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# Minor Planet Center



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**MPEC 2013-M18 : DAILY ORBIT UPDATE (2013 JUNE 18 UT)**

The following [Minor Planet Electronic Circular](#) may be linked-to from your own Web pages, but must **not** otherwise be redistributed electronically.

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M.P.E.C. 2013-M18

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DAILY ORBIT UPDATE (2013 JUNE 18 UT)

Update to [MPEC 2013-M04](#)

Full-precision elements for the objects listed here are available at <http://www.minorplanetcenter.org/iau/MPCORB.html>

New identification:

K01TQ0Q	K06D38B	Lopez
K02Tc2U	K05G55F	Lopez
K02U710	K00EI2V	Lopez
K08C72G	K01H26S	Lopez
K08SM0A	K13M00L	MPCW
K12004C	K03H32Y	MPCS
K12V77B	K06V13B	MPCS
K12V99H	K01TP8V	MPCS
K13AE1N	K09X09Y	MPCS
K13AF30	K08F09B	MPCS
K13AH0L	K10J51X	MPCS
K13AH4T	K05EA7Y	MPCS
K13GB0A	K04TC3D	MPCS
K13H00F	K03W45Z	MPCS
K13H40B	K08K16A	MPCS
K13H44E	K10TB3B	MPCS
K13H48Z	K09R60Z	MPCS
K13H49J	K11S15Y	MPCS
K13H91X	K02TG7K	MPCS
K13H92F	K05SK7M	MPCS
K13HA8N	J95U35G	MPCS
K13HB8C	K05Ub6K	MPCS
K13HCOM	K10BA2D	MPCS
K13HC9P	K12BC1J	MPCS
K13J17F	K01W22E	MPCS
K13J26P	K10O74K	MPCS
K13J34Q	K03U05P	MPCS
K13J36T	K12D13C	MPCS
K13J43M	K09U43D	MPCS
K13K06T	K01C37X	MPCS
K13K08G	K08E79J	MPCS
K13K08J	K02J03U	MPCS
K13K12F	K02L04T	MPCS
K13K13G	K00G02Z	MPCS
K13K13V	J95Y20V	MPCS
K13K17R	K04FB8C	MPCS
K13L00D	J99K00P	MPCS
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	K10R78F	

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K13L07B	K10O97R	MPCS
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K13L21D	K10VE4S	MPCS
K13L24E	K12B64X	MPCS
K13L24X	K01Y00G	MPCS
K13L29C	K06X50G	MPCS

## New double designation:

K02E04M	K02EF5W	Lopez
K03Q31F	K03SC6Z	Lopez
K03SA4C	K03SX3C	Lopez
K03SH4O	K03Sb4K	Lopez
K13H53R	K13H21Y	MPCS

## New multiple-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Opp	C
J98S08W	16.6	0.15	K134I	278.704	185.006	186.792	8.808	0.10737	3.02270	6	X
J99XP9S	15.1	0.15	K134I	214.433	321.885	60.946	17.739	0.06361	3.04955	5	X
K00CA5N	5.0	0.15	K134I	114.352	10.861	28.857	3.417	0.09817	44.64495	10	X
K00K40B	18.0	0.15	K134I	319.817	214.567	56.718	5.991	0.15040	2.19459	3	X
K00O22A	18.0	0.15	K134I	283.793	55.675	307.148	10.117	0.48260	2.72390	2	X
K00O69U	6.6	0.15	K134I	6.017	232.936	77.323	4.422	0.04656	43.09225	5	X
K00S39O	17.5	0.15	K134I	324.079	207.361	125.602	4.747	0.23665	2.20449	5	X
K00S93F	15.8	0.15	K134I	305.604	126.382	231.618	8.102	0.30790	2.69101	6	X
K00SC8X	16.0	0.15	K134I	219.175	177.443	252.994	22.264	0.28487	2.24753	4	X
K00W50W	17.3	0.15	K134I	140.425	190.824	242.978	17.101	0.13600	1.98722	4	X
K01L00O	18.4	0.15	K134I	189.873	14.683	253.028	9.569	0.36770	2.23359	3	X
K01QF1G	15.7	0.15	K134I	301.245	72.526	312.145	26.871	0.28404	2.53612	4	X
K01QM1M	16.5	0.15	K134I	341.815	108.459	163.229	12.005	0.24924	2.54667	4	X
K01RE3Z	6.5	0.15	K134I	353.605	33.581	8.345	2.124	0.06794	44.26099	6	X
K01TQ0Q	13.9	0.15	K134I	233.635	40.319	96.552	5.670	0.00833	5.17348	5	W
K01VB4K	16.3	0.15	K134I	278.899	123.509	254.882	12.613	0.21010	2.62255	5	X
K01XK7H	17.1	0.15	K134I	275.317	147.934	239.098	13.028	0.28231	2.61749	4	X
K02C11O	17.7	0.15	K134I	229.501	266.219	142.388	22.836	0.07125	1.86037	6	X
K02C25K	19.8	0.15	K134I	209.638	184.899	319.794	26.824	0.05703	1.58614	6	X
K02CO8Y	5.3	0.15	K134I	226.766	337.327	300.665	7.017	0.14171	46.37194	8	X
K02E04M	17.0	0.15	K134I	171.919	140.464	351.254	7.858	0.17290	2.77034	3	W
K02F32K	18.4	0.15	K134I	165.350	71.276	160.633	15.072	0.41039	2.67867	2	X
K02G01T	16.0	0.15	K134I	24.956	25.372	179.220	17.159	0.17511	3.03827	3	X
K02G31V	6.0	0.15	K134I	345.372	128.792	59.095	2.183	0.09211	44.10089	6	X
K02G86G	16.9	0.15	K134I	6.657	163.522	57.892	7.882	0.06093	2.34830	7	X
K02H11T	17.4	0.15	K134I	234.356	98.554	71.040	28.595	0.38621	2.60712	2	X
K02L03B	15.5	0.15	K134I	4.664	335.150	250.140	15.796	0.16361	3.12155	3	X
K02L24Q	15.9	0.15	K134I	347.250	29.084	238.257	30.917	0.26953	3.10244	3	X
K02L24T	22.0	0.15	K134I	81.272	282.115	166.687	0.762	0.49604	0.71980	3	X
K02M03S	19.1	0.15	K134I	311.288	239.460	106.219	21.852	0.61055	2.39354	2	W
K02N16V	21.4	0.15	K134I	244.370	179.417	183.562	3.508	0.21998	1.23760	5	X
K02N49U	17.9	0.15	K134I	316.461	16.056	303.840	1.625	0.25100	2.36262	6	X
K02O23N	16.3	0.15	K134I	345.698	358.697	303.365	23.201	0.14468	2.36955	4	X
K02P02Q	15.9	0.15	K134I	301.908	161.163	208.077	12.583	0.15431	3.12343	6	X
K02PE5Q	5.7	0.15	K134I	205.742	311.902	165.813	3.075	0.04984	43.73700	6	X
K02PJ9O	16.6	0.15	K134I	359.615	108.183	162.711	13.228	0.22474	3.16707	6	X
K02Q13P	16.4	0.15	K134I	332.346	135.817	179.667	9.678	0.22975	3.16368	4	X
K02RR0W	15.7	0.15	K134I	350.631	357.799	316.088	4.275	0.12542	3.12669	6	X
K02T22W	17.4	0.15	K134I	313.759	46.155	305.474	0.430	0.21127	2.40337	5	X
K02TG5Z	15.5	0.15	K134I	309.721	64.199	312.101	15.600	0.25891	3.14378	5	X
K02Tc2U	15.7	0.15	K134I	263.749	82.438	31.738	8.540	0.01801	3.07137	5	W
K02U71O	16.2	0.15	K134I	357.566	173.223	38.130	15.619	0.04717	2.61479	8	W
K02X88B	15.6	0.15	K134I	169.966	183.253	309.860	10.722	0.11931	2.53405	7	X
K03C14K	16.2	0.15	K134I	95.228	44.993	125.718	22.660	0.03425	2.66461	5	X
K03G55H	5.9	0.15	K134I	21.197	84.790	116.518	1.102	0.07753	44.04346	6	X
K03L07B	6.7	0.15	K134I	33.010	154.826	49.657	2.298	0.12921	45.41801	5	X
K03SA4C	15.6	0.15	K134I	52.677	266.073	134.360	10.229	0.33097	3.97938	4	W
K03SH4O	17.0	0.15	K134I	49.565	162.633	181.540	14.979	0.19143	2.74190	4	W
K03SR0H	15.9	0.15	K134I	278.777	280.997	91.042	8.008	0.22613	3.08620	7	X
K03SU8S	17.3	0.15	K134I	297.364	99.817	223.474	21.801	0.21525	2.30361	4	X
K03SW8Q	16.6	0.15	K134I	345.976	102.057	185.004	9.616	0.12581	3.07790	6	X
K03SX6C	15.9	0.15	K134I	295.749	223.048	150.613	11.609	0.28950	3.03791	5	X
K03SY5G	16.5	0.15	K134I	40.253	33.379	198.690	9.368	0.04602	3.07093	5	X
K03Sg0K	17.9	0.15	K134I	3.557	58.204	198.908	9.671	0.11340	2.29028	3	X
K03U69J	16.5	0.15	K134I	339.903	114.085	184.192	9.795	0.07632	3.07612	6	X
K03UB7Z	5.3	0.15	K134I	336.305	245.822	204.598	27.396	0.13807	44.51226	9	X
K03UD2L	14.8	0.15	K134I	293.077	124.421	240.537	13.904	0.21203	3.10033	5	X
K03WF3N	15.2	0.15	K134I	249.351	267.682	149.091	15.715	0.28187	3.13943	6	X
K03Y00C	16.3	0.15	K134I	254.084	300.828	132.742	24.550	0.31741	2.28356	5	X
K04C84S	16.6	0.15	K134I	6.740	77.689	150.870	13.608	0.12325	2.57666	4	X
K04D09Y	16.0	0.15	K134I	110.178	351.349	135.432	22.441	0.05001	2.56240	4	X

