.0			
		1941671				259.195	24.3676	670.0			
		2941681				251.732	22.5333	690.0			

EARTH-JUPITER

1973

HEV

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C.D	L	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
JAN										
8	41691		—		243.360	20.7192	700.0		NONE	
18	41701		NONE		235.907	18.9326	720.0	}		
29	41711				227.563	17.1837	730.0			
FCB.	7	41721			219.247	15.4911	740.0			
17	41731				210.970	13.8875	750.0			
27	41741	178.573	32.5920	500.0	203.654	12.4363	770.0			
MAR.	9	41751	171.702	13.4611	520.0	199.135	11.2490		820.0	
19	41761	168.086	11.1130	580.0	196.504	10.4021	890.0			
29	41771	164.549	9.7534	640.0	195.749	9.8533	980.0			
APR.	8	41781	161.088	9.2008	700.0	195.932	9.5115		1080.0	
18	41791	160.439	9.2762	790.0	196.112	9.3088	1180.0			
28	41801	163.512	9.6583	920.0	196.264	9.2004	1280.0			
MAY	8	41811	165.693	10.0806	1040.0	196.363	9.1600	1380.0		
18	41821	167.848	10.4552	1160.0	196.391	9.1735	1480.0			
28	41831	169.930	10.7509	1280.0	197.189	9.2296	1590.0			
JUN.	7	41841	172.776	10.9566	1410.0	197.856	9.3194	1700.0		
17	41851	174.580	11.0513	1530.0	200.044	9.4290	1830.0			
27	41861	177.059	10.9945	1660.0	202.025	9.5468	1960.0			
JUL.	7	41871	177.638	11.1095	1770.0	203.802	9.6622	2090.0		
17	41881	175.567	11.7248	1850.0		—				
27	41891	174.205	12.2817	1940.0		—				
AUG.	6	41901	173.512	12.7990	2040.0			NONE		
16	41911		—					}		
26	41921		—							
SEP.	5	41931		—						
15	41941		—							
25	41951		—		354.492	46.8613	500.0			
OCT.	5	41961		—	345.667	45.1469	500.0			
15	41971		—		336.716	43.3070	500.0			
25	41981		—		327.698	41.4835	500.0			
NOV.	4	41991		—	318.621	39.6705	500.0			
14	42001		—		311.320	37.8450	520.0			
24	42011		—		303.976	35.9967	540.0			
DEC.	4	42021		—	296.594	34.1338	560.0			
14	42031		—		289.184	32.2630	580.0			
24	42041		—		281.754	30.3902	600.0			

EARTH-JUPITER

1974

HEV

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C.D.	L	TYPE I	HEV	T	TYPE II	HEV	T	TYPE III	HEV	T
JAN.										
	342051		—		274.313	28.5214	620.0		NONE	
	1342061	0.763	40.8767	1710.0	266.871	26.6604	640.0			
	2342071		—		259.439	24.8128	660.0			
FEB.										
	242081		—		251.111	22.9824	670.0			
	1242091	1.123	46.9078	2060.0	243.727	21.1727	690.0			
	2242101		NONE		235.466	19.3920	700.0			
MAR.										
	442111				227.248	17.6496	710.0			
	1442121				219.991	15.9591	730.0			
	2442131				211.877	14.3461	740.0			
APR.										
	342141				204.727	12.8590	760.0			
	1342151	171.932	14.3869	500.0	198.536	11.5779	790.0			
	2342161	168.604	11.7182	560.0	197.788	10.5788	880.0			
MAY										
	342171	166.215	10.1041	630.0	194.343	9.8877	940.0			
	1342181	162.940	9.3277	690.0	192.669	9.4281	1020.0			
	2342191	163.295	9.2038	790.0	191.828	9.1550	1110.0			
JUN.										
	242201	167.175	9.4111	930.0	190.917	9.0297	1200.0			
	1242211	170.881	9.6572	1070.0	190.771	9.0270	1300.0			
	2242221	174.370	9.8249	1210.0	192.180	9.1289	1420.0			
JUL.										
	242231	179.293	9.7288	1370.0	195.048	9.2811	1560.0			
	1242241	176.439	10.3018	1440.0	198.475	9.4304	1710.0			
	2242251	174.323	10.9039	1520.0	201.641	9.5634	1860.0			
AUG.										
	142261	172.908	11.4856	1610.0						
	1142271	172.160	12.0357	1710.0						
	2142281	171.263	12.5545	1810.0						
	3142291	170.998	13.0314	1920.0					NONE	
SEP.										
	1042301		—							
	2042311		—							
	3042321		—							
OCT.										
	1042331		—							
	2042341		—							
	3042351		—		356.611	47.5550	500.0			
NOV.										
	942361		—		347.663	46.0039	500.0			
	1942371		—		338.531	44.1243	500.0			
	2942381		—		329.342	42.2635	500.0			
DEC.										
	942391		—		320.112	40.4149	500.0			
	1942401		—		312.670	38.548	520.0			
	2942411		—		305.207	36.7085	540.0			

