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MPEC 2021-Y44 : DAILY ORBIT UPDATE (2021 December 20)

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M.P.E.C. 2021-Y44

Issued 2021 December 20, 12:02 UT

The Minor Planet Electronic Circulars contain information on unusual minor planets and routine data on comets. They are published on behalf of Division F of the International Astronomical Union by the Minor Planet Center, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.

Prepared using the Tamkin Foundation Computer Network

MPC@CFA.HARVARD.EDU
 URL <https://www.minorplanetcenter.net/> ISSN 1523-6714

DAILY ORBIT UPDATE (2021 December 20)

Update to 2021-Y38

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

New identifications:

K12U25T	K21P62W	Weryk
K17UE6M	K14DE6C	Weryk
K16UB4K	K05J12A	Doppler
K12TR1D	K06KC8A	Doppler
K17N22U	K06KC8J	Doppler
K10KF6K	K15AF7A	Doppler
K10N63R	K10B15R	Doppler
K10N63R	K10N99W	Doppler
K14WA3N	K07B92J	Doppler
K16R27M	K10H66R	Doppler
K19F25E	K16UL5E	Doppler
K10CO0P	K14OB0L	Weryk
J95S91B	K01FK8U	Doppler
K08X68V	J97C31D	Doppler
J99TY0A	K06C91X	Doppler
J99VC8M	K12T60C	Doppler
K00AN6C	K09T40D	Doppler
K07T44S	K07To2V	Doppler
K08YD2R	K08YJ5C	Doppler
K10VR7E	K10VR7K	Doppler
K11A78W	K11AA5S	Doppler
K15O59O	K21TB3A	Doppler
K16F76H	K16EV2U	Doppler
K16G12Q	K16G85S	Doppler
K07R73R	K16NF9H	Doppler
K16NF9Q	K21PB0R	Doppler
K13C94F	K16TI5Y	Doppler
K17O11U	K10O14J	Doppler
K17R49N	K17S24G	Doppler
K17S59Y	K09WT9G	Doppler
K17S67Z	K10CR6Y	Doppler
K17SC4A	K17UH5H	Doppler
K17T44B	K21R53O	Doppler
K10F26N	K17U96B	Doppler
K17SH8O	K17UH4Y	Doppler

K17Y53J	K18A55R		Doppler
K18P57O	K10BF3W		Doppler
K10LB9H	K18R26D		Doppler
K18U36C	K15Bz9V		Doppler
K18VE4M	K18VF2U		Doppler
K19A61M	K07Y97C		Doppler
K19A91N	K19C21O		Doppler
K19G99D	K14C36D		Doppler
K19GB7V	K06WN6F		Doppler
K19V33V	K08WG5G		Doppler
K20R43Y	K15S20H		Doppler
K15W06W	K20T30G		Doppler
K20Y23F	K19UC5D		Doppler
K21GD4V	K11Um6N		Doppler
K21GF9G	K21GD6P		Doppler
K13RA0C	K21GG7U		Doppler
K21K09M	K17SH4A		Doppler
K10RG2L	K21O19C		Doppler
K16Q31E	K21P18L		Doppler
K10L81F	K21P37M		Doppler
K21P39Y	K08SI6J		Doppler
K10R85H	K21P48Y		Doppler
K21P67W	K09HC6Y		Doppler
K16Q63V	K21PA1B		Doppler
K07VH5V	K21PBOX		Doppler
K10R35Z	K21PD0M		Doppler
K20B04V	K21Q02C		Doppler
K04TM7D	K21R22T		Doppler
K21R43U	K21R53M		Doppler
K09SU6T	K10W11U	K21R50A	Doppler
K13Q59H	K21R52N		Doppler
K10TG2V	K21R55Z		Doppler
K05Uq4Z	K10S22A	K21R58R	Doppler
K11UL0X	K21R73X		Doppler
K10M64A	K21R76Q		Doppler
K10T74Z	K21R82L		Doppler
K10T09U	K21R92F		Doppler
K08TI0N	K21R94X		Doppler
K09SM2F	K21R96V		Doppler
K10U99Q	K21RB6A		Doppler
K10L65N	K21RC3U		Doppler
K11T03Y	K21RE1D		Doppler
K21RE6N	K10RM2A		Doppler
K21S00S	K21T00A		Doppler
K15P53K	K21S17N		Doppler
K10O25B	K21S17T		Doppler
K10O18K	K21S18R		Doppler
K04V32D	K21S18T		Doppler
K10T70N	K21S23U		Doppler
K05UH2F	K21S29K		Doppler
K10O31V	K21S36Y		Doppler
K21S43N	K14HN5D		Doppler
J95T09B	K21S45X		Doppler
K13HC7R	K21T00P		Doppler
K16P47R	K21T11X		Doppler
K21T19U	K12V51M		Doppler
K16U97S	K21T28H		Doppler
K21T29K	K10RD7A		Doppler
K10W35X	K21T30Q		Doppler
J98W29R	K21T31L		Doppler
K10V77U	K21T38Q		Doppler
K14E72G	K21T48H		Doppler
K05UG5W	K21T49C		Doppler
K12X13L	K21T55R		Doppler
K10P25Z	K21T63R		Doppler
K05UX9J	K21T77H		Doppler
K15PK6D	K21T79M		Doppler
K21T90U	K06Ud3B		Doppler
K14EH0U	K21T94W		Doppler
K09UA2F	K21T94Y		Doppler
K14EA8Q	K21U20W		Doppler
K13A68Z	K21U26Q		Doppler
K14E68O	K21U29F		Doppler
K12F04S	K21U30P		Doppler
K05T92L	K21U33G		Doppler
K21U37H	K05WC7O		Doppler
K08K42R	K21U39Q		Doppler
K21U48A	K18C27M		Doppler
K10R01U	K21U48Z		Doppler