K04D54C	17.5	0.15	K134I	5.820	113.209	145.905	14.547	0.07940	2.51597	5 X
K04E36V	16.2	0.15	K134I	25.365	14.907	179.003	13.043	0.21521	2.66039	3 X
K04G14Q	16.9	0.15	K134I	61.729	323.717	225.023	12.544	0.18644	2.61495	6 X
K04H36N	16.5	0.15	K134I	53.057	358.570	156.979	14.250	0.22388	2.68136	6 X
K04H79D	5.7	0.15	K134I	204.659	236.430	159.257	1.306	0.03407	45.79858	4 X
K04M08U	6.0	0.15	K134I	216.953	337.754	109.762	3.584	0.08407	44.74179	4 X
K04PB7V	6.5	0.15	K134I	28.066	314.629	329.215	4.330	0.15124	45.98733	4 X
K04RM8O	16.0	0.15	K134I	316.625	66.076	207.525	10.613	0.06500	3.05460	5 X
K04T19J	17.5	0.15	K134I	339.365	183.578	132.628	14.033	0.48219	2.75194	2 X
K04TD2V	15.7	0.15	K134I	263.326	92.974	240.185	15.349	0.13508	3.03562	6 X
K04TZ0V	16.3	0.15	K134I	202.417	229.668	212.329	7.581	0.10302	2.98986	5 X
K04V60Y	15.6	0.15	K134I	178.503	296.955	123.068	23.008	0.15845	3.13045	5 X
K05A49P	15.9	0.15	K134I	216.644	310.627	130.100	21.784	0.24636	3.05776	5 X
K05ET8F	6.1	0.15	K134I	333.979	74.440	117.979	2.865	0.09102	44.13582	8 X
K05JE6D	16.2	0.15	K134I	290.427	137.992	192.869	15.147	0.20485	2.52243	7 X
K05L54A	6.5	0.15	K134I	345.160	198.659	70.667	7.932	0.06363	44.15714	4 X
K05L54B	5.8	0.15	K134I	347.371	171.452	96.047	3.008	0.04337	43.53117	4 X
K05M29N	16.4	0.15	K134I	261.760	217.809	142.203	15.042	0.19969	2.62296	5 X
K05M34W	17.8	0.15	K134I	268.697	81.069	305.006	18.196	0.10722	1.91390	3 X
K05N50T	16.5	0.15	K134I	358.641	104.867	133.607	14.990	0.04114	2.62186	6 X
K05N68G	16.7	0.15	K134I	285.602	212.261	121.118	13.092	0.21329	2.60613	7 X
K05Q01F	16.3	0.15	K134I	277.739	190.413	151.458	13.752	0.18019	2.62712	6 X
K05S04E	16.4	0.15	K134I	311.764	137.167	192.853	13.603	0.29135	2.60147	4 X
K05TF9U	16.1	0.15	K134I	9.849	29.873	224.131	11.113	0.15396	2.69129	6 X
K05U98N	16.8	0.15	K134I	251.067	206.170	201.318	6.790	0.19573	2.68147	5 X
K05UA0V	16.5	0.15	K134I	199.233	242.454	195.585	8.497	0.08206	2.75475	6 X
K05UQ1J	15.7	0.15	K134I	234.404	173.140	236.451	15.778	0.05247	2.77101	5 X
K05UQ6D	16.7	0.15	K134I	65.958	84.750	65.198	8.947	0.16633	3.04173	5 X
K05Um0H	16.5	0.15	K134I	258.657	267.199	139.429	14.198	0.27397	2.66604	4 X
K05V09U	17.5	0.15	K134I	309.967	78.675	286.340	3.113	0.22675	2.58641	4 X
K05V72E	16.9	0.15	K134I	303.988	118.171	227.455	10.231	0.19802	2.67809	4 X
K05W08G	16.6	0.15	K134I	245.934	274.120	135.898	14.220	0.23299	2.66200	5 X
K05WB7E	16.0	0.15	K134I	312.442	96.957	241.673	28.339	0.30427	2.60447	4 X
K05YS9R	19.0	0.15	K134I	115.713	60.510	113.272	13.868	0.11012	1.64309	2 X
K06A00P	16.6	0.15	K134I	75.352	16.242	114.305	23.689	0.26630	2.21507	3 X
K06A92P	16.4	0.15	K134I	22.767	323.130	312.564	8.449	0.07366	2.91384	6 X
K06B37Q	16.3	0.15	K134I	261.190	235.211	124.084	11.744	0.16274	2.97443	3 X
K06B84M	15.2	0.15	K134I	292.502	184.302	125.871	22.616	0.08950	3.11852	5 X
K06BG9A	16.2	0.15	K134I	265.817	238.111	153.401	14.903	0.21578	2.90411	5 X
K06BH7P	16.1	0.15	K134I	43.357	77.292	147.309	11.539	0.09310	3.06826	4 X
K06F12D	15.9	0.15	K134I	276.992	195.936	172.729	9.900	0.08031	3.13515	8 X
K06G14V	18.5	0.15	K134I	337.032	108.565	178.449	6.190	0.18326	2.22629	3 X
K06HC3B	7.1	0.15	K134I	359.725	125.895	115.734	1.802	0.08694	43.93920	3 X
K06J81Z	6.7	0.15	K134I	5.961	180.530	36.390	3.552	0.07844	44.59341	7 X
K06R77Q	18.0	0.15	K134I	327.255	138.727	168.035	6.022	0.24520	2.36315	6 X
K06SL8X	17.6	0.15	K134I	341.677	19.578	284.631	2.590	0.24199	2.34397	6 X
K06Sc6G	17.7	0.15	K134I	119.275	350.117	150.270	12.688	0.11579	2.56174	4 X
K06U66L	17.9	0.15	K134I	327.671	59.839	267.005	0.477	0.19582	2.36323	6 X
K06UE0S	16.5	0.15	K134I	353.730	344.672	243.340	11.987	0.08199	2.67274	4 X
K06V82L	16.5	0.15	K134I	312.687	32.551	243.247	13.635	0.06864	2.63572	5 X
K06V98Q	16.2	0.15	K134I	141.412	233.709	218.979	21.504	0.05098	2.63264	6 X
K06W02X	17.7	0.15	K134I	0.257	330.192	255.619	17.278	0.03782	1.90031	4 X
K06WF6G	18.1	0.15	K134I	28.374	125.084	68.018	22.523	0.06945	1.90468	2 X
K06WI6Q	16.4	0.15	K134I	285.072	117.345	211.895	11.686	0.11942	2.54653	4 X
K06X62S	16.5	0.15	K134I	251.286	282.079	94.090	5.522	0.25830	2.57175	5 X
K06Y05E	17.2	0.15	K134I	325.327	181.101	150.867	1.657	0.12206	2.43153	7 X
K06Y48R	16.0	0.15	K134I	167.581	332.088	135.691	16.984	0.14509	2.69976	5 X
K07B53R	18.5	0.15	K134I	26.200	102.177	123.974	24.141	0.06544	1.92992	4 X
K07C05B	16.1	0.15	K134I	5.867	332.972	319.179	10.569	0.07702	2.67137	5 X
K07C65O	16.8	0.15	K134I	249.487	249.506	151.572	13.543	0.18017	2.58855	6 X
K07D32F	16.7	0.15	K134I	40.699	54.231	158.246	13.026	0.21092	2.97131	3 X
K07E75X	16.1	0.15	K134I	351.923	63.402	188.081	19.466	0.04490	3.05880	4 X
K07EK1N	15.1	0.15	K134I	28.173	99.744	125.960	26.519	0.22045	3.08931	4 X
K07EL9N	16.3	0.15	K134I	83.442	16.664	161.034	10.010	0.13949	2.99466	4 X
K07J12L	16.5	0.15	K134I	337.822	159.482	144.427	11.337	0.20274	3.13602	6 X
K07RF5F	18.7	0.15	K134I	335.452	288.464	332.190	1.244	0.17807	2.17491	6 X
K07VA9G	17.8	0.15	K134I	338.014	196.229	60.129	7.529	0.12225	2.35184	4 X
K07VL8Q	17.2	0.15	K134I	286.522	59.152	259.636	5.410	0.13895	2.31663	5 X
K07VM6C	18.2	0.15	K134I	319.292	81.049	206.502	1.383	0.13472	2.25950	6 X
K07VS5C	17.2	0.15	K134I	312.267	202.788	75.260	7.134	0.10690	2.37421	3 X
K08C14V	16.8	0.15	K134I	71.902	25.741	133.108	10.213	0.08786	2.63392	4 X
K08C72G	18.5	0.15	K134I	110.169	38.967	143.869	2.098	0.08536	2.39597	5 W
K08CG6R	16.8	0.15	K134I	93.119	153.479	253.483	8.473	0.19989	2.71124	4 W
K08D06V	16.7	0.15	K134I	51.294	37.305	139.547	14.171	0.12571	2.59915	5 X
K08E57N	15.7	0.15	K134I	240.658	221.777	160.010	14.755	0.19780	2.57779	4 X
K08F06Z	16.8	0.15	K134I	99.122	14.427	147.839	13.890	0.12833	2.60814	4 X
K08F73K	17.7	0.15	K134I	15.161	80.059	161.583	7.601	0.23238	2.73332	5 X
K08FD5Q	16.6	0.15	K134I	50.715	8.686	218.912	12.953	0.10780	2.62844	4 X
K08GB4X	17.7	0.15	K134I	13.484	69.598	177.824	9.685	0.18198	2.72979	4 X
K08J14P	19.3	0.15	K134I	311.508	206.323	129.118	10.714	0.61793	1.85475	3 X
K08J40F	16.3	0.15	K134I	121.565	305.917	220.395	13.668	0.03537	2.63292	5 X
K08K02E	16.7	0.15	K134I	330.027	96.012	217.266	12.354	0.21438	2.79841	5 X
K08K05Z	20.0	0.15	K134I	304.783	194.155	142.739	8.380	0.45274	1.83976	2 X
K08L13K	17.2	0.15	K134I	60.085	13.049	187.830	12.334	0.11843	2.73709	6 X
K08O22B	16.6	0.15	K134I	286.753	213.358	160.303	8.978	0.20260	3.05475	4 X