	1842551	174.605	15.2146	500.0	198.627	11.9308	770.0	
	2842561	172.196	12.0935	570.0	192.496	10.7363	800.0	
JUN.	742571	170.621	10.2539	650.0	188.959	9.8379	860.0	
	1742581	168.982	9.3067	730.0	186.241	9.2472	930.0	
	2742591	172.425	8.9940	870.0	183.465	8.9392	1000.0	
JUL	742601	176.448	8.9819	1020.0	186.422	9.0546	1140.0	
	1742611	173.574	9.3538	1090.0	192.350	9.2228	1320.0	
	2742621	172.249	9.8672	1180.0	196.329	9.3667	1480.0	
AUG.	642631	171.596	10.4427	1280.0				
	1642641	170.791	11.0303	1380.0				
	2642651	169.839	11.6029	1480.0		NONE		
SEP.	542661							
	1542671							
	2542681							
OCT.	542691							
	1542701							
	2542711							
NOV.	442721							
	1442731							
	2442741							
DEC.	442751				357.624	48.9009	500.0	
	1442761				349.300	46.7033	510.0	
	2442771				339.129	44.8563	500.0	

EARTH-JUPITER

1976

## HEV

13	C. D.	L	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
	JAN.										
		342781		—		329.819	42.9766	500.0		NONE	
		1342791		—		320.507	41.1097	500.0			
		2342801		—		312.949	39.2351	520.0			
	FEB.										
		242811		—		305.401	37.3364	540.0			
		1242821		—		298.739	35.4223	570.0			
		2242831		NONE		291.234	33.5035	590.0			
	MAR.										
		342841				283.765	31.5893	610.0			
		1342851				276.336	29.6844	630.0			
		2342861				268.949	27.7942	650.0			
	APR.										
		242871				261.609	25.9221	670.0			
		1242881				254.314	24.0720	690.0			
		2242891				247.064	22.2468	710.0			
	MAY										
		242901				239.019	20.4503	720.0			
		1242911				231.852	18.6874	740.0			
		2242921				223.885	16.9670	750.0			
	JUN.										
		142931				215.950	15.3028	760.0			
		1142941				208.040	13.7179	770.0			
		2142951	177.431	14.8492	510.0	200.145	12.2511	780.0			
	JUL.										
		142961	178.944	11.4980	630.0	192.257	10.9721	790.0			
		1142971	176.101	10.1104	700.0	188.461	10.0619	850.0			
		2142981	171.530	9.3520	750.0	190.237	9.6355	980.0			
		3142991	167.720	9.1212	810.0	192.592	9.4852	1120.0			
	AUG.										
		1043001	167.059	9.3343	910.0						
		2043011	166.241	9.8103	1010.0						
		3043021	167.615	10.3809	1140.0					NONE	
	SEP.										
		943031		—							
		1943041		—							
		2943051		—							
	OCT.										
		943061		—							
		1943071		—							
		2943081		—							
	NOV.										
		843091		—							
		1843101		—							
		2843111		—							
	DEC.										
		843121		—							
		1843131		—							
		2843141		—							