New old-numbered orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Opp	C
04660	18.6	0.15	K221L	7.326	159.539	313.155	1.454	0.35893	1.48555	12	V
D8971	18.4	0.15	K221L	258.081	271.812	353.721	7.899	0.33336	1.03435	14	V

New multiple-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Opp	C
J95S91B	18.8	0.15	K221L	42.084	198.928	175.366	3.201	0.13794	2.38309	8	V
J95T09B	17.6	0.15	K221L	17.357	237.375	166.191	12.335	0.17954	2.96630	4	V
J97N04N	21.4	0.15	K221L	268.314	61.528	242.897	5.369	0.36550	2.15518	2	V
J98W29R	17.0	0.15	K221L	325.145	237.236	227.511	15.036	0.17880	2.77139	7	V
J99TY0A	17.6	0.15	K221L	124.407	138.739	342.299	2.930	0.03907	2.86164	5	V
J99VC8M	17.4	0.15	K221L	10.118	21.853	41.726	3.561	0.17793	2.67886	8	V

K00AN6C	17.0	0.15	K221L	89.532	309.226	102.306	9.317	0.25241	3.04514	6 V
K04TM7D	17.1	0.15	K221L	340.308	243.228	209.155	24.085	0.33523	3.17049	2 V
K04V32D	17.0	0.15	K221L	338.848	30.421	60.106	15.543	0.23423	3.18153	3 V
K05T92L	17.2	0.15	K221L	33.002	139.015	247.435	6.995	0.05636	3.01839	6 V
K05UG5W	17.3	0.15	K221L	344.687	217.600	219.425	16.297	0.07468	3.04847	5 V
K05UH2F	17.5	0.15	K221L	29.748	321.194	46.201	4.225	0.18101	3.07944	3 V
K05UX9J	19.9	0.15	K221L	55.647	335.376	36.245	21.043	0.08555	1.92362	3 V
K05Uq4Z	17.3	0.15	K221L	42.309	185.780	181.233	21.966	0.07565	3.04725	4 V
K05Y96Q	20.6	0.15	K221L	217.060	340.121	282.678	22.225	0.33351	0.74342	5 V
K05YC8X	19.0	0.15	K221L	341.663	315.917	260.065	4.476	0.73478	2.17445	4 X
K06A00N	24.3	0.15	K221L	304.837	273.396	277.594	7.407	0.22063	1.09435	4 X
K06C91W	17.6	0.15	K221L	355.540	321.359	130.408	2.385	0.14115	3.11278	5 V
K06005A	19.7	0.15	K221L	38.234	87.431	308.432	10.833	0.37839	1.52399	4 V
K07R73R	17.6	0.15	K221L	113.198	130.301	154.736	5.210	0.08102	2.72774	5 V
K07T23C	20.4	0.15	K221L	10.023	14.142	55.354	12.897	0.60852	2.81940	2 X
K07T44S	17.2	0.15	K221L	131.783	224.781	196.587	9.162	0.07452	3.22685	4 V
K07VH5V	17.6	0.15	K221L	55.838	196.243	117.333	3.139	0.05943	2.87113	5 V
K08CD6T	17.9	0.15	K221L	8.045	129.644	265.105	1.438	0.23280	2.37918	9 X
K08K42R	17.1	0.15	K221L	94.700	185.825	120.874	21.269	0.13845	3.18859	3 V
K08SO9F	17.8	0.15	K221L	46.304	311.458	48.306	5.801	0.20207	2.63952	3 V
K08T10N	17.5	0.15	K221L	5.929	300.887	112.572	10.127	0.19252	2.64526	5 V
K08X68V	17.6	0.15	K221L	71.200	312.422	105.568	8.712	0.22724	2.57309	7 V
K08YD2R	17.3	0.15	K221L	200.632	357.028	61.284	3.956	0.12065	3.05158	7 V
K09SM2F	15.2	0.15	K221L	346.334	188.171	214.159	6.855	0.03654	5.09634	3 V
K09SU6T	14.5	0.15	K221L	328.446	38.219	26.511	19.778	0.05767	5.22947	4 V
K09UA2F	14.8	0.15	K221L	2.553	350.682	51.022	9.565	0.05356	5.17761	3 V
K10COOP	16.7	0.15	K221L	60.776	266.144	132.296	25.618	0.22672	3.17548	2 V
K10F26N	17.8	0.15	K221L	316.584	11.452	63.273	5.067	0.08126	2.74274	7 V
K10KF6K	17.3	0.15	K221L	291.288	336.041	304.363	14.856	0.05604	3.17898	4 V
K10L65N	18.9	0.15	K221L	102.223	229.327	85.573	22.840	0.08887	1.90269	4 V
K10L81F	17.4	0.15	K221L	71.428	274.220	5.922	9.773	0.21156	3.11131	3 V
K10LB9H	15.9	0.15	K221L	156.950	293.522	51.570	3.909	0.26642	3.99242	5 V
K10M64A	17.8	0.15	K221L	44.596	296.154	39.876	15.227	0.20778	3.10157	2 V
K10N63R	17.0	0.15	K221L	33.951	207.686	352.809	14.368	0.20775	3.17244	3 V
K10O18K	17.4	0.15	K221L	51.775	281.526	51.829	10.782	0.24534	3.10987	3 V
K10O25B	17.7	0.15	K221L	25.285	242.684	133.358	10.851	0.22624	3.11790	3 V
K10O31V	17.5	0.15	K221L	7.503	175.653	222.180	28.852	0.20723	3.12106	2 V
K10P25Z	17.3	0.15	K221L	24.028	326.471	58.230	31.696	0.27481	3.11685	2 V
K10R01U	18.9	0.15	K221L	15.534	142.693	275.634	0.349	0.16696	2.32494	6 V
K10R35Z	18.0	0.15	K221L	44.289	4.873	339.502	16.455	0.25533	3.05634	2 V
K10R85H	16.9	0.15	K221L	79.836	234.153	52.168	3.253	0.04803	3.12186	10 V