K08P10C	15.7	0.15	K134I	8.680	44.298	214.747	8.279	0.12946	3.05437	5 X
K08Q21A	17.9	0.15	K134I	161.724	47.836	280.293	5.751	0.24669	2.18361	2 X
K08R03S	15.7	0.15	K134I	246.380	216.071	183.664	10.590	0.07686	3.24942	5 X
K08SL4W	19.1	0.15	K134I	100.733	301.256	12.375	2.026	0.34932	2.41989	2 X
K08SM0A	16.3	0.15	K134I	333.567	140.346	198.596	11.006	0.14947	3.02777	3 X
K08SQ7F	16.0	0.15	K134I	333.618	79.371	216.169	22.645	0.33208	3.17978	3 X
K08SS4G	15.9	0.15	K134I	338.554	93.114	203.354	19.958	0.25651	3.14212	5 X
K08U10L	16.3	0.15	K134I	308.274	159.079	207.579	12.277	0.22563	3.06112	4 X
K08UV3R	17.8	0.15	K134I	285.327	105.836	233.329	19.363	0.11249	1.93894	4 X
K08V00N	16.7	0.15	K134I	323.527	277.198	59.989	12.917	0.64419	3.04920	3 X
K08X47E	17.7	0.15	K134I	242.628	137.167	287.198	21.860	0.09585	1.96926	2 X
K09B02L	19.4	0.15	K134I	359.252	55.916	148.686	7.161	0.59337	2.48982	2 X
K09C12T	17.5	0.15	K134I	342.136	105.988	148.099	9.109	0.18081	2.26815	6 X
K09D50W	17.8	0.15	K134I	343.840	71.574	185.123	1.333	0.15882	2.38019	4 X
K09F25T	17.4	0.15	K134I	15.633	121.072	98.476	3.911	0.07148	2.37586	6 X
K09F28N	19.3	0.15	K134I	337.589	52.321	175.125	31.149	0.25357	2.62887	2 W
K09F49D	16.9	0.15	K134I	7.571	97.626	133.319	21.907	0.25869	2.39947	3 X
K09H07R	17.8	0.15	K134I	347.624	116.243	160.700	6.884	0.11058	2.34445	6 X
K09L05T	16.5	0.15	K134I	321.759	156.317	124.566	16.388	0.14039	2.68983	3 X
K09M00S	16.0	0.15	K134I	251.414	219.511	252.110	52.411	0.56957	2.00526	4 X
K09M09S	10.3	0.15	K134I	0.009	128.680	220.261	68.000	0.96993	365.90759	3 X
K09O22K	16.4	0.15	K134I	306.105	179.561	149.312	18.286	0.29883	2.74597	3 X
K09P02U	16.6	0.15	K134I	1.071	40.876	231.957	11.298	0.24635	2.53533	6 X
K09R71H	15.8	0.15	K134I	31.230	0.143	204.457	25.456	0.09660	3.18937	4 X
K09SP7Q	16.8	0.15	K134I	310.779	47.906	312.804	12.840	0.18068	2.57315	4 X
K09SS8O	17.1	0.15	K134I	278.562	201.291	178.058	10.292	0.24111	2.73063	5 X
K09SX0Q	15.6	0.15	K134I	189.530	251.377	163.269	16.356	0.07516	3.04057	6 X
K09SY4V	17.4	0.15	K134I	349.501	107.878	185.677	12.455	0.26524	2.67284	5 X
K09UB3C	15.6	0.15	K134I	356.256	29.126	248.899	11.195	0.11713	2.92474	5 X
K09W18Q	16.8	0.15	K134I	324.701	200.365	138.843	2.840	0.07840	2.83022	7 X
K09W26A	16.1	0.15	K134I	217.349	213.247	213.922	8.557	0.08016	3.13660	5 X
K09WK0Q	16.5	0.15	K134I	294.103	117.747	238.229	9.543	0.11633	3.02617	3 X
K09Y07E	4.2	0.15	K134I	176.795	99.711	141.654	29.084	0.13801	44.54870	5 X
K10F92C	17.0	0.15	K134I	57.039	32.385	146.954	23.916	0.04723	1.93231	6 X
K10HA8Z	21.0	0.15	K134I	339.573	106.580	174.039	22.880	0.20843	1.24822	2 W
K10KC7K	20.7	0.15	K134I	293.065	157.603	182.572	6.943	0.42428	2.23045	2 W
K10L15E	19.5	0.15	K134I	11.295	328.595	134.310	13.259	0.27308	0.86484	3 X
K10R68C	18.2	0.15	K134I	348.554	36.147	240.712	4.206	0.25810	2.12334	4 X
K10R98K	17.6	0.15	K134I	353.254	62.301	204.078	8.753	0.12030	2.29741	5 X
K10RC6L	16.6	0.15	K134I	37.195	18.598	168.683	13.771	0.10379	2.64581	4 X
K10T19L	19.7	0.15	K134I	69.253	136.444	197.088	28.644	0.10410	1.73870	3 X
K10TF7D	17.9	0.15	K134I	312.016	245.643	47.528	2.367	0.24044	2.33649	3 X
K10U56W	15.5	0.15	K134I	150.317	189.001	251.551	8.824	0.09304	3.01673	5 X
K10V47S	16.3	0.15	K134I	278.513	67.788	253.497	11.040	0.06950	2.86377	4 X
K10V69U	16.9	0.15	K134I	45.186	315.861	241.388	6.219	0.02214	2.75972	5 X
K10V79O	16.7	0.15	K134I	269.013	278.125	54.566	6.675	0.06930	2.66472	6 X
K10VA4M	16.2	0.15	K134I	238.160	305.180	60.484	15.060	0.10838	2.68634	5 X
K10W22Z	15.7	0.15	K134I	358.662	168.600	66.281	17.618	0.14088	3.03798	5 X
K10W26S	16.4	0.15	K134I	246.597	316.600	51.708	5.047	0.20938	2.58844	6 X
K11A47Z	17.1	0.15	K134I	268.235	286.493	135.684	22.733	0.29167	2.29521	3 X
K11B02J	18.0	0.15	K134I	155.252	84.127	34.027	49.900	0.34724	1.29038	3 W
K11B15T	21.8	0.15	K134I	213.544	308.465	105.841	1.660	0.30370	1.29659	2 W
K11B75L	16.5	0.15	K134I	236.730	262.030	157.375	13.417	0.19603	2.80311	5 X
K11B86M	16.8	0.15	K134I	322.403	27.800	313.612	4.365	0.09512	2.66493	7 X
K11C06B	16.0	0.15	K134I	158.768	328.026	150.936	12.174	0.08634	3.11953	4 X
K11CA1U	16.5	0.15	K134I	235.834	227.926	180.595	8.968	0.08492	3.11416	6 X
K11E16P	16.4	0.15	K134I	240.683	249.501	165.328	11.575	0.16408	3.02897	7 X
K11P01T	20.3	0.15	K134I	280.206	358.197	354.866	13.068	0.31465	1.61252	2 W
K11Q03F	17.2	0.15	K134I	96.895	315.262	172.755	9.756	0.51170	2.05420	2 W
K11U63N	19.7	0.15	K134I	297.266	165.297	223.571	20.363	0.06459	1.52374	2 X
K11UV5E	16.8	0.15	K134I	74.318	279.795	218.775	22.667	0.21123	2.40361	6 X
K11V12O	17.9	0.15	K134I	208.756	158.962	258.462	14.807	0.08351	1.80198	4 X
K11W52M	17.4	0.15	K134I	22.029	144.273	57.152	5.161	0.10141	2.25776	6 X
K11W65F	18.2	0.15	K134I	242.124	126.951	257.294	20.078	0.06980	1.84200	4 X
K12A10U	18.0	0.15	K134I	252.601	307.426	125.263	39.120	0.31597	1.65790	2 W
K12B55G	17.1	0.15	K134I	40.935	109.875	133.498	10.658	0.10464	2.36077	4 X
K12B66Z	17.3	0.15	K134I	25.580	85.940	134.326	16.319	0.23135	2.73764	3 X
K12B85X	5.5	0.15	K134I	186.604	349.146	314.259	1.087	0.00240	42.91580	2 X
K12B90E	16.5	0.15	K134I	175.717	96.557	311.832	1.327	0.05149	2.77909	8 X
K12C29G	16.0	0.15	K134I	121.795	212.115	249.730	8.186	0.09457	2.85052	5 X
K12C42O	16.0	0.15	K134I	331.485	123.384	149.100	10.509	0.15438	3.04876	5 X
K12D05A	17.4	0.15	K134I	16.735	118.039	144.720	2.848	0.16662	2.44532	8 X
K12D60P	15.6	0.15	K134I	39.482	44.850	150.025	13.968	0.03746	3.18873	7 X
K12D68F	15.9	0.15	K134I	336.148	108.298	158.780	11.539	0.17644	3.04288	6 X
K12D86O	16.3	0.15	K134I	107.627	280.589	228.891	11.725	0.23673	2.70394	6 X
K12D90A	17.7	0.15	K134I	105.753	1.156	156.338	11.109	0.08250	2.40017	4 X
K12E04G	16.7	0.15	K134I	110.403	343.012	164.957	11.038	0.17413	2.76666	6 X
K12H04D	16.2	0.15	K134I	331.273	153.958	155.366	10.700	0.08878	3.00679	7 X
K12H26R	15.6	0.15	K134I	135.145	308.021	194.444	8.515	0.02936	3.11327	6 X
K12H49T	16.4	0.15	K134I	3.847	163.536	128.966	2.313	0.15333	3.10379	7 X
K12K28M	16.4	0.15	K134I	229.126	227.525	192.689	9.380	0.18918	2.57957	6 X
K12O04C	16.9	0.15	K134I	57.097	152.768	141.504	18.899	0.30600	2.68988	2 S
K12R03G	17.9	0.15	K134I	354.200	35.115	113.081	15.917	0.52831	1.57487	2 X
K12T78Q	19.5	0.15	K134I	20.611	118.953	51.985	11.384	0.38350	1.20123	2 W
K12V37F	21.0	0.15	K134I	20.283	58.602	82.599	4.910	0.65354	2.45869	2 W