## EARTH-JUPITER

1977

HEV

14	C.D.	L	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
	JAN.										
		7 43151		—		351.482	48.6717	510.0			
		17 43161		—		347.297	47.0455	500.0			
		27 43171		—		337.957	45.1688	500.0			
	FEB.										
		6 43181		—		328.641	43.2901	500.0			
		16 43191		—		321.015	41.4057	520.0			
		26 43201		None		313.420	39.4896	540.0			
	MAR.										
		8 43211				305.862	37.5551	560.0			
		18 43221				299.164	35.6101	590.0			
		28 43231				291.691	33.6661	610.0			
	APR.										
		7 43241				284.265	31.7308	630.0			
		17 43251				277.692	29.7741	660.0			
		27 43261				269.551	27.9056	670.0			
	MAY										
		7 43271				263.058	26.0194	700.0			
		17 43281				256.595	24.1537	730.0			
		27 43291				248.570	22.3248	740.0			
	JUN.										
		6 43301				240.574	20.5192	750.0			
		16 43311				233.389	18.7476	770.0			
		26 43321				225.425	17.0199	780.0			
	JUL.										
		6 43331				217.466	15.3511	790.0			
		16 43341				209.503	13.7696	800.0			
		26 43351	176.790	15.7223	500.0	202.310	12.3307	820.0			
	AUG.										
		5 43361	173.689	12.6733	570.0						
		15 43371	170.491	10.7752	640.0						
		25 43381	166.412	9.7312	700.0						
	SEP.										
		4 43391	163.028	9.4130	770.0						
		14 43401		—							
		24 43411		—							
	OCT.										
		4 43421		—							
		14 43431		—							
		24 43441		—							
	NOV.										
		3 43451		—							
		13 43461		—							
		23 43471		—							
	DEC.										
		3 43481		—							
		13 43491		—							
		23 43501		—							

EARTH-JUPITER 1978

HEY

15

C.D.	L	Type I	HEV	T	Type II	HEV	T	Type III	HEV	T
JAN.										
2	43511		—			None			None	
12	43521		—							
22	43531		—							
FEB.										
1	43541		—							
11	43551		—		357.624	46.8864	550.0			
21	43561		None		344.506	46.8181	500.0			
MAR.										
3	43571				335.255	44.9500	500.0			
13	43581				327.625	43.0649	520.0			
23	43591				320.039	41.1436	540.0			
APR.										
2	43601				313.285	39.1985	570.0			
12	43611				305.795	37.2397	590.0			
22	43621					—				
MAY										
2	43631					—				
12	43641					—				
22	43651					—				
JUN.										
1	43661					—				
11	43671					—				
21	43681					—				
JUL.										
1	43691					—				
11	43701					—				
21	43711					—				
31	43721					—				

END OF TAPE

EARTH - JUPITER 1964

LAUNCH ENERGY

L	C. D.	Type I	Type II	Type III
	1963			
38391	Dec. 27	—	1275.7380	None
	1964			
38401	JAN. 6	—	1717 2920	}
38411	16	—	1566 3520	
38421	26	—	1420 2881	
38431	FEB. 5	—	1280 2056	
38441	" 15	—	1146 9731	
38451	25	—	1020 1446	
38461	MAR. 6	—	903 0880	
38471	16	—	793 0094	
38481	26	—	690 8975	
✓ 38491	APR. 5	—	596 9350	
38501	15	NONE	510 8637	
38511	25	}	432 6589	
38521	MAY 5		362 1718	
38531	15		299 3681	
38541	25		244 1674	
38551	JUN. 4		196 6269	
38561	14	283 8600	156 8977	
38571	24	152 2621	125 2749	
38581	JUL. 4	104 5284	102 9211	
✓ 38591	14	88 5179	92 5810	
38601	24	82 5321	89 2385	
38611	AUG. 3	84 8927	88 7457	
38621	13	92 8270	89 3658	
38631	23	103 8300	90 3068	
38641	SEP. 2	116 2671	91 2269	
38651	12	129 1718	91 9960	
38661	22	141 7546	92 5936	
38671	OCT. 2	153 4742	93 0612	
38681	12	164 0019	—	
✓ 38691	22	172 8366	—	
38701	NOV. 1	179 8634	—	
38711	11	—	NONE	
38721	21	—	}	
38731	Dec 1	—		
38741	11	—		
38751	21	—		
38761	31	—	2097 2083	