K10RFOA	17.5	0.15	K221L	161.704	133.501	214.974	3.792	0.08172	2.79514	5 X
K10RG2L	16.6	0.15	K221L	20.975	359.352	342.214	9.852	0.09787	3.15038	7 V
K10RG4G	18.1	0.15	K221L	208.655	34.941	349.263	8.928	0.25823	2.65150	2 X
K10T09U	17.6	0.15	K221L	45.055	137.752	192.282	9.120	0.28195	3.10268	3 V
K10T70N	17.5	0.15	K221L	41.551	152.491	202.707	10.234	0.11629	3.09342	2 V
K10T74Z	17.4	0.15	K221L	76.449	275.640	18.216	16.710	0.23583	3.11256	2 V
K10TG2V	17.7	0.15	K221L	355.456	31.230	21.316	19.067	0.25801	3.13910	3 V
K10U99Q	16.9	0.15	K221L	15.055	139.784	246.148	16.429	0.23847	3.16020	2 V
K10V77U	16.8	0.15	K221L	67.152	128.165	201.000	9.050	0.09049	3.16078	8 V
K10VR7E	17.0	0.15	K221L	48.298	138.362	213.861	11.605	0.06085	3.17518	4 V
K10W07Q	18.3	0.15	K221L	348.763	57.197	98.753	13.610	0.55676	2.36998	4 X
K10W35X	16.9	0.15	K221L	57.060	103.508	238.436	10.424	0.11492	3.18482	2 V
K11T03Y	19.7	0.15	K221L	146.063	258.585	9.041	19.761	0.06164	1.83398	3 V
K11ULOX	18.0	0.15	K221L	49.197	81.590	248.880	5.016	0.22323	2.94491	2 V
K12F04S	17.3	0.15	K221L	324.138	285.392	181.942	10.004	0.18313	3.12063	5 V
K12TR1D	17.7	0.15	K221L	302.208	21.533	51.367	4.211	0.07140	2.79437	8 V
K12U25T	18.4	0.15	K221L	36.629	21.147	331.894	7.199	0.22084	2.74466	2 V
K12UD6S	15.7	0.15	K221L	17.965	279.302	0.261	51.894	0.91259	4.28836	4 X
K12U00U	17.6	0.15	K221L	62.872	157.306	185.759	5.800	0.03359	2.72275	7 V
K12X13L	18.0	0.15	K221L	40.165	339.729	34.524	4.835	0.07638	2.78104	3 V
K13A68Z	18.9	0.15	K221L	6.931	323.667	101.083	3.546	0.29033	2.78185	2 V
K13C94F	17.3	0.15	K221L	4.203	270.415	150.146	7.292	0.04308	2.91916	7 V
K13HC7R	19.6	0.15	K221L	6.846	23.286	19.538	23.181	0.10649	1.82059	3 V
K13Q59H	17.0	0.15	K221L	34.472	204.028	124.321	3.106	0.30221	3.92450	2 V
K13RA0C	17.3	0.15	K221L	322.099	183.181	151.403	11.248	0.19285	2.74590	5 V
K14C36C	18.0	0.15	K221L	295.477	172.596	332.567	13.499	0.25436	2.65371	2 V
K14E68O	14.7	0.15	K221L	4.573	222.286	176.527	9.104	0.01498	5.24402	6 V
K14E72G	14.7	0.15	K221L	349.085	71.394	340.636	19.315	0.10153	5.21207	4 V
K14E80A	17.9	0.15	K221L	39.197	84.453	334.584	21.278	0.15473	2.61697	4 V
K14EA8Q	14.6	0.15	K221L	331.031	247.507	189.988	9.355	0.06969	5.14062	6 V
K14EH0U	15.4	0.15	K221L	6.519	95.501	302.999	1.206	0.10462	5.12422	5 V
K14Ok2J	17.0	0.15	K221L	70.801	60.649	324.458	10.393	0.08109	3.05902	5 V
K14WA3N	17.7	0.15	K221L	323.082	176.441	115.886	1.514	0.08154	2.71278	10 V
K15FA8U	17.1	0.15	K221L	119.747	51.489	227.973	9.182	0.15699	2.70660	7 V
K15O59O	17.1	0.15	K221L	37.222	300.909	54.152	10.599	0.10156	3.12265	6 V
K15P53K	16.8	0.15	K221L	50.564	291.375	43.005	16.374	0.20724	3.16483	4 V
K15PK6D	17.7	0.15	K221L	25.827	322.787	56.579	11.285	0.22377	3.14089	4 V
K15W06W	17.4	0.15	K221L	51.785	52.434	43.613	11.393	0.12576	2.96908	4 V
K15Xm3E	17.2	0.15	K221L	357.107	68.773	69.027	17.257	0.17857	3.13201	3 V
K16NF9Q	17.4	0.15	K221L	334.254	277.956	134.620	24.867	0.10367	2.80510	4 V
K16P47R	18.2	0.15	K221L	40.759	291.690	61.674	8.531	0.22505	2.77570	2 V
K16PN6D	16.9	0.15	K221L	47.248	15.068	44.907	14.553	0.23483	2.66330	6 V
K16Q31E	17.1	0.15	K221L	339.555	247.522	131.424	10.649	0.09502	3.02375	5 V
K16Q63V	17.7	0.15	K221L	3.941	75.372	294.249	0.982	0.09955	2.90520	4 V
K16R27M	16.9	0.15	K221L	6.005	76.207	208.272	25.472	0.23481	3.22611	4 V
K16U97S	18.4	0.15	K221L	339.394	216.404	218.850	4.529	0.23276	2.98860	3 V
K16UB4K	18.1	0.15	K221L	97.890	290.345	41.783	6.666	0.06145	2.78975	5 V
K17BJ5W	17.5	0.15	K221L	310.174	25.501	116.230	16.602	0.14244	3.16502	2 V
K17BJ5X	17.1	0.15	K221L	318.657	245.851	298.967	8.303	0.12234	3.12055	3 V
K17DE5D	16.9	0.15	K221L	332.887	123.050	4.327	16.632	0.09177	3.23507	4 V
K17DE5E	17.7	0.15	K221L	347.729	114.675	357.288	23.276	0.36309	3.08042	3 V
K17FK2Q	16.8	0.15	K221L	349.653	159.098	354.088	18.467	0.24185	3.06591	3 V