K12V77B	15.9	0.15	K134I	36.966	118.651	266.996	23.790	0.34331	3.26860	2 S
K12V82N	19.9	0.15	K134I	356.779	331.154	228.697	9.708	0.50660	1.55105	2 W
K12V99H	16.4	0.15	K134I	0.072	282.965	175.824	24.560	0.36102	3.08551	2 S
K12X55H	19.0	0.15	K134I	16.819	77.428	107.950	28.505	0.70740	1.97292	2 W
K12XB2D	21.2	0.15	K134I	34.522	76.723	97.908	3.719	0.36568	1.32309	2 W
K13AE1N	18.6	0.15	K134I	276.095	338.907	260.483	17.894	0.04077	1.95844	2 S
K13AF3O	17.5	0.15	K134I	243.992	101.915	154.290	17.851	0.08354	3.14054	2 S
K13AH4L	17.0	0.15	K134I	154.208	176.155	157.746	17.006	0.12453	3.18506	2 S
K13AH4T	17.1	0.15	K134I	113.458	220.207	151.736	24.539	0.13497	2.58518	3 S
K13CC9T	15.8	0.15	K134I	332.517	151.402	121.385	28.096	0.16489	3.19658	5 W
K13EA5B	16.6	0.15	K134I	7.618	354.909	219.652	14.271	0.27065	2.57765	5 X
K13EC8A	16.4	0.15	K134I	359.406	300.202	266.350	6.336	0.24761	3.08893	5 X
K13F17Q	16.5	0.15	K134I	353.029	35.960	166.453	1.389	0.16200	3.08634	4 X
K13GA3U	16.0	0.15	K134I	355.285	170.492	33.534	10.062	0.05817	3.08331	7 X
K13GB0A	15.6	0.15	K134I	261.882	288.739	33.417	19.073	0.14447	3.04498	2 S
K13H00F	17.8	0.15	K134I	149.318	10.297	48.381	22.991	0.08691	1.96228	2 S
K13H27W	17.6	0.15	K134I	331.014	39.338	227.319	4.406	0.14788	2.35943	5 W
K13H40B	16.5	0.15	K134I	154.859	190.545	216.336	25.864	0.10768	3.17971	2 S
K13H44E	17.2	0.15	K134I	87.434	91.975	19.951	26.774	0.09316	3.09907	2 S
K13H48Z	16.5	0.15	K134I	262.728	104.985	216.941	17.385	0.13289	3.12516	2 S
K13H49J	19.4	0.15	K134I	213.125	338.755	24.420	20.823	0.10677	1.89278	2 S
K13H91X	17.1	0.15	K134I	144.960	203.273	203.227	32.972	0.19615	2.62214	2 S
K13H92F	17.2	0.15	K134I	72.921	256.200	207.575	18.735	0.23250	3.10221	2 S
K13HA8N	19.1	0.15	K134I	79.531	277.092	202.717	21.786	0.06716	1.94431	2 S
K13HB8C	17.0	0.15	K134I	75.327	71.454	34.418	15.845	0.23169	3.18272	2 S
K13HC0M	15.9	0.15	K134I	278.184	290.897	28.917	26.484	0.25709	3.18948	2 S
K13HC9P	17.1	0.15	K134I	133.954	48.652	19.806	17.408	0.12557	2.87695	2 S
K13J02W	17.3	0.15	K134I	21.550	79.054	94.406	28.178	0.38363	2.60126	2 X
K13J04G	15.4	0.15	K134I	209.905	315.172	74.606	10.249	0.08177	3.18293	7 W
K13J17F	18.7	0.15	K134I	128.218	30.675	54.122	21.928	0.06323	1.88045	2 S
K13J18F	15.8	0.15	K134I	332.831	69.673	214.250	17.313	0.25501	2.54835	4 W
K13J26P	15.8	0.15	K134I	105.646	49.009	49.594	18.206	0.19095	3.21878	2 S
K13J34Q	18.4	0.15	K134I	253.950	124.920	221.708	24.795	0.11702	1.89720	3 S
K13J36T	16.4	0.15	K134I	64.553	343.861	182.485	11.443	0.04470	3.03952	2 S
K13J43M	16.1	0.15	K134I	349.496	42.222	210.827	16.686	0.19844	3.13811	2 S
K13K06T	17.3	0.15	K134I	128.516	350.495	114.765	26.014	0.05640	2.01462	2 S
K13K08G	16.4	0.15	K134I	74.170	336.103	179.842	22.101	0.09582	2.65511	3 S
K13K08J	16.8	0.15	K134I	355.663	136.220	102.341	25.183	0.20001	2.33562	2 S
K13K12F	16.2	0.15	K134I	342.905	180.103	81.586	34.449	0.29412	3.12891	2 S
K13K13G	17.6	0.15	K134I	359.213	42.680	192.583	16.811	0.27693	2.62050	2 S
K13K13V	17.4	0.15	K134I	294.667	182.586	115.905	24.414	0.03698	1.95425	2 S
K13K17R	16.4	0.15	K134I	17.361	35.559	179.833	13.529	0.10852	2.64329	2 S
K13L00D	18.0	0.15	K134I	104.579	252.634	227.479	20.272	0.09138	1.97452	2 S
K13L01W	18.3	0.15	K134I	344.598	337.849	260.145	16.402	0.19349	1.61414	2 S
K13L03K	17.1	0.15	K134I	1.335	40.018	195.607	17.471	0.20593	3.18296	2 S
K13L07A	15.2	0.15	K134I	315.018	181.329	109.473	19.254	0.13905	3.17611	2 S
K13L07B	15.9	0.15	K134I	298.088	215.078	84.932	28.753	0.05997	2.57865	2 S
K13L09H	15.9	0.15	K134I	4.187	75.060	158.166	27.143	0.15274	3.09696	2 S
K13L11R	15.5	0.15	K134I	209.836	252.570	143.119	16.864	0.06418	3.48576	2 S
K13L12F	15.5	0.15	K134I	339.011	147.406	114.030	22.745	0.06488	3.05255	2 S
K13L14S	17.6	0.15	K134I	294.747	357.534	322.763	1.546	0.22371	2.45934	2 S
K13L15G	17.9	0.15	K134I	291.372	161.530	166.382	8.794	0.18432	2.31803	3 S
K13L15Z	15.4	0.15	K134I	325.925	16.761	298.225	19.074	0.26226	2.48236	2 S
K13L20Y	16.3	0.15	K134I	266.346	111.755	249.417	10.856	0.30645	2.52991	2 S
K13L21D	15.7	0.15	K134I	29.583	349.671	206.841	17.437	0.22138	3.09867	2 S
K13L24E	17.1	0.15	K134I	33.020	53.352	138.816	8.420	0.14929	2.90973	2 S
K13L24X	18.4	0.15	K134I	151.095	355.191	84.337	24.265	0.07349	1.87648	2 S
K13L29C	18.3	0.15	K134I	352.292	144.382	100.555	24.642	0.04271	1.92397	2 S

New perturbed one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc	C
K12UD8R	21.3	0.15	K134I	93.628	48.847	256.060	7.783	0.54125	1.96885	52	X
K13A53D	23.4	0.15	K134I	81.519	110.832	294.645	13.747	0.35156	1.54067	23	X
K13B18C	19.0	0.15	K134I	5.799	262.181	286.300	24.817	0.77005	2.75414	146	W
K13G79Z	19.9	0.15	K134I	336.210	102.805	155.643	15.986	0.29064	1.67323	77	X
K13H53R	19.1	0.15	K134I	348.910	6.833	209.943	21.138	0.06475	1.84014	21	S
K13J22Q	20.2	0.15	K134I	15.645	324.490	189.711	12.779	0.54146	1.70337	33	X
K13K01Z	21.5	0.15	K134I	301.691	104.657	236.116	29.173	0.50625	1.56173	31	X
K13K02B	24.1	0.15	K134I	346.745	355.307	229.824	3.405	0.20976	1.33202	26	X
K13K02C	17.5	0.15	K134I	8.387	110.220	98.250	30.105	0.31146	2.60423	96	X
K13K06H	23.5	0.15	K134I	115.419	195.582	246.352	15.563	0.16075	0.92274	12	X
K13K06J	19.9	0.15	K134I	90.447	235.636	212.290	20.400	0.24379	0.82382	19	X
K13K06L	24.2	0.15	K134I	330.390	222.854	81.484	7.167	0.53578	2.10486	15	X
K13K06N	18.5	0.15	K134I	10.495	232.307	229.656	23.610	0.85060	1.46573	20	X
K13L00B	22.8	0.15	K134I	47.571	109.251	17.306	2.171	0.34283	1.11703	17	X
K13L01B	17.5	0.15	K134I	10.354	313.154	262.687	31.754	0.52318	2.60455	15	X
K13L02A	16.9	0.15	K134I	6.357	324.202	241.061	175.127	0.51731	6.26744	16	X
K13L02D	24.8	0.15	K134I	340.321	199.203	61.543	1.728	0.47409	1.95376	13	X
K13L16G	19.3	0.15	K134I	141.666	209.472	232.795	11.115	0.40650	1.59995	10	X
K13L16H	18.8	0.15	K134I	331.298	201.255	164.533	8.584	0.77902	2.98477	11	X
K13L28V	18.5	0.15	K134I	23.814	24.132	139.058	24.251	0.68952	1.48274	7	X
K13L28Z	22.4	0.15	K134I	358.824	61.008	122.462	10.030	0.62979	2.09961	4	W
K13L31K	19.2	0.15	K134I	321.307	173.016	207.740	14.883	0.78089	2.19714	3	S
K13L31L	20.2	0.15	K134I	87.893	275.642	207.724	17.733	0.14708	1.37724	2	X
K13L31M	20.1	0.15	K134I	322.018	251.339	103.088	1.778	0.66362	2.33265	2	X