## LAUNCH ENERGY

2	L.	C. D.	Type I	Type II	Type III
	38771	JAN. 10	—	2250.5067	NONE
	38781	20	—	2076.4930	}
	38791	30	—	1908.6644	
	38801	FEB. 9	—	1748.2787	
	38811	19	—	1592.6593	
	38821	MAR 1	—	1442.5189	
	38831	11	—	1298.9163	
	38841	21	—	1162.7415	
	38851	31	—	1034.4704	
	38861	APR. 10	—	914.3839	
✓	38871	20	—	802.6691	
	38881	30	—	699.2876	
	38891	MAY 10	—	604.1247	
	38901	20	NONE	517.0780	
	38911	30	}	437.9923	
	38921	JUN. 9		366.6929	
	38931	19		303.1697	
	38941	29		247.3799	
	38951	JUL. 9		199.4486	
	38961	19	319.9684	159.7772	
✓	38971	29	170.9443	129.4191	
	38981	AUG. 8	121.9590	109.7836	
	38991	18	97.0475	99.1369	
	39001	28	88.2363	93.8254	
	39011	SEP. 7	90.9362	91.2786	
	39021	17	100.4072	90.1111	
	39031	27	112.3973	89.6250	
	39041	OCT. 7	124.8265	89.4947	
	39051	17	136.4689	89.5760	
	39061	27	146.7353	89.8249	
✓	39071	NOV. 6	155.1012	—	
	39081	16	161.3635	—	
	39091	26	165.1175	—	
	39101	DEC. 6	166.2411	NONE	
	39111	16	—	}	
	39121	26	—		

LAUNCH ENERGY

3

5

L	C. D.	Type I	Type II	Type III
39131	JAN. 5	—	NONE	NONE
39141	15	—	—	—
39151	25	—	—	—
39161	FEB. 4	—	21400871	—
39171	14	—	22358689	—
39181	24	—	20625588	—
39191	MAR. 6	—	18958425	—
39201	16	—	17331565	—
39211	26	—	15753901	—
39221	APR. 5	—	14240675	—
✓ 39231	15	—	12800903	—
39241	25	—	11438142	—
39251	MAY 5	—	10159423	—
39261	15	—	8965406	—
39271	25	—	7855826	—
39281	JUN. 4	—	6830200	—
39291	14	1931.8147	5887794	—
39301	24	NONE	5026592	—
39311	JUL 4	—	4245404	—
39321	14	—	3542389	—
✓ 39331	24	—	2917826	—
39341	AUG. 3	—	2371918	—
39351	13	—	1907526	—
39361	23	373.1516	1531012	—
39371	SEP. 2	1849051	1253050	—
39381	12	1268756	1074331	—
39391	22	995460	970268	—
39401	OCT. 2	913421	911952	—
39411	12	958192	880324	—
39421	22	1060474	864448	—
✓ 39431	NOV. 1	1169936	858488	—
39441	11	1268006	859151	—
39451	21	1340652	863678	—
39461	DEC. 1	1398913	874023	—
39471	11	1424135	—	—
39481	21	1415249	—	—
39491	31	1383422	—	—

## LAUNCH ENERGY

	L	C. D.	Type I	Type II	Type III	
	39501	JAN. 10	—	NONE	NONE	
	39511	20	—	}	}	
	39521	30	—			
	39531	FEB. 9	—			
	39541	19	—			
	39551	MAR. 1	—			
	39561	11	—			2196.6636
	39571	21	—			2174.6554
	39581	31	—			2004.5373
	39591	APR. 10	—			1837.7798
✓	39601	20	—			1675.6814
	39611	30	—	1519.6298		
	39621	MAY 10	—	1370.6340		
	39631	20	—	1229.1693		
	39641	30	—	1095.8974		
	39651	JUN. 9	—	971.0626		
	39661	19	—	854.5983		
	39671	29	—	746.6004		
	39681	JUL. 9	1561.4850	646.9150		
	39691	19	2282.9549	555.4352		
✓	39701	29	NONE	471.8430		
	39711	AUG. 8	}	396.2530		
	39721	18		328.4773		
	39731	28		268.5575		
	39741	SEP 7		216.6425		
	39751	17		173.1096		
	39761	27	279.6110	138.6561		
	39771	OCT. 7	167.5103	114.0437		
	39781	17	115.9325	98.4619		
	39791	27	94.4381	89.3847		
✓	39801	NOV. 6	91.1274	84.4812		
	39811	16	97.5297	82.2482		
	39821	26	105.6909	81.7911		
	39831	DEC. 6	112.3610	82.5124		
	39841	16	116.3597	83.9431		
	39851	26	116.3838	85.7270		