K17FK2R	19.3	0.15	K221L	120.448	242.587	8.816	5.732	0.18502	2.22993	3 V
K17N22U	19.3	0.15	K221L	93.648	43.651	270.685	1.531	0.22387	2.33601	5 V
K17O11U	18.3	0.15	K221L	51.976	46.918	308.116	4.946	0.13806	2.37551	6 V
K17S59Y	17.4	0.15	K221L	341.659	305.133	117.783	6.240	0.19164	2.57822	6 V
K17S67Z	17.3	0.15	K221L	334.188	9.592	332.093	1.226	0.07469	2.86112	3 V
K17SH8O	17.2	0.15	K221L	250.071	337.440	71.041	10.645	0.11605	3.16091	5 V
K17T44B	18.5	0.15	K221L	38.355	316.220	27.690	1.903	0.08410	2.62610	3 V
K17U59Y	18.5	0.15	K221L	339.407	20.901	292.633	19.554	0.04368	1.91900	4 V
K17UE6M	17.3	0.15	K221L	110.199	87.379	139.552	10.078	0.01646	3.04983	4 V
K17W15A	18.8	0.15	K221L	190.553	266.959	335.010	19.081	0.50978	0.90849	4 X
K17X60Q	24.4	0.15	K221L	313.035	284.053	269.181	27.192	0.21496	0.99841	4 V
K17Y53J	18.6	0.15	K221L	342.506	331.440	128.149	2.779	0.16079	2.65591	4 V
K18B06G	17.6	0.15	K221L	328.473	113.710	93.879	29.330	0.43734	2.62671	3 V
K18B08J	18.8	0.15	K221L	335.306	9.644	103.173	5.849	0.19955	2.65702	2 V
K18P57O	17.7	0.15	K221L	275.545	30.779	309.986	7.009	0.22923	2.75873	5 V
K18U36C	17.2	0.15	K221L	146.926	92.993	65.377	16.587	0.03496	2.71221	7 V
K18VE4M	17.1	0.15	K221L	235.386	18.932	17.810	15.749	0.05339	2.97215	3 V
K19A61M	17.1	0.15	K221L	335.630	261.898	74.328	4.022	0.12001	3.06528	7 V
K19A89Z	17.8	0.15	K221L	264.647	244.920	263.229	8.329	0.08192	2.51654	3 V
K19A91N	18.9	0.15	K221L	292.503	91.691	48.725	2.146	0.12412	2.33663	4 V
K19F25E	16.9	0.15	K221L	195.784	88.733	77.835	1.987	0.07238	3.25253	8 V
K19G99D	18.1	0.15	K221L	237.651	122.265	56.525	4.189	0.13029	2.74045	3 V
K19GB7V	16.8	0.15	K221L	261.181	246.859	214.445	11.904	0.11769	3.09304	7 V
K19N01C	21.5	0.15	K221L	36.780	143.785	310.726	6.829	0.12703	0.99378	5 V
K19V33V	16.8	0.15	K221L	70.365	45.903	86.566	3.034	0.05406	3.11001	6 V
K20B04V	20.1	0.15	K221L	28.654	226.222	146.148	28.896	0.08286	1.88282	2 V
K20R43Y	16.6	0.15	K221L	208.724	234.522	19.496	15.282	0.11448	2.83934	7 V
K20Y23F	17.4	0.15	K221L	68.292	114.015	348.424	11.517	0.10456	3.17831	5 V
K21G98A	19.3	0.15	K221L	354.788	201.784	103.818	6.713	0.13360	2.31738	6 V
K21GD4V	18.1	0.15	K221L	321.222	1.238	302.821	2.812	0.05233	2.45332	9 V
K21GF9G	17.3	0.15	K221L	84.588	326.937	185.960	15.240	0.17456	3.15471	2 V
K21GG8C	17.4	0.15	K221L	72.677	314.845	206.029	0.786	0.11843	3.10899	2 V
K21K09M	16.8	0.15	K221L	329.835	195.247	129.325	10.566	0.06637	3.17581	5 V
K21O01Q	19.3	0.15	K221L	52.094	107.812	226.280	4.942	0.27882	2.14830	6 V
K21P37N	16.4	0.15	K221L	75.557	128.616	158.883	15.469	0.09255	3.37126	5 V
K21P39Y	17.9	0.15	K221L	17.483	105.797	250.553	2.786	0.06844	2.68956	3 V
K21P46N	17.0	0.15	K221L	300.136	110.286	304.162	15.254	0.11833	3.24117	5 V
K21P66E	17.7	0.15	K221L	314.538	108.370	312.096	5.733	0.13493	2.99831	4 V
K21P67W	16.9	0.15	K221L	184.867	8.474	174.585	8.657	0.01785	3.00879	6 V
K21P86Z	18.0	0.15	K221L	71.006	328.028	317.900	16.308	0.13504	2.54396	3 V
K21PB9U	16.8	0.15	K221L	358.882	43.117	334.118	17.383	0.20301	2.78459	4 V
K21PD0U	18.0	0.15	K221L	52.159	106.862	224.065	15.287	0.24739	3.08963	2 V
K21PD1L	17.0	0.15	K221L	357.392	91.213	319.315	10.850	0.06334	3.12171	5 V
K21PDI1R	14.7	0.15	K221L	356.691	270.366	156.254	8.138	0.09824	5.22958	6 V
K21Q27E	18.2	0.15	K221L	9.395	68.966	312.361	2.536	0.10935	2.79328	5 V
K21Q36M	17.5	0.15	K221L	28.955	32.118	317.357	8.414	0.06898	2.88514	4 V