K13L31N 20.1 0.15 K134I 324.224 278.597 101.080 23.083 0.79943 2.22650 3 X

## New one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc	C
K02TH8G	17.1	0.15	K02AD	15.223	144.832	210.483	4.521	0.23927	2.60380	48	W
K02U79Q	17.0	0.15	K02AD	330.301	51.596	17.414	7.256	0.19972	2.67454	49	X
K02U79R	18.1	0.15	K02AD	339.982	329.702	84.871	2.147	0.17200	2.37074	30	W
K02W31X	18.6	0.15	K02AD	340.984	13.216	29.377	22.023	0.08836	1.91212	44	W
K03Q31F	17.1	0.15	K038T	27.640	322.569	331.526	16.424	0.24071	2.96375	35	DW
K07G32J	17.5	0.15	K074A	327.966	57.966	175.735	19.162	0.07099	1.88929	9	ES
K10C02G	16.1	0.15	K101O	28.614	123.513	322.748	27.523	0.25121	2.62997	32	S
K10CK7D	16.9	0.15	K1014	207.736	321.085	257.518	21.934	0.04705	2.82504	31	S
K10P65P	17.2	0.15	K1073	1.653	24.231	281.864	18.145	0.06459	1.87472	67	S
K10W19W	16.1	0.15	K10BK	93.548	230.580	69.792	16.332	0.32009	2.75450	11	ES
K10X88N	16.6	0.15	K10CA	113.405	13.502	265.031	23.775	0.16646	2.27403	83	S
K11BG1S	16.9	0.15	K10CU	285.262	82.336	121.448	15.902	0.09486	2.85304	56	S
K11UE6J	16.8	0.15	K11AQ	24.510	333.282	54.388	19.567	0.12779	3.14576	22	S
K11W39Y	17.1	0.15	K11BF	14.144	311.748	65.373	27.810	0.18942	3.18757	25	S
K11WB4C	18.0	0.15	K11C5	355.362	353.388	76.355	21.726	0.08263	1.89676	39	S
K11WC0O	17.4	0.15	K11AQ	26.399	275.111	83.745	21.796	0.26009	2.39223	26	S
K11Y45X	15.6	0.15	K121E	285.679	269.957	306.731	24.202	0.22102	3.11214	35	S
K12D14S	17.4	0.15	K1223	328.733	178.519	5.428	24.803	0.20055	2.33154	23	S
K12F44G	19.3	0.15	K123E	61.529	287.239	186.590	21.824	0.08149	1.85632	42	S
K12H06Y	18.2	0.15	K1243	27.567	111.397	31.570	19.808	0.33678	2.24956	42	S
K12TM7V	18.5	0.15	K12AK	18.958	330.584	23.621	18.196	0.22957	2.59823	27	S
K12TS3J	17.1	0.15	K129U	24.560	335.322	350.315	19.346	0.28901	3.06223	23	S
K12U50B	15.6	0.15	K12AK	293.212	74.782	48.464	23.180	0.17083	3.21378	27	S
K12UC2B	16.8	0.15	K12B9	45.670	103.347	240.563	24.590	0.22087	3.19928	51	S
K12UG7S	18.5	0.15	K12B9	332.229	196.348	235.717	21.303	0.03966	1.87506	64	S
K12V38K	16.2	0.15	K12AK	2.378	262.332	122.075	25.965	0.33582	3.18318	88	S
K12V38P	17.0	0.15	K12BT	7.685	322.412	73.173	31.442	0.26257	2.63070	93	S
K12V81T	19.6	0.15	K12B9	344.246	9.342	60.607	21.766	0.04691	1.80183	31	S
K12V97P	17.8	0.15	K12B9	57.296	303.527	47.130	22.675	0.11802	1.90341	12	S
K12VA8Q	15.8	0.15	K12B9	354.729	17.369	46.050	19.073	0.08457	3.11860	23	S
K12W03T	18.0	0.15	K12BT	290.097	244.355	254.420	18.182	0.08165	1.91807	58	S
K12W35N	18.2	0.15	K12BT	56.339	286.671	84.014	24.624	0.06972	1.87570	41	S
K12X17A	17.1	0.15	K1318	24.060	182.510	234.739	28.048	0.23941	2.39772	69	S
K12X84J	16.5	0.15	K12CJ	6.270	320.461	111.216	19.141	0.17041	3.18868	32	S
K12XB1X	18.0	0.15	K12BT	21.458	131.817	259.751	28.442	0.38257	2.55092	39	S
K12XB6B	18.0	0.15	K12B9	353.099	186.505	272.351	19.156	0.04111	1.97079	106	S
K13A23L	13.7	0.15	K131S	335.776	203.498	320.085	19.914	0.04864	5.15347	57	S
K13A49A	17.3	0.15	K12CJ	3.323	197.319	268.974	19.779	0.16411	3.11263	28	S
K13A70H	18.7	0.15	K1318	63.356	281.430	124.466	24.052	0.10980	1.96152	35	S
K13A75V	13.7	0.15	K1318	216.693	153.993	121.586	22.377	0.01807	5.08519	19	ES
K13AE1E	19.1	0.15	K12BT	222.480	338.700	265.437	18.983	0.07687	1.81784	79	S
K13AE2W	19.5	0.15	K12B9	118.663	53.978	267.864	25.675	0.25948	1.86345	104	S
K13AE3J	18.1	0.15	K1318	19.756	282.840	162.383	18.396	0.21539	3.08741	16	S
K13AE3Y	18.7	0.15	K1318	273.182	77.071	135.776	25.831	0.11172	1.92864	37	S
K13AE3Z	16.7	0.15	K1318	63.504	228.597	165.064	18.061	0.17834	3.17746	16	S
K13AE8V	17.2	0.15	K1318	262.765	91.373	141.005	20.416	0.20303	3.13921	12	S
K13AE9K	17.3	0.15	K1318	67.532	240.954	132.076	26.513	0.27896	3.07037	37	S
K13AF0B	16.9	0.15	K1318	226.567	115.756	147.628	16.600	0.21401	3.09649	12	S
K13AF0P	17.6	0.15	K12CJ	9.613	195.139	267.190	17.121	0.04794	3.08771	26	S
K13AF2F	19.3	0.15	K12CJ	324.809	250.609	277.039	25.497	0.26673	2.59678	26	S
K13AF3W	18.2	0.15	K132H	239.161	118.357	141.514	21.845	0.17855	2.28114	100	S
K13AF9U	17.7	0.15	K1318	272.615	96.056	133.676	26.331	0.23444	3.09966	37	S
K13AG1Z	17.5	0.15	K1318	111.667	86.691	271.997	20.999	0.09748	3.04525	17	S
K13AG3K	17.9	0.15	K1318	96.485	218.740	144.270	22.311	0.15800	3.06288	16	S
K13AG6F	17.8	0.15	K1318	239.075	114.524	136.668	27.576	0.14524	2.58784	37	S
K13AG7A	17.3	0.15	K1318	292.545	88.764	136.538	25.281	0.34734	3.17361	37	S
K13AG8D	16.9	0.15	K12BT	21.019	159.411	284.404	27.200	0.14111	3.12371	69	S
K13AH8Z	18.8	0.15	K1318	22.630	281.682	133.168	24.247	0.44161	3.11760	11	S
K13AI2P	13.8	0.15	K131S	109.583	87.320	255.564	23.844	0.38199	4.81568	84	S
K13C84K	18.1	0.15	K132H	142.167	32.745	345.040	19.013	0.02166	2.01186	57	S
K13C99X	17.4	0.15	K132H	49.229	274.781	155.831	29.020	0.28232	2.59695	24	S
K13CA0K	14.0	0.15	K131S	95.870	75.137	323.423	17.928	0.09355	5.13515	54	S
K13CB4C	18.1	0.15	K132H	23.381	315.940	158.243	17.913	0.22816	2.58107	31	S
K13CC7X	17.9	0.15	K131S	110.920	236.702	139.731	24.106	0.08753	1.95770	11	S
K13E23K	18.2	0.15	K1339	135.364	23.850	6.980	19.377	0.10316	1.94016	46	S
K13E24O	18.7	0.15	K1339	58.712	106.265	359.640	19.345	0.07487	1.93887	44	S
K13E67B	17.2	0.15	K1339	337.492	131.006	88.462	28.269	0.30059	3.09639	30	S
K13E89U	16.2	0.15	K133T	26.197	35.351	142.898	27.865	0.26069	2.57789	148	S
K13EA9Y	15.9	0.15	K1339	16.218	345.092	177.784	26.929	0.12108	3.20082	23	S
K13EB4V	18.6	0.15	K1339	15.770	341.023	177.074	21.773	0.04831	1.92899	43	S
K13G34T	17.3	0.15	K134I	343.098	21.766	202.029	28.448	0.12069	3.12619	27	S
K13G45G	16.8	0.15	K133T	322.000	217.929	23.501	15.920	0.02138	3.10469	19	S
K13GB2J	17.6	0.15	K1358	347.072	355.227	250.213	3.624	0.21471	2.54365	66	X
K13GC5N	16.3	0.15	K1358	335.117	191.712	66.415	18.536	0.12069	3.11082	59	S
K13GD3J	18.2	0.15	K1339	71.843	93.021	8.384	20.488	0.10590	1.98370	26	S
K13H10Y	16.3	0.15	K1358	345.510	120.089	130.385	22.670	0.18326	3.16227	44	S
K13H20B	16.3	0.15	K1358	139.114	292.265	149.440	25.405	0.13643	2.77657	42	S
K13H21B	18.1	0.15	K133T	302.198	146.717	103.638	23.867	0.07620	1.95098	16	S
K13H24C	16.0	0.15	K1339	313.528	111.033	165.031	17.807	0.21877	3.10029	116	S
K13H30Q	17.8	0.15	K132H	340.758	202.612	13.817	23.861	0.14037	3.06109	117	S
K13H31O	20.0	0.15	K133T	141.824	42.480	13.206	21.656	0.02895	1.91880	10	S

K13H31Q	17.3	0.15	K133T	24.971	154.508	13.793	29.055	0.15303	3.20971	10 S
K13H31X	16.8	0.15	K134I	316.054	253.796	7.398	18.149	0.12720	3.18579	25 S
K13H32L	19.2	0.15	K133T	17.068	169.775	6.522	16.094	0.14365	2.85376	29 S
K13H33O	16.3	0.15	K133T	190.741	11.811	5.280	19.853	0.17548	3.20669	10 S
K13H37N	17.9	0.15	K133T	232.510	335.556	16.586	26.955	0.29636	2.22720	10 S
K13H42S	16.1	0.15	K1358	343.086	11.609	219.482	22.227	0.05876	3.08551	58 S
K13H45W	17.3	0.15	K134I	323.737	248.137	20.186	21.618	0.25697	3.07552	18 S
K13H52L	17.2	0.15	K133T	45.174	136.294	7.629	17.152	0.11858	3.08949	9 S
K13H52P	19.5	0.15	K134I	358.200	353.821	212.111	20.860	0.03292	1.92585	21 S
K13H53Y	18.5	0.15	K133T	2.989	340.834	212.560	17.490	0.17386	3.14673	9 S
K13H55T	17.6	0.15	K133T	48.387	125.669	15.238	15.720	0.10787	2.77941	35 S
K13H58W	17.0	0.15	K133T	335.224	214.584	17.123	26.170	0.11293	2.78117	14 S
K13H60O	17.8	0.15	K133T	328.078	230.562	15.869	17.297	0.19171	3.17353	9 S
K13H60Z	18.7	0.15	K132H	174.106	352.591	19.229	19.868	0.04004	2.00311	118 S
K13H63W	16.4	0.15	K133T	220.106	336.799	19.370	18.100	0.21043	3.12371	15 S
K13H64O	21.4	0.15	K133T	20.276	140.901	21.946	17.243	0.21734	1.76393	5 S
K13H65K	17.7	0.15	K133T	26.605	315.345	212.084	26.121	0.12110	3.12844	10 S
K13H67R	17.0	0.15	K133T	261.691	300.321	16.365	17.153	0.13018	3.18302	10 S
K13H68L	19.9	0.15	K133T	247.321	102.865	212.670	20.888	0.03419	1.82605	10 S
K13H69L	20.3	0.15	K133T	269.530	272.106	23.270	20.262	0.04843	1.88264	9 S
K13H70S	21.3	0.15	K133T	51.827	116.495	24.390	21.877	0.06230	1.78187	9 S
K13H76A	17.3	0.15	K134I	319.720	255.406	23.018	25.591	0.29648	3.16523	25 S
K13H77S	17.2	0.15	K134I	280.283	298.178	26.161	30.914	0.32144	2.59767	18 S
K13H81F	18.2	0.15	K134I	355.776	6.351	209.388	17.072	0.18947	2.71755	29 S
K13H85M	18.6	0.15	K133T	78.047	87.289	17.131	16.411	0.13635	2.49213	10 S
K13H87O	19.5	0.15	K133T	52.353	112.799	22.795	20.438	0.08640	1.97476	18 S
K13H88P	18.2	0.15	K133T	104.265	246.691	203.487	20.904	0.04162	2.62596	10 S
K13H89T	20.9	0.15	K133T	20.287	152.225	22.116	20.652	0.04966	1.95964	9 S
K13H93K	20.3	0.15	K134I	276.795	87.102	207.008	20.221	0.04915	1.90674	18 S
K13H93Y	20.0	0.15	K133T	79.657	86.049	22.791	21.772	0.07532	1.88065	11 S
K13H97E	17.6	0.15	K133T	292.340	269.772	25.763	25.586	0.23314	3.18118	8 S
K13H99R	18.6	0.15	K133T	243.050	124.373	205.686	22.109	0.14955	2.31592	9 S
K13HA1C	20.8	0.15	K133T	55.163	108.817	22.706	22.516	0.11183	1.95905	8 S
K13HA1F	16.2	0.15	K133T	231.077	320.931	25.487	28.601	0.21333	3.19208	11 S
K13HA3U	20.4	0.15	K133T	47.701	119.050	25.172	22.551	0.08286	2.02223	9 S
K13HA6L	17.8	0.15	K133T	309.240	257.762	26.711	25.109	0.29396	3.15002	9 S
K13HA7Z	18.0	0.15	K133T	326.530	211.537	31.194	16.149	0.10343	3.18104	8 S
K13HA9N	19.0	0.15	K134I	35.360	126.415	26.246	14.280	0.22058	2.95886	32 S
K13HB4G	17.0	0.15	K133T	78.261	80.929	27.745	26.723	0.15283	3.13490	9 S
K13HB4T	17.7	0.15	K133T	166.062	190.172	206.760	28.782	0.08912	3.13317	4 S
K13HB6X	19.1	0.15	K134I	303.966	70.040	204.233	17.076	0.10208	2.62057	17 S
K13HB9S	17.0	0.15	K133T	56.876	93.667	32.992	26.142	0.19401	3.23609	88 S
K13HC1Z	16.8	0.15	K133T	41.209	289.514	206.402	25.108	0.28245	3.22105	47 S
K13HD5W	18.4	0.15	K133T	160.545	16.228	27.054	22.924	0.04672	2.58373	10 S
K13HD6O	17.3	0.15	K132H	330.451	212.597	17.719	26.188	0.15313	3.31798	118 S
K13HD7Y	18.1	0.15	K133T	217.389	333.268	21.056	26.319	0.20692	2.35685	10 S
K13HD8Z	19.0	0.15	K133T	236.575	311.245	25.491	19.866	0.15732	2.22484	9 S
K13HD9K	20.2	0.15	K134I	331.267	29.328	206.805	21.448	0.03086	1.89850	12 S
K13HE0Y	19.4	0.15	K133T	223.061	320.989	28.046	28.637	0.15016	2.01733	9 S
K13HE1S	17.4	0.15	K134I	157.348	201.299	207.454	21.492	0.05472	2.66312	24 S
K13HE2U	16.7	0.15	K134I	67.449	91.211	35.986	17.661	0.12526	3.13448	23 S
K13J04L	16.6	0.15	K1358	319.303	230.249	66.363	8.693	0.20382	2.78629	56 X
K13J04N	18.8	0.15	K1358	159.651	192.638	228.050	20.284	0.09046	1.90568	52 S
K13J21L	15.7	0.15	K135S	271.858	205.146	138.024	11.129	0.11378	3.01554	37 S
K13J25F	17.4	0.15	K135S	4.366	105.266	129.168	22.882	0.18949	2.27320	34 S
K13J28B	15.7	0.15	K1358	335.774	189.859	84.257	17.964	0.23519	3.16544	63 S
K13J32Z	16.2	0.15	K1358	4.224	78.871	152.355	26.621	0.19697	3.13708	28 S
K13J34P	18.7	0.15	K1358	124.788	243.194	217.520	21.083	0.08364	1.87794	26 S
K13J63L	15.6	0.15	K1358	314.582	184.165	102.034	19.287	0.19092	3.11038	66 S
K13K01U	16.8	0.15	K135S	339.887	116.544	234.637	10.145	0.40585	2.76194	32 W
K13K02Z	18.3	0.15	K135S	307.147	205.177	96.227	25.812	0.06144	1.93024	31 X
K13K03R	15.4	0.15	K133T	284.542	224.295	109.850	18.516	0.23290	3.16268	106 S
K13K06R	17.5	0.15	K135S	356.176	70.577	191.132	16.105	0.40778	3.30310	26 S
K13K07G	17.2	0.15	K133T	299.255	229.918	84.152	23.125	0.23297	2.33829	121 S
K13K07N	15.8	0.15	K1358	300.584	245.866	60.547	17.618	0.19607	3.05294	49 S
K13K07O	15.5	0.15	K1358	257.189	294.584	46.143	17.169	0.10226	3.14215	48 S
K13K08H	15.7	0.15	K1358	359.588	123.078	118.823	23.273	0.17004	3.07888	68 X
K13K09M	16.7	0.15	K135S	334.658	94.637	205.781	23.812	0.36691	3.16952	17 W
K13K11N	16.9	0.15	K1358	7.516	146.704	83.629	25.604	0.16629	2.38516	43 S
K13K12L	17.0	0.15	K135S	324.866	142.814	152.793	17.341	0.17581	2.64194	35 X
K13K13X	16.1	0.15	K133T	275.565	220.344	115.933	14.394	0.19577	2.54439	123 S
K13K16Z	17.8	0.15	K135S	24.415	145.226	62.406	6.442	0.19562	2.52475	32 X
K13L00Y	18.3	0.15	K133T	346.266	142.307	97.637	24.232	0.12202	1.88288	113 S
K13L02J	17.2	0.15	K135S	344.558	145.893	123.363	20.122	0.20462	2.65771	39 X
K13L03G	16.9	0.15	K135S	329.459	164.837	118.334	22.529	0.08811	3.11830	16 X
K13L03T	15.8	0.15	K135S	233.927	230.530	150.435	21.938	0.05983	2.70134	16 X
K13L06X	17.2	0.15	K135S	349.380	140.438	121.384	33.185	0.25290	2.61389	9 S
K13L06Y	18.6	0.15	K135S	248.980	278.186	92.631	24.394	0.10690	1.87343	11 X
K13L09F	18.8	0.15	K135S	107.360	238.453	249.433	19.861	0.06333	1.81029	13 S
K13L11U	16.9	0.15	K135S	283.863	185.354	150.677	9.008	0.08558	2.75427	33 S
K13L12D	15.4	0.15	K133T	301.423	219.258	97.928	18.201	0.23439	3.16361	119 S
K13L15F	17.0	0.15	K135S	31.668	25.312	190.617	11.185	0.05831	2.65878	32 S
K13L15X	17.9	0.15	K1358	270.616	254.074	86.187	23.725	0.09334	1.93867	48 S
K13L21W	17.8	0.15	K135S	350.813	100.182	157.473	7.966	0.17878	2.45683	41 S
K13L21Y	16.9	0.15	K1358	4.805	346.021	235.837	18.996	0.24248	3.06446	49 S