## LAUNCH ENERGY

	L	C. D.	Type I	Type II	Type III
	39861	JAN. 5	116.5913	87.6460	NONE
	39871	15	131.3686	—	}
	39881	25	144.9762	—	
	39891	FEB. 4	157.8729	—	
	39901	14	—	NONE	
	39911	24	—	}	
	39921	MAR. 5	—		
	39931	15	—		
	39941	25	—		
	39951	APR. 4	—	2427.2035	
✓	39961	14	—	22544319	
	39971	24	—	20834237	
	39981	MAY 4	—	19156140	
	39991	14	—	17520609	
	40001	24	—	15940521	
	40011	JUN. 3	—	14424128	
	40021	13	—	12980773	
	40031	23	—	11615301	
	40041	JUL 3	—	10330025	
	40051	13	—	9127137	
✓	40061	23	—	8007103	
	40071	AUG. 2	—	6968612	
	40081	12	2198.1022	6011121	—
	40091	22	2335.5092	5132846	—
	40101	SEP. 1	NONE	4333144	NONE
	40111	11	}	3611718	}
	40121	21		2967815	
	40131	OCT. 1		2402657	
	40141	11		1918491	
	40151	21	1484.7023	1518936	
✓	40161	31	2117363	1211159	
	40171	NOV. 10	1322931	999380	
	40181	20	973203	871481	
	40191	30	860862	804345	
	40201	DEC. 10	872044	779377	
	40211	20	908529	785052	
	40221	30	910154	807029	

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	L	C. D	Type I	Type II	Type III	
	40231	JAN. 9	99,6622	83,1563	NONE	
	40241	19	112,7463	85,5137	}	
	40251	29	125,8818	87,7064		
	40261	FEB. 8	138,8529	89,6975		
	40271	18	151,2005	—		
	40281	28	162,8316	—		
	40291	MAR. 10	173,3796	—		
	40301	20	182,7401	NONE		
	40311	30	—	}		
	40321	APR. 9	—			
✓	40331	19	—			
	40341	29	—	}		
	40351	MAY 9	—			2176,9399
	40361	19	—			2149,5957
	40371	29	—			1982,9142
	40381	JUN. 8	—			1820,0742
	40391	18	—		1661,9088	
	40401	28	—		1509,5191	
	40411	JUL. 8	—		1363,7400	
	40421	18	—		1225,1308	
✓	40431	28	—		1093,9458	
	40441	AUG. 7	—	970,6206		
	40451	17	—	846,4179		
	40461	27	—	747,7876		
	40471	SEP. 6	—	648,2276		
	40481	16	2251,5506	556,4912	—	
	40491	26	2389,8097	472,5277	—	
	40501	OCT. 6	NONE	396,2637	NONE	
	40511	16	}	327,7129	}	
	40521	26		266,8560		
✓	40531	NOV. 5		213,9166		
	40541	15	256,3236	169,0938	}	
	40551	25	132,7077			
	40561	DEC. 5	145,9795	105,2647		
	40571	15	98,4251	87,0995		
	40581	25	80,3043	77,3887		

40711	MAY	4	—	NONE	NONE
40721		14	—	}	}
40731		24	—		
40741	JUN.	3	—		
40751		13	—	2157 1297	}
40761		23	—	2057 5831	
40771	JUL.	3	—	1896 7774	
40781		13	—	1739 6773	
40791		23	—	1587 4250	
40801	AUG.	2	—	1440 7327	
40811		12	—	1300 3469	
40821		22	—	1166 7379	
40831	SEP.	1	—	1040 4120	
40841		11	—	921 5183	
40851		21	—	810 2377	
40881		21	2192 9873	522 2453	—
40891		31	2391 5606	441 4567	—
40901	NOV.	10	NONE	368 3483	NONE
40911		20	}	302 8203	}
40921		30		245 0927	
40931	DEC.	10		195 2853	
40941		20		153 7014	
40951		30	152 8233	120 8245	

✓

✓

LAUNCH ENERGY

	L	C.D	Type I	Type II	Type III
	40961	JAN. 9	105.0263	98.0796	NONE
	40971	19	84.6998	87.2976	}
	40981	29	77.7936	83.8268	
	40991	FEB. 8	80.6256	83.3618	
	41001	18	89.2216	84.0368	
	41011	28	100.3568	85.1162	
	41021	MAR. 10	112.2732	86.2862	
	41031	20	123.9195	87.4194	
	41041	30	134.8310	88.5227	
	41051	APR. 9	144.6542	89.6016	
✓	41061	19	153.0168	90.6725	
	41071	29	159.9312	—	
	41081	MAY 9	165.2218	—	
	41091	19	168.8661	—	
	41101	29	170.5708	NONE	
	41111	JUN. 8	—	}	
	41121	18	—		
	41131	28	—		
	41141	JUL. 8	—	JUMBLED	
	41151	18	—	2164.0073	
✓	41161	28	—	1999.9301	
	41171	AUG. 7	—	1842.7065	
	41181	17	—	1666.1687	
	41191	27	—	1543.2437	
	41201	SEP 6	—	1401.0793	
	41211	16	—	1264.4072	
	41221	26	—	1134.3364	
	41231	OCT. 6	—	1011.1633	
	41241	16	—	895.1220	
	41251	26	—	786.4026	
✓	41261	NOV. 5	—	685.0904	
	41271	15	—	591.3133	
	41281	25	—	504.9450	
	41291	DEC. 5	—	426.2010	
	41301	15	NONE	354.9588	
	41311	25	}	291.4783	