K21Q48L	18.8	0.15	K221L	351.322	255.188	172.215	12.751	0.36728	2.75655	2 V
K21Q60C	17.3	0.15	K221L	25.784	68.046	314.166	14.780	0.22872	3.20575	4 V
K21R11L	17.5	0.15	K221L	34.800	32.897	320.139	6.514	0.20159	2.98249	3 V
K21R13T	17.3	0.15	K221L	19.540	350.481	41.023	11.135	0.30164	2.99741	3 V
K21R15O	17.6	0.15	K221L	30.176	268.720	79.546	3.044	0.09992	2.91674	2 V
K21R16Z	17.7	0.15	K221L	1.650	103.927	282.012	4.089	0.17785	3.11421	4 V
K21R21X	19.6	0.15	K221L	154.191	54.086	197.970	21.149	0.07280	1.81924	4 V
K21R43U	17.9	0.15	K221L	359.921	19.883	12.387	4.457	0.13368	2.72724	5 V
K21R54O	14.9	0.15	K221L	354.256	219.541	172.308	12.087	0.08710	5.25863	4 V
K21R55H	17.3	0.15	K221L	330.423	301.890	150.435	10.848	0.20025	3.02890	4 V
K21R58P	17.0	0.15	K221L	16.682	235.381	161.799	14.599	0.28752	3.17290	4 V
K21R59N	17.4	0.15	K221L	61.849	137.246	173.619	4.216	0.13861	3.19300	4 V
K21R60K	14.8	0.15	K221L	299.361	332.705	117.286	8.540	0.09842	5.23655	3 V
K21R63M	16.8	0.15	K221L	31.210	222.922	146.284	11.001	0.06601	3.20859	7 V
K21R64M	14.5	0.15	K221L	326.430	23.092	59.138	25.752	0.15009	5.18991	2 V
K21R70S	17.8	0.15	K221L	8.078	5.525	25.837	3.654	0.09874	2.79487	4 V
K21R71G	15.0	0.15	K221L	16.912	171.907	198.029	7.096	0.04009	5.21929	3 V
K21R72E	14.8	0.15	K221L	318.498	30.631	50.747	32.586	0.09397	5.23558	3 V
K21R72M	14.5	0.15	K221L	331.053	249.925	178.191	21.242	0.07264	5.30381	4 V
K21R73E	15.0	0.15	K221L	293.129	209.320	244.293	1.914	0.09539	5.14546	6 V
K21R74B	16.8	0.15	K221L	98.066	302.729	338.058	11.838	0.08936	3.02621	7 V
K21R81Z	18.1	0.15	K221L	62.711	143.918	170.850	1.347	0.23058	2.93087	4 V
K21R82Z	17.9	0.15	K221L	6.916	2.485	21.202	11.407	0.23575	3.15734	2 V
K21R83X	17.3	0.15	K221L	59.343	77.546	238.283	8.341	0.08712	3.15876	5 V
K21R83Z	17.2	0.15	K221L	7.304	242.968	133.852	2.703	0.07874	2.88068	7 V
K21R88K	18.0	0.15	K221L	22.033	189.743	180.194	6.030	0.24350	3.07019	2 V
K21R89L	17.1	0.15	K221L	30.309	230.813	129.952	10.895	0.10321	3.00760	2 V
K21R89M	17.6	0.15	K221L	32.453	226.594	124.063	8.570	0.21530	3.05230	2 V
K21R90G	17.7	0.15	K221L	35.052	100.076	252.081	6.508	0.27877	3.08864	4 V
K21R92N	17.7	0.15	K221L	344.323	48.774	10.380	4.007	0.05851	2.75785	6 V
K21R93F	17.6	0.15	K221L	331.667	84.685	4.611	10.669	0.27498	3.10717	3 V
K21R98S	17.8	0.15	K221L	310.417	241.398	213.538	9.614	0.07603	2.97106	4 V
K21RA0M	17.2	0.15	K221L	41.445	50.338	297.269	4.840	0.14903	3.06213	5 V
K21RA4Q	17.6	0.15	K221L	357.023	158.592	241.366	5.034	0.01667	2.81023	4 V
K21RA4W	14.7	0.15	K221L	320.043	256.222	197.085	17.915	0.18661	5.18848	4 V
K21RA7Q	17.4	0.15	K221L	25.491	325.303	37.203	30.979	0.22272	2.80320	2 V
K21RA8C	14.9	0.15	K221L	329.535	143.415	289.701	8.559	0.14723	5.18596	3 V
K21RB1U	17.1	0.15	K221L	33.375	63.954	307.082	4.682	0.16998	3.13889	4 V
K21RB3K	14.9	0.15	K221L	343.705	196.173	213.423	23.504	0.04087	5.22277	3 V
K21RB3R	18.0	0.15	K221L	39.972	355.945	347.652	9.475	0.28508	3.07731	2 V
K21RB6U	17.5	0.15	K221L	33.016	149.083	214.502	1.363	0.08201	2.86479	6 V
K21RC1B	17.1	0.15	K221L	12.779	74.862	310.934	10.499	0.01278	3.05166	5 V
K21RC1L	17.6	0.15	K221L	329.130	65.746	16.431	8.822	0.13965	3.05126	4 V
K21RC2M	18.4	0.15	K221L	20.229	247.098	117.658	3.327	0.07183	2.67717	4 V
K21RC3N	17.0	0.15	K221L	54.306	214.896	124.120	18.221	0.20822	3.08385	5 V
K21RC3Y	14.7	0.15	K221L	354.538	251.643	143.512	8.140	0.08957	5.22442	4 V
K21RC6X	17.1	0.15	K221L	71.786	142.839	182.807	13.865	0.15884	3.08709	4 V