K13L21Z	16.2	0.15	K1358	45.367	107.032	73.519	18.888	0.11702	3.18829	30	S
K13L22Q	18.1	0.15	K135S	339.567	38.748	234.403	4.496	0.10506	2.39521	12	W
K13L24C	16.2	0.15	K135S	310.692	157.075	145.086	10.438	0.10029	3.09717	14	X
K13L25A	16.2	0.15	K135S	257.239	139.930	235.786	31.173	0.17611	2.62132	10	W
K13L25E	17.3	0.15	K134I	3.426	73.736	125.111	29.590	0.32847	2.59753	83	S
K13L25N	15.6	0.15	K1358	246.645	115.180	238.847	20.628	0.04343	3.10209	60	W
K13L25W	17.3	0.15	K135S	353.378	83.765	177.487	21.499	0.30726	3.07745	37	S
K13L26E	16.7	0.15	K135S	74.307	73.418	90.286	6.990	0.12960	2.57761	8	W
K13L27Y	17.1	0.15	K135S	9.102	92.500	139.510	25.659	0.17911	2.53554	27	S
K13L28M	16.9	0.15	K135S	357.650	10.674	235.687	8.415	0.14415	2.76312	6	W
K13L28N	16.8	0.15	K135S	328.452	52.598	236.685	8.008	0.19270	2.70242	6	W
K13L29E	18.8	0.15	K135S	330.569	83.043	260.249	26.186	0.48237	2.56293	3	W
K13L29F	18.3	0.15	K135S	332.767	233.914	89.465	8.119	0.32287	2.22791	4	X
K13L29J	17.2	0.15	K1358	232.544	246.242	128.335	24.241	0.12157	1.98769	54	X
K13L29Q	17.2	0.15	K135S	38.960	22.773	172.903	15.157	0.15488	2.54618	8	X
K13L29U	17.7	0.15	K135S	342.973	127.522	143.187	13.520	0.17615	2.60489	8	X
K13L30A	17.6	0.15	K135S	339.283	91.106	197.552	16.527	0.31284	2.59094	7	X
K13L30Z	16.3	0.15	K135S	303.305	93.801	289.511	27.679	0.10067	1.78344	3	W
K13L31A	16.1	0.15	K135S	300.347	141.643	210.712	9.382	0.36532	2.65670	2	X
K13L31B	17.9	0.15	K135S	286.996	180.868	144.424	24.208	0.05503	1.85921	2	X
K13L31C	16.9	0.15	K135S	341.008	120.728	147.798	29.959	0.18054	2.45021	2	X
K13L31D	17.1	0.15	K135S	254.895	247.598	132.408	25.625	0.18221	2.05404	2	X
K13L31E	17.3	0.15	K135S	344.476	162.149	157.904	18.031	0.34341	2.74261	2	EX
K13L31F	16.0	0.15	K135S	151.771	237.083	265.697	24.561	0.17487	2.34740	2	EX
K13L31G	17.7	0.15	K135S	322.253	72.487	273.091	16.068	0.07019	1.81894	2	EX
K13L31H	18.3	0.15	K135S	41.686	91.952	141.801	29.191	0.22648	2.02012	2	EX
K13L31J	17.9	0.15	K135S	106.487	258.343	250.091	26.262	0.11008	1.89625	2	W
K13M00A	18.1	0.15	K135S	220.562	230.021	159.365	23.832	0.08470	1.85646	8	S
K13M00B	18.0	0.15	K136H	240.412	212.801	182.560	22.397	0.09979	1.92511	1	EX
K13M00C	18.2	0.15	K136H	169.396	285.336	167.385	21.943	0.13005	1.87715	1	EX
K13M00D	17.7	0.15	K136H	67.665	268.966	239.807	23.571	0.35776	2.11287	1	EX
K13M00E	17.6	0.15	K135S	270.006	226.014	139.339	10.749	0.27990	2.30430	18	X
K13M00F	19.6	0.15	K135S	350.806	51.658	220.307	23.245	0.33047	2.18311	6	ES