41431	25	1241254	866512
41441	MAY 3	1322866	875365
41451	13	1388779	886972
41461	23	1437486	901048
41471	JUN. 2	1466494	917321
41481	12	1474919	—
41491	22	1452353	—
41501	JUL. 2	—	NONE
41511	12	—	—
✓ 41521	22	—	—
41531	AUG. 1	—	—
41541	11	—	—
41551	21	—	21597045
41561	31	—	19931864
41571	SEP. 10	—	18347788
41581	20	—	16839344
41591	30	—	15388970
41601	OCT. 10	—	13983657
41611	20	—	12633977
✓ 41621	30	—	11344554
41631	NOV. 9	—	10120467
41641	19	—	8965719
41651	29	—	7882698
41661	DEC. 9	—	6873241
41671	19	—	5937778
41681	29	—	5077500



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L	C. D	Type I	Type II	Type III	
41691	JAN. 8	—	429 2843	NONE	
41701	18	NONE	358 4425	}	
41711	28	}	295 2793		
41721	FEB. 7		239 9749		
41731	17		192 8630		
41741	27		1062 2387		154 6620
41751	MAR. 9		181 2004		126 5395
41761	19		123 4989		108 2027
41771	29		95 1283		97 0879
41781	APR. 8		84 6548		90 4686
✓ 41791	18		86 0482		86 6545
41801	28		93 2826		84 6466
41811	MAY 8		101 6186		83 9058
41821	18		109 3121		84 1529
41831	28		115 5810		85 1860
41841	JUN. 7		120 0480		86 8511
41851	17		122 1303		88 9064
41861	27		120 8784		91 1415
41871	JUL. 7		123 4214		93 3578
41881	17		137 4710		—
✓ 41891	27		150 8390		—
41901	AUG. 6		163 8140	NONE	
41911	16	—	}		
41921	26	—			
41931	SEP. 5	—			
41941	15	—			
41951	25	—		2195 9805	
41961	OCT. 5	—		2038 2459	
41971	15	—		1875 4980	
41981	25	—		1720 8833	
✓ 41991	NOV. 4	—		1573 7511	
42001	14	—		1432 2464	
42011	24	—		1295 7652	
42021	DEC. 4	—		1165 1143	
42031	14	—		1040 9006	
42041	24	—		923 5639	

42171	MAY	3	1020925	977656
42181		13	870058	888888
42191		23	847101	838145
42201	JUN.	2	885685	815357
42211		12	932608	814862
42221		22	965284	833371
42231	JUL.	2	946500	861382
42241		12	1061272	889320
42251		22	1188961	914595
42261	AUG.	1	1319190	—
42271		11	1448574	—
42281		21	1576144	—
42291		31	1698177	NONE
42301	SEP.	10	—	}
42311		20	—	
42321		30	—	
42331	OCT.	10	—	
42341		20	—	
42351		30	—	22614760
42381		29	—	17862035
42391	DEC.	9	—	16333673
42401		19	—	14880134
42411		29	—	13475146

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12

	L	C. D	TYPE I	TYPE II	TYPE III
	42421	JAN. 8	—	1212 8600	NONE
	42431	18	—	1084 9214	
	42441	28	—	964 0304	
	42451	FEB. 7	2111 6688	8506250	
	42461	17	2203 9996	7449299	
	42471	27	NONE	646 9507	
	42481	MAR. 9		5569181	
	42491	19		474 5368	
	42501	29		399 9407	
	42511	APR. 8		332 9400	
✓	42521	18		273 6047	
	42531	28		221 9300	
	42541	MAY 8		178 0757	
	42551	18	231 4827	142 3429	
	42561	28	146 2539	115 2674	
	42571	JUN. 7	105 1423	96 7850	
	42581	17	86 6152	85 5106	
	42591	27	80 8929	79 9085	
	42601	JUL. 7	80 6751	81 9855	
	42611	17	87 4927	85 0604	
✓	42621	27	97 3615	87 7344	
	42631	AUG. 6	109 0496	—	
	42641	16	121 6669	—	
	42651	26	134 6264	NONE	
	42661	SEP. 5	—		
	42671	15	—		
	42681	25	—		
	42691	OCT. 5	—		
	42701	15	—		
	42711	25	—		
✓	42721	NOV. 4	—		
	42731	14	—		
	42741	24	—		
	42751	DEC. 4	—	2391 2937	
	42761	14	—	2181 1958	
	42771	24	—	2012 0913	