K21RC8A	17.0	0.15	K221L	342.539	26.207	29.109	17.803	0.04791	3.14363	4 V
K21RD00	17.0	0.15	K221L	322.061	261.497	212.515	24.488	0.28270	3.15993	4 V
K21RD3N	19.6	0.15	K221L	99.633	296.559	28.043	22.993	0.07318	1.84341	3 V
K21RD6V	17.3	0.15	K221L	336.481	100.145	347.586	15.194	0.19007	3.20260	2 V
K21RD7U	14.9	0.15	K221L	340.593	211.684	211.172	18.425	0.07929	5.29227	3 V
K21RD8D	17.0	0.15	K221L	302.423	113.463	14.285	17.278	0.18062	3.09565	3 V
K21RD9A	14.9	0.15	K221L	347.573	277.538	142.782	16.952	0.12269	5.20914	3 V
K21RE0J	14.7	0.15	K221L	313.697	328.897	115.343	17.566	0.01772	5.30673	4 V
K21RE2Y	17.9	0.15	K221L	26.896	149.513	239.990	8.264	0.11248	2.85852	2 V
K21RE5C	17.4	0.15	K221L	357.489	256.486	175.798	3.712	0.18201	2.98423	4 V
K21RE6N	17.1	0.15	K221L	24.544	292.935	102.871	2.526	0.16197	3.10874	7 V
K21RE6T	17.6	0.15	K221L	53.612	272.806	86.468	9.250	0.22196	2.77448	4 V
K21RE9L	17.4	0.15	K221L	22.453	11.285	18.800	17.515	0.13327	3.06232	2 V
K21RF0G	18.6	0.15	K221L	25.303	254.649	100.490	4.917	0.25712	2.90008	3 V
K21RF1C	17.2	0.15	K221L	79.150	258.723	70.786	20.928	0.22806	2.76874	4 V
K21S04S	20.2	0.15	K221L	315.794	258.017	211.221	20.585	0.14615	1.85472	3 V
K21S08G	18.2	0.15	K221L	40.261	264.995	83.069	8.629	0.23866	2.79865	2 V
K21S10W	17.5	0.15	K221L	92.869	196.743	98.536	3.277	0.04267	2.86788	8 V
K21S11F	18.1	0.15	K221L	19.576	225.704	151.317	8.543	0.24108	2.76987	4 V
K21S11L	17.4	0.15	K221L	17.595	224.592	166.227	15.889	0.15774	3.11289	2 V
K21S12X	17.1	0.15	K221L	68.989	208.226	118.445	9.605	0.06726	3.10005	5 V
K21S25Y	15.0	0.15	K221L	323.990	19.346	65.976	21.140	0.14829	5.19910	2 V
K21S25Z	16.6	0.15	K221L	346.250	20.244	49.912	28.535	0.16623	3.21224	4 V
K21S30N	17.3	0.15	K221L	333.474	163.557	276.521	8.190	0.10768	2.85290	4 V
K21S35Y	14.6	0.15	K221L	233.686	167.700	353.813	6.883	0.03321	5.30160	2 V
K21S36P	14.8	0.15	K221L	321.340	2.583	74.971	24.981	0.09958	5.25182	2 V
K21S40F	14.8	0.15	K221L	49.689	321.669	21.583	9.341	0.01518	5.12148	3 V
K21S41T	14.7	0.15	K221L	301.312	193.168	260.574	15.212	0.13056	5.22359	3 V
K21S43J	16.9	0.15	K221L	85.195	64.589	244.732	13.876	0.11226	3.05787	2 V
K21S43N	17.1	0.15	K221L	91.911	78.370	214.702	12.767	0.12729	3.06539	5 V
K21S43T	18.0	0.15	K221L	339.504	192.206	249.967	17.652	0.24981	2.97399	4 V
K21S43U	17.4	0.15	K221L	313.836	130.779	328.654	2.163	0.09857	3.07094	4 V
K21S43V	14.8	0.15	K221L	315.545	81.175	358.203	7.829	0.03595	5.25684	3 V
K21S44K	17.5	0.15	K221L	62.509	316.887	20.960	2.186	0.07609	2.86207	6 V
K21S44O	15.0	0.15	K221L	308.787	214.769	234.899	8.220	0.07264	5.24619	4 V
K21S44R	17.6	0.15	K221L	61.033	125.308	226.903	17.456	0.09128	2.81112	4 V
K21S44W	17.0	0.15	K221L	86.827	311.824	359.797	21.639	0.07391	3.08466	4 V
K21S44Y	14.7	0.15	K221L	17.698	285.446	89.418	20.104	0.06652	5.24525	3 V
K21S45S	14.3	0.15	K221L	25.263	322.132	48.525	32.420	0.01064	5.19167	2 V
K21S46C	17.4	0.15	K221L	41.782	134.626	223.547	13.490	0.29268	3.15119	3 V
K21S46T	14.9	0.15	K221L	335.116	118.151	291.042	12.178	0.05177	5.22571	2 V
K21S47T	14.3	0.15	K221L	321.892	193.952	237.455	28.241	0.05883	5.29489	3 V
K21T05G	16.6	0.15	K221L	289.563	21.635	99.319	6.667	0.15378	3.22748	6 V
K21T06B	16.0	0.15	K221L	120.780	99.024	168.895	11.142	0.06031	3.95945	5 V
K21T06Z	17.4	0.15	K221L	26.953	268.997	110.184	13.431	0.12559	3.10447	3 V
K21T09C	17.7	0.15	K221L	32.030	313.279	50.085	13.082	0.14725	2.89653	3 V