## New observations:

K02L24T	C2013	06	17.52131	19	57	51.665-09	28	05.06	17.9	wLEM018F51	
K02L24T	C2013	06	17.53535	19	57	39.977-09	28	14.57	17.9	wLEM018F51	
K02L24T	C2013	06	17.56347	19	57	16.532-09	28	33.67	18.0	wLEM018F51	
K02N16V	C2013	06	17.87577217	22	54	36	-02	28	16.1	19.0	VqEM018K91
K02N16V	C2013	06	17.87694117	22	54	20	-02	28	14.7	19.1	VqEM018K91
K02N16V	C2013	06	17.87809217	22	54	05	-02	28	13.3	19.1	VqEM018K91
K02N16V	C2013	06	17.87939717	22	53	90	-02	28	12.1	19.2	VqEM018K91
K02N16V	C2013	06	17.88056817	22	53	75	-02	28	10.7	19.1	VqEM018K91
K02N16V	C2013	06	17.88278317	22	53	45	-02	28	08.2	19.2	VqEM018K91
K02N16V	C2013	06	17.88441017	22	53	23	-02	28	06.4	19.2	VqEM018K91
K02N16V	C2013	06	17.88602317	22	53	02	-02	28	04.6	19.1	VqEM018K91
K02N16V	C2013	06	17.88779417	22	52	79	-02	28	02.6	19.3	VqEM018K91
K02N16V	C2013	06	17.88942317	22	52	57	-02	28	00.7	19.1	VqEM018K91
K02N16V	C2013	06	17.89105817	22	52	37	-02	27	58.9	19.1	VqEM018K91
K08J14P	KC2013	06	12.91156	12	59	08.75	+21	14	50.7	19.5	RtEM018204
K08J14P	KC2013	06	12.92531	12	59	07.14	+21	14	48.6		tEM018204
K08J14P	KC2013	06	12.93937	12	59	05.50	+21	14	46.7		tEM018204
K08K05Z	KC2013	06	13.01365	16	29	05.69	+06	36	33.1	19.4	RtEM018204
K08K05Z	KC2013	06	13.02325	16	29	04.75	+06	36	38.3		tEM018204
K08K05Z	KC2013	06	18.00500	16	21	22.36	+07	13	48.6	18.7	RoEM018B67
K08K05Z	KC2013	06	18.01244	16	21	21.64	+07	13	51.2	18.5	RoEM018B67
K08K05Z	KC2013	06	18.01989	16	21	20.88	+07	13	53.7	18.6	RoEM018B67
K08V00N	KC2013	06	12.95264	14	20	00.56	-13	14	30.1	19.2	RtEM018204
K08V00N	IC2013	06	12.96362	14	19	59.86	-13	14	31.7		tEM018204
K08V00N	KC2013	06	12.97365	14	19	59.21	-13	14	34.1		tEM018204
K09B02L	KC2013	06	17.90381	17	30	38.70	+08	02	49.3	18.3	VqEM018A13
K09B02L	KC2013	06	17.90694	17	30	38.79	+08	02	39.7	18.1	VqEM018A13
K09B02L	KC2013	06	17.93201	17	30	39.63	+08	01	23.0	18.2	VqEM018A13
K09F28N	KC2013	05	14.17858	08	50	30.67	+16	04	46.7	21.6	RoEM018291
K09F28N	KC2013	05	14.19580	08	50	32.95	+16	05	01.3	21.4	RoEM018291
K09F28N	KC2013	05	14.21311	08	50	35.24	+16	05	15.7	21.6	RoEM018291
K09M00S	KC2013	06	17.41351	21	50	13.01	+48	58	44.5	21.1	RoEM018291
K09M00S	KC2013	06	17.41683	21	50	13.03	+48	58	49.0	19.3	RoEM018291
K09M00S	KC2013	06	17.42014	21	50	13.03	+48	58	53.5	21.0	RoEM018291
K10HA8Z	^C2013	06	09.45312	00	30	41.90	+24	06	10.4		oEM018695
K10HA8Z	^C2013	06	09.45825	00	30	43.08	+24	06	11.5		oEM018695
K10HA8Z	^C2013	06	09.46338	00	30	44.19	+24	06	11.6		oEM018695
K10L15E	KC2013	06	18.17246	10	09	33.63	+27	28	38.3	20.2	RoEM018291
K10L15E	KC2013	06	18.17545	10	09	34.71	+27	28	34.6	20.6	RoEM018291
K10L15E	KC2013	06	18.17845	10	09	35.73	+27	28	30.5	20.4	RoEM018291
K11B02J	KC2013	05	08.74286	00	44	34.70	-52	32	15.5	19.8	RoEM018474
K11B02J	KC2013	05	08.74989	00	44	36.23	-52	32	15.5	20.9	RoEM018474
K11B02J	KC2013	05	08.75693	00	44	37.75	-52	32	13.0	21.3	RoEM018474
K11B15T	C2011	01	26.24905	02	03	12.041+13	05	28.74	22.4	wLEM018F51	
K11B15T	C2011	01	26.26018	02	03	16.634+13	05	58.57	22.1	wLEM018F51	
K11B15T	C2011	01	26.27342	02	03	22.104+13	06	34.33	22.4	wLEM018F51	
K12R03G	C2013	06	17.16885	10	43	07.93	+29	30	15.8	19.3	VuEM018G96
K12R03G	C2013	06	17.17363	10	43	09.76	+29	30	05.4	19.1	VuEM018G96
K12R03G	C2013	06	17.17841	10	43	11.64	+29	29	54.8	19.1	VuEM018G96
K12R03G	C2013	06	17.18326	10	43	13.62	+29	29	43.5	19.6	VuEM018G96



K12UD8R	2C2012	12	14.27363502	01	44.555+16	59	06.46	23.2	RtEM018568
K12UD8R	2C2012	12	14.28086602	01	44.793+16	59	03.86	23.5	RtEM018568
K12UD8R	2C2012	12	14.28906702	01	45.061+16	59	01.30	24.1	RtEM018568
K12V82N	KC2013	06	11.13707123	20	24.78	+29	24 59.0	19.9	VqEM018Z81
K12V82N	KC2013	06	11.15586523	20	18.52	+29	24 57.1	20.2	VqEM018Z81
K12V82N	C2013	06	11.41315	23	18	55.98	+29 24 09.0	19.8	VuEM018G96
K12V82N	C2013	06	11.41806	23	18	54.36	+29 24 08.5	19.7	VuEM018G96
K12V82N	C2013	06	11.42304	23	18	52.70	+29 24 08.0	19.8	VuEM018G96
K12V82N	C2013	06	11.42801	23	18	51.08	+29 24 07.3	19.7	VuEM018G96
K12V82N	C2013	06	11.44550	23	18	45.24	+29 24 05.7	19.9	VoEM018691
K12V82N	C2013	06	11.44728	23	18	44.67	+29 24 05.6	19.9	VoEM018691
K12V82N	C2013	06	11.44907	23	18	44.06	+29 24 05.2	20.1	VoEM018691
K12X55H	C2013	06	13.38293	23	31	30.11	-18 34 25.3	22.2	VuEM018807
K12X55H	C2013	06	13.39093	23	31	30.38	-18 34 34.5	22.2	VuEM018807
K12X55H	C2013	06	13.39872	23	31	30.62	-18 34 43.4	22.2	VuEM018807
K13A53D	2C2013	02	01.42843306	42	28.001+13	21	03.34	22.2	RtEM018568
K13A53D	2C2013	02	01.43299506	42	28.136+13	20	55.57	22.3	RtEM018568
K13A53D	2C2013	02	01.43673606	42	28.260+13	20	49.11	22.7	RtEM018568
K13B18C	KC2013	05	29.43912	22	42	13.48	-06 13 48.2	19.8	RoEM018291
K13B18C	KC2013	05	29.44346	22	42	13.34	-06 13 42.5	19.8	RoEM018291
K13B18C	KC2013	05	29.44780	22	42	13.17	-06 13 37.7	20.3	RoEM018291
K13B18C	C2013	06	04.33867	22	36	48.57	-04 11 46.7	21.5	VuEM018807
K13B18C	C2013	06	04.34286	22	36	48.29	-04 11 41.7	21.2	VuEM018807
K13B18C	C2013	06	04.34706	22	36	48.02	-04 11 36.6	21.1	VuEM018807
K13B18C	C2013	06	04.35126	22	36	47.76	-04 11 31.7	21.3	VuEM018807
K13B18C	C2013	06	04.35545	22	36	47.48	-04 11 26.6	21.2	VuEM018807
K13B18C	C2013	06	05.40381	22	35	41.13	-03 50 57.4	20.6	VuEM018G96
K13B18C	C2013	06	05.40924	22	35	40.77	-03 50 51.0	20.6	VuEM018G96
K13B18C	C2013	06	05.41463	22	35	40.45	-03 50 44.3	20.6	VuEM018G96
K13B18C	C2013	06	05.42007	22	35	40.05	-03 50 38.1	20.8	VuEM018G96
K13B18C	C2013	06	07.43083	22	33	24.62	-03 11 53.0	20.7	VuEM018G96
K13B18C	C2013	06	07.43722	22	33	24.15	-03 11 45.6	20.8	VuEM018G96
K13B18C	C2013	06	07.44361	22	33	23.68	-03 11 38.4	20.8	VuEM018G96
K13B18C	C2013	06	07.44991	22	33	23.22	-03 11 31.3	20.8	VuEM018G96
K13B18C	C2013	06	08.35248	22	32	18.98	-02 54 19.9	21.3	VuEM018807
K13B18C	C2013	06	08.35791	22	32	18.56	-02 54 13.5	21.4	VuEM018807
K13B18C	C2013	06	08.36334	22	32	18.16	-02 54 07.5	21.3	VuEM018807
K13B18C	KC2013	06	08.43473	22	32	13.11	-02 52 57.4	19.9	RoEM018291
K13B18C	KC2013	06	08.43907	22	32	12.78	-02 52 52.7	20.3	RoEM018291
K13B18C	KC2013	06	08.44268	22	32	12.50	-02 52 49.0	20.2	RoEM018291
K13G79Z	KC2013	06	15.96659	17	51	38.20	+43 38 13.9	19.1	RqEM018157
K13G79Z	KC2013	06	15.97306	17	51	38.40	+43 38 08.9	19.5	RqEM018157
K13G79Z	KC2013	06	15.97959	17	51	38.62	+43 38 03.9	19.0	RqEM018157
K13J22Q	KC2013	06	12.03192	16	37	05.20	+17 59 15.0	19.7	RtEM018204
K13J22Q	KC2013	06	12.04274	16	37	04.48	+17 58 56.7	tEM018204	
K13J22Q	KC2013	06	12.05397	16	37	03.80	+17 58 37.4	tEM018204	
K13K01Z	KC2013	06	17.29479	14	25	35.46	+54 15 09.3	20.8	RoEM018291
K13K01Z	KC2013	06	17.29940	14	25	33.88	+54 15 36.3	20.5	RoEM018291
K13K01Z	KC2013	06	17.30406	14	25	32.32	+54 16 03.4	20.7	RoEM018291
K13K02B	FC2013	06	11.99001	15	33	02.20	+03 07 33.7	tEM018204	
K13K02B	KC2013	06	12.00330	15	33	06.08	+03 07 27.9	tEM018204	
K13K02B	KC2013	06	12.01662	15	33	10.00	+03 07 23.0	19.9	RtEM018204
K13K06H	IC2013	06	11.01884	15	46	20.41	+25 18 46.8	tEM018204	
K13K06H	KC2013	06	11.03014	15	46	18.06	+25 19 45.5	19.5	RtEM018204
K13K06H	KC2013	06	11.04049	15	46	15.91	+25 20 39.0	tEM018204	
K13K06J	KC2013	06	11.94395	14	06	01.16	+66 41 57.2	tEM018204	
K13K06J	KC2013	06	11.95795	14	06	01.81	+66 41 34.6	tEM018204	
K13K06J	KC2013	06	11.97195	14	06	02.49	+66 41 12.0	18.8	RtEM018204
K13K06J	C2013	06	17.20561	14	10	55.27	+64 37 02.7	19.4	VuEM018703
K13K06J	C2013	06	17.21073	14	10	55.74	+64 36 56.8	19.6	VuEM018703
K13K06J	C2013	06	17.21584	14	10	55.63	+64 36 48.9	19.6	VuEM018703
K13K06J	C2013	06	17.22089	14	10	55.77	+64 36 42.5	19.1	VuEM018703
K13K06L	KC2013	06	12.98538	17	25	49.56	-24 23 55.7	18.7	RqEM018204
K13K06L	KC2013	06	12.99602	17	25	55.45	-24 25 35.3	qEM018204	
K13K06N	KC2013	06	10.98699	15	08	48.42	+05 34 35.4	tEM018204	
K13K06N	KC2013	06	10.99460	15	08	47.79	+05 34 30.4	18.7	RtEM018204
K13K06N	KC2013	06	11.00211	15	08	47.17	+05 34 25.1	tEM018204	
K13K06N	KC2013	06	16.92125	15	03	10.96	+04 29 20.0	19.8	VqEM018C95
K13K06N	KC2013	06	16.93849	15	03	10.24	+04 29 09.0	19.2	VqEM018C95
K13K06N	KC2013	06	16.95321	15	03	09.57	+04 28 59.3	qEM018C95	
K13K06N	KC2013	06	16.97073	15	03	08.82	+04 28 48.7	19.5	VqEM018C95
K13K06N	KC2013	06	17.98720	15	02	30.98	+04 18 08.5	18.5	RoEM018B67
K13K06N	KC2013	06	17.99218	15	02	30.79	+04 18 05.3	18.6	RoEM018B67
K13K06N	KC2013	06	17.99715	15	02	30.61	+04 18 02.5	18.5	RoEM018B67
K13L00B	KC2013	06	18.19782	15	19	08.34	-26 35 28.8	20.5	RoEM018291
K13L00B	KC2013	06	18.20772	15	19	08.12	-26 35 24.4	21.0	RoEM018291
K13L00B	KC2013	06	18.21765	15	19	07.87	-26 35 18.9	21.2	RoEM018291
K13L01B	KC2013	06	16.03331	20	39	27.27	+10 17 16.5	19.1	RqEM018157
K13L01B	KC2013	06	16.03975	20	39	26.79	+10 17 28.6	19.3	RqEM018157
K13L02D	QC2013	06	17.69661	22	42	57.47	-36 23 50.2	20.1	VqEM018E12
K13L02D	QC2013	06	17.70140	22	42	59.62	-36 23 04.5	20.0	VqEM018E12
K13L16G	C2013	06	16.27994	16	43	26.45	-13 46 20.6	21.7	RoEM018695
K13L16G	C2013	06	16.28410	16	43	26.09	-13 46 19.3	21.9	RoEM018695
K13L16G	C2013	06	16.28804	16	43	25.76	-13 46 18.0	21.9	RoEM018695
K13L16G	C2013	06	16.29199	16	43	25.41	-13 46 16.6	21.9	RoEM018695