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13

L	C. D.	Type I	Type II	Type III
42781	JAN. 3	—	1846.9839	NONE
42791	13	—	1690 0112	
42801	23	—	1539 3940	
42811	FEB. 2	—	1394 0031	
42821	12	—	1254 7418	
42831	22	NONE	1122 4839	
42841	MAR. 3		997 8860	
42851	13		881 1660	
42861	23		772 5200	
42871	APR. 2		671 9568	
42881	12		579 4614	
42891	22		494 9215	
42901	MAY 2		418 2141	
42911	12		349 2205	
42921	22		287 8783	
42931	JUN. 1		234 1755	
42941	11		188 1795	
42951	21	220.4998	150 0896	
42961	JUL. 1	132 2044	120 3868	
42971	11	102 2208	101 2424	
42981	21	87 4591	92 8426	
42991	31	83 1969	89 9697	
43001	AUG. 10	87 1296	—	
43011	20	96 2414	—	
43021	30	107 7629	NONE	
43031	SEP. 9	—		
43041	19	—		
43051	29	—		
43061	OCT 9	—		
43071	19	—		
43081	29	—		
43091	NOV. 8	—		
43101	18	—		
43111	28	—		
43121	DEC. 8	—		
43131	18	—		
43141	28	—		

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14

	L	G.D	Type I	Type II	Type III
	43151	JAN. 7	—	2368.9366	None
	43161	17	—	2213.2780	
	43171	27	—	2040.2170	
	43181	FEB. 6	—	1874.0309	
	43191	16	—	1714.4287	
	43201	26	NONE	1559.4285	
	43211	MAR. 8		1410.3838	
	43221	18		1268.0789	
	43231	28		1133.4086	
	43241	APR. 7		1006.8457	
✓	43251	17		886.4951	
	43261	27		778.7199	
	43271	MAY 7		677.0086	
	43281	17		583.4016	
	43291	27		498.3949	
	43301	JUN. 6		421.0365	
	43311	16		351.4722	
	43321	26		289.6785	
	43331	JUL. 6		235.6571	
	43341	16		189.6009	
✓	43351	26	247.1904	152.0467	
	43361	AUG. 5	160.6121	—	
	43371	15	116.1047	—	
	43381	25	94.6957	NONE	
	43391	SEP. 4	88.6051		
	43401	14	—		
	43411	24	—		
	43421	OCT. 4	—		
	43431	14	—		
	43441	24	—		
✓	43451	NOV. 3	—		
	43461	13	—		
	43471	23	—		
	43481	DEC. 3	—		
	43491	13	—		
	43501	23	—		

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15

	L	C.D.	TYPE I	TYPE II	TYPE III
	43511	JAN. 2	—	NONE	NONE
	43521	12	—	⋮	⋮
	43531	22	—	⋮	⋮
	43541	FEB. 1	—	⋮	⋮
	43551	11	—	2198.3322	⋮
	43561	21	NONE	2191.9313	⋮
	43571	MAR. 3	⋮	2020.5016	⋮
	43581	13	⋮	1854.5832	⋮
	43591	23	⋮	1692.7928	⋮
	43601	APR. 2	⋮	1536.5193	⋮
✓	43611	12	⋮	1386.7946	⋮
	43621	22	⋮	—	⋮
	43631	MAY 2	⋮	—	⋮
	43641	12	⋮	—	⋮
	43651	22	⋮	—	⋮
	43661	JUN. 1	⋮	—	⋮
	43671	11	⋮	—	⋮
	43681	21	⋮	—	⋮
	43691	JUL. 1	⋮	—	⋮
	43701	11	⋮	—	⋮
	43711	21	⋮	—	⋮
	43721	31	⋮	—	⋮
	END OF TAPE				