K21T10P	17.7	0.15	K221L	344.276	239.145	184.075	13.958	0.10348	2.96743	4 V
K21T12G	17.5	0.15	K221L	328.612	75.548	13.352	8.703	0.12031	3.08718	4 V
K21T17S	14.8	0.15	K221L	321.641	65.529	15.344	3.873	0.04226	5.28337	4 V
K21T18E	17.5	0.15	K221L	58.346	140.709	198.500	14.845	0.12366	2.99493	4 V
K21T19L	14.8	0.15	K221L	347.023	347.976	63.377	4.259	0.10477	5.21445	3 V
K21T19U	18.6	0.15	K221L	358.858	339.474	73.675	3.100	0.23030	2.74797	5 V
K21T20T	17.6	0.15	K221L	12.709	181.295	213.412	11.080	0.11492	3.23878	2 V
K21T20V	14.8	0.15	K221L	342.181	211.999	210.942	10.219	0.12784	5.22674	5 V
K21T26Q	17.7	0.15	K221L	39.452	151.813	207.939	10.716	0.11052	2.84204	3 V
K21T29K	17.8	0.15	K221L	358.267	188.118	226.719	7.788	0.23501	3.09271	6 V
K21T31J	17.4	0.15	K221L	31.444	0.107	21.456	14.893	0.15055	3.11064	3 V
K21T34U	17.8	0.15	K221L	46.225	117.764	245.828	5.192	0.07885	2.81095	7 V
K21T34X	19.1	0.15	K221L	323.632	20.218	92.414	25.331	0.11358	1.86187	7 V
K21T34Y	14.8	0.15	K221L	346.056	266.497	154.842	8.278	0.09500	5.12349	6 V
K21T35E	17.6	0.15	K221L	336.438	236.969	201.711	9.035	0.11431	3.18321	2 V
K21T36P	17.4	0.15	K221L	1.372	185.092	234.763	14.715	0.24774	3.18993	2 V
K21T36R	17.5	0.15	K221L	8.271	10.481	43.472	28.961	0.14701	3.01798	3 V
K21T41O	17.1	0.15	K221L	352.198	18.740	25.013	17.249	0.10692	3.16711	4 V
K21T42V	14.6	0.15	K221L	15.996	330.725	48.553	8.902	0.02141	5.21981	4 V
K21T42W	14.6	0.15	K221L	321.951	47.921	32.278	13.550	0.10247	5.33177	6 V
K21T44K	15.0	0.15	K221L	29.589	178.401	192.119	12.736	0.07104	5.22867	3 V
K21T46D	17.4	0.15	K221L	15.630	168.352	225.610	12.637	0.15841	3.08372	2 V
K21T48K	15.9	0.15	K221L	52.976	11.900	300.634	6.842	0.18243	3.98961	3 V
K21T48N	14.7	0.15	K221L	309.319	204.622	258.532	23.060	0.11380	5.22316	3 V
K21T49J	17.2	0.15	K221L	26.727	174.036	214.670	10.308	0.10753	3.19758	4 V
K21T51P	15.1	0.15	K221L	344.915	31.036	29.666	22.517	0.13790	5.22987	3 V
K21T51Y	18.2	0.15	K221L	3.076	347.356	54.074	11.666	0.27752	3.17336	3 V
K21T52Y	14.7	0.15	K221L	19.258	146.220	237.958	11.995	0.07952	5.20502	4 V
K21T54D	18.1	0.15	K221L	348.731	86.593	352.011	6.839	0.24671	3.02256	4 V
K21T54Q	16.9	0.15	K221L	342.105	220.832	229.243	15.769	0.18076	3.12505	3 V
K21T55A	16.9	0.15	K221L	336.312	212.191	235.236	17.641	0.09698	3.20209	2 V
K21T55J	17.2	0.15	K221L	68.720	99.319	238.124	9.403	0.11565	3.02064	6 V
K21T55P	17.4	0.15	K221L	41.183	104.230	265.836	3.839	0.13700	3.01653	6 V
K21T56G	15.3	0.15	K221L	344.093	169.779	240.161	19.749	0.07109	5.27840	3 V
K21T56J	17.5	0.15	K221L	40.381	92.424	286.592	4.916	0.10809	2.81938	6 V
K21T57S	17.6	0.15	K221L	1.357	64.377	356.542	1.880	0.07957	2.81774	5 V
K21T58U	17.4	0.15	K221L	92.670	278.031	25.516	2.761	0.10323	3.04990	4 V
K21T61S	18.0	0.15	K221L	1.544	68.691	348.568	8.423	0.14178	2.86557	4 V
K21T62E	17.3	0.15	K221L	120.324	18.281	262.134	9.228	0.08461	2.80188	3 V
K21T62F	17.2	0.15	K221L	22.534	44.813	339.002	10.581	0.07081	3.13183	6 V
K21T62H	17.3	0.15	K221L	317.323	96.298	25.881	24.996	0.24957	3.11647	3 V
K21T62V	17.7	0.15	K221L	33.056	90.340	275.174	5.750	0.16618	3.15804	2 V
K21T63B	17.1	0.15	K221L	283.382	176.984	322.948	6.398	0.12852	3.22269	3 V
K21T63C	16.8	0.15	K221L	11.215	141.772	252.983	11.542	0.02537	3.08176	4 V
K21T64C	17.3	0.15	K221L	84.739	171.044	132.876	1.351	0.17569	3.07069	4 V
K21T64M	17.6	0.15	K221L	356.532	318.451	111.479	7.470	0.05136	2.78154	8 V
K21T64U	16.7	0.15	K221L	293.673	270.130	232.372	9.650	0.12760	3.09745	8 V