K13L16G	KC2013	06	17.34578	16	41	56.09	-13	40	18.3	21.8	RoEM018291
K13L16G	KC2013	06	17.36160	16	41	54.69	-13	40	13.2	21.8	RoEM018291
K13L16G	KC2013	06	17.37691	16	41	53.42	-13	40	07.9	21.2	RoEM018291
K13L16H	KC2013	06	17.95857	16	08	21.10	+01	35	34.7	18.8	RoEM018B67
K13L16H	KC2013	06	17.96716	16	08	19.75	+01	35	41.4	18.7	RoEM018B67
K13L16H	KC2013	06	17.97576	16	08	18.42	+01	35	48.3	18.9	RoEM018B67
K13L28V	C2013	06	17.39932	22	31	48.68	+03	26	51.1	21.2	VuEM018G96
K13L28V	C2013	06	17.40759	22	31	48.32	+03	26	45.4	20.9	VuEM018G96
K13L28V	C2013	06	17.41590	22	31	48.10	+03	26	40.8	20.6	VuEM018G96
K13L28V	C2013	06	17.42436	22	31	47.74	+03	26	35.9	20.9	VuEM018G96
K13L28Z	KC2013	06	17.32694	16	18	48.61	+25	09	20.8	20.4	RoEM018291
K13L28Z	KC2013	06	17.32934	16	18	49.15	+25	08	57.0	20.3	RoEM018291
K13L28Z	KC2013	06	17.33176	16	18	49.67	+25	08	33.8	20.0	RoEM018291
K13L31L	JC2013	06	16.17322	16	36	51.63	+16	07	34.4	20.7	RoEM018695
K13L31L	JC2013	06	16.17622	16	36	51.39	+16	07	35.0	20.8	RoEM018695
K13L31L	JC2013	06	16.17871	16	36	51.20	+16	07	35.8	21.1	RoEM018695
K13L31L	JC2013	06	16.18070	16	36	51.05	+16	07	36.3	21.1	RoEM018695
K13L31M	JC2013	06	16.18771	16	28	35.63	-19	11	17.3	19.2	RoEM018695
K13L31M	JC2013	06	16.19074	16	28	35.09	-19	11	16.4	19.6	RoEM018695
K13L31M	JC2013	06	16.19209	16	28	34.84	-19	11	16.0	19.5	RoEM018695
K13L31M	JC2013	06	16.19404	16	28	34.49	-19	11	15.6	19.4	RoEM018695
K13L31M	C2013	06	17.52248	16	24	39.28	-19	04	18.9	19.8	VoEM018E23
K13L31M	C2013	06	17.53174	16	24	37.56	-19	04	16.5	19.3	VoEM018E23
K13L31M	C2013	06	17.54100	16	24	35.80	-19	04	13.6	19.6	VoEM018E23
K13L31N	\$C2013	06	17.56914	17	33	12.50	+11	36	00.8	18.3	RuEM018F65
K13L31N	\$C2013	06	17.57741	17	33	09.57	+11	36	18.0	17.8	RuEM018F65
K13L31N	KC2013	06	17.87667	17	31	27.18	+11	46	41.1	18.6	RuEM018B88
K13L31N	KC2013	06	17.90283	17	31	17.51	+11	47	38.1	18.8	RuEM018B88
K13L31N	KC2013	06	17.92891	17	31	07.85	+11	48	34.2	18.2	RuEM018B88
03752	C2013	06	17.18173	13	18	10.00	+65	56	07.6	18.1	VuEM018703
03752	C2013	06	17.18676	13	18	10.54	+65	56	00.7	18.0	VuEM018703
03752	C2013	06	17.19184	13	18	11.16	+65	55	53.9	18.1	VuEM018703
03752	C2013	06	17.19689	13	18	11.66	+65	55	47.7	18.0	VuEM018703
04503	4C2013	06	17.50549	17	33	30.85	-25	33	13.9	19.6	VqEM018Q62
04503	4C2013	06	17.50715	17	33	30.73	-25	33	14.4	19.8	VqEM018Q62
04503	4C2013	06	17.50876	17	33	30.57	-25	33	13.9	19.4	VqEM018Q62
07888	C2013	06	17.21165	14	27	24.20	+28	51	45.4	17.9	rEM018718
07888	C2013	06	17.24769	14	27	25.62	+28	50	54.9	17.9	rEM018718
07888	C2013	06	17.28344	14	27	27.06	+28	50	04.8	17.9	rEM018718
07888	C2013	06	18.18135	14	28	05.73	+28	29	07.0	17.8	rEM018718
07888	C2013	06	18.18842	14	28	05.99	+28	28	57.6	17.9	rEM018718
07888	C2013	06	18.19545	14	28	06.26	+28	28	47.2	18.0	rEM018718
09950	1C2013	06	17.09831	21	40	00.03	+05	45	08.3	17.3	qEM018G40
09950	1C2013	06	17.11252	21	40	01.76	+05	45	43.1	17.2	qEM018G40
09950	1C2013	06	17.12641	21	40	03.47	+05	46	17.0	17.2	qEM018G40
09950	1C2013	06	17.15035	21	40	06.38	+05	47	15.7	17.4	qEM018G40
17188	AC2013	06	17.39668	20	25	13.99	-19	38	44.0	13.9	VoEM018H06
17188	AC2013	06	17.39891	20	25	11.80	-19	38	14.8	13.9	VoEM018H06
17188	AC2013	06	17.40179	20	25	08.96	-19	37	37.7	13.8	VoEM018H06
24445	C2013	06	16.94755	22	59	18.07	+22	36	53.1	17.6	woEM018C41
24445	C2013	06	16.97574	22	59	20.85	+22	37	23.0	16.5	woEM018C41
54789	C2013	06	17.40129	22	16	05.19	-09	10	49.3	18.4	VuEM018G96
54789	C2013	06	17.40950	22	16	05.34	-09	10	52.8	18.4	VuEM018G96
54789	C2013	06	17.41800	22	16	05.44	-09	10	56.3	18.3	VuEM018G96
54789	C2013	06	17.42632	22	16	05.59	-09	10	59.9	18.4	VuEM018G96
D7199	KC2013	06	17.92203	17	55	23.72	-00	29	35.2	16.0	VqEM018A13
D7199	KC2013	06	17.92632	17	55	23.22	-00	29	50.0	15.8	VqEM018A13
G3249	C2013	05	31.88073	17	41	29.39	+14	01	02.3	15.8	RtEM018G36
G3249	C2013	06	01.03546	17	41	36.06	+14	13	49.2	15.9	RtEM018G36
G3249	C2013	06	01.14475	17	41	40.50	+14	22	48.4	15.6	RtEM018G36
G3249	C2013	06	01.98908	17	42	31.68	+15	33	39.2	15.9	RtEM018G36
G3249	C2013	06	02.04993	17	42	34.15	+15	38	50.8	16.3	RtEM018G36
G3249	C2013	06	02.08106	17	42	35.42	+15	41	30.1	16.1	RtEM018G36
G3249	C2013	06	02.11206	17	42	36.71	+15	44	08.4	16.3	RtEM018G36
G3249	C2013	06	02.15036	17	42	38.36	+15	47	23.7	16.1	RtEM018G36
G3249	C2013	06	03.01124	17	43	31.65	+17	02	15.3	16.2	RtEM018G36
G3249	C2013	06	03.04303	17	43	32.98	+17	05	04.0	16.3	RtEM018G36
G3249	C2013	06	03.07622	17	43	34.38	+17	07	59.8	16.4	RtEM018G36
G3249	C2013	06	03.11345	17	43	35.97	+17	11	16.6	16.1	RtEM018G36
G3249	C2013	06	03.14433	17	43	37.34	+17	13	59.7	16.4	RtEM018G36
G3249	C2013	06	03.91411	17	44	28.14	+18	23	05.6	16.2	RtEM018G36
G3249	C2013	06	04.00873	17	44	32.48	+18	31	46.4	16.4	RtEM018G36
G3249	C2013	06	04.03608	17	44	33.70	+18	34	16.8	15.8	RtEM018G36
G3249	C2013	06	04.06345	17	44	34.85	+18	36	46.7	15.8	RtEM018G36
G3249	C2013	06	04.09082	17	44	36.05	+18	39	16.0	16.1	RtEM018G36
G3249	C2013	06	04.12459	17	44	37.57	+18	42	22.8	15.8	RtEM018G36
G3249	C2013	06	07.85473	17	48	53.19	+24	46	00.9	16.2	RtEM018G36
G3249	C2013	06	08.08714	17	49	06.18	+25	10	19.7	16.2	RtEM018G36
G3249	C2013	06	08.16475	17	49	10.55	+25	18	19.5	15.8	RtEM018G36
G3249	C2013	06	09.00312	17	50	17.71	+26	47	07.9	16.0	RtEM018G36
G3249	C2013	06	09.03277	17	50	19.37	+26	50	19.0	16.0	RtEM018G36
G3249	C2013	06	09.04271	17	50	19.91	+26	51	22.2	16.1	RtEM018G36
G3249	C2013	06	11.10497	17	53	10.43	+30	39	16.0	15.9	RtEM018G36
G3249	C2013	06	11.16492	17	53	14.57	+30	45	56.4	15.4	RtEM018G36
G3249	C2013	06	11.91630	17	54	29.01	+32	12	30.3	15.9	RtEM018G36