K21T65A	15.1	0.15	K221L	351.034	227.460	184.121	7.657	0.06636	5.05861	4 V
K21T66O	15.7	0.15	K221L	336.816	21.499	51.276	3.118	0.16768	5.19741	3 V
K21T66Q	15.2	0.15	K221L	340.281	213.945	207.867	16.015	0.06646	5.18893	3 V
K21T68C	17.1	0.15	K221L	308.655	246.765	232.273	21.664	0.09073	3.09957	3 V
K21T68S	17.1	0.15	K221L	315.790	37.572	66.133	17.353	0.08005	2.89403	5 V
K21T69H	17.0	0.15	K221L	318.469	284.456	203.378	15.382	0.27296	3.16342	4 V
K21T69S	17.4	0.15	K221L	266.502	344.993	159.449	9.653	0.00605	3.09269	4 V
K21T69T	17.5	0.15	K221L	88.959	230.464	79.139	10.675	0.10940	3.03518	4 V
K21T70N	16.9	0.15	K221L	140.627	242.166	22.338	10.608	0.05212	3.15664	6 V
K21T71A	17.7	0.15	K221L	43.359	241.323	133.823	7.186	0.05575	2.78753	5 V
K21T71E	17.7	0.15	K221L	29.296	310.948	76.062	10.359	0.16245	2.78356	3 V
K21T71J	17.9	0.15	K221L	349.577	275.561	162.593	9.439	0.11465	2.85959	5 V
K21T71O	17.3	0.15	K221L	81.084	278.363	41.266	9.557	0.07572	3.17396	2 V
K21T71S	18.2	0.15	K221L	341.934	78.818	10.250	9.748	0.27629	3.11059	3 V
K21T71X	17.9	0.15	K221L	55.521	291.242	39.672	13.942	0.30190	3.16249	2 V
K21T71Y	17.7	0.15	K221L	10.520	180.470	227.779	7.660	0.13605	3.02314	4 V
K21T72Q	17.7	0.15	K221L	14.725	331.319	69.027	2.411	0.20461	3.10245	4 V
K21T72R	18.1	0.15	K221L	39.180	293.873	75.344	4.553	0.18695	2.76563	2 V
K21T74A	17.7	0.15	K221L	341.442	126.868	305.251	7.175	0.10505	3.00430	4 V
K21T74K	16.8	0.15	K221L	178.597	321.436	266.236	15.172	0.02748	3.16360	4 V
K21T76J	17.6	0.15	K221L	50.901	138.363	206.897	22.841	0.22509	3.12835	2 V
K21T77B	17.7	0.15	K221L	39.747	170.183	204.583	10.772	0.10205	2.93114	6 V
K21T77O	17.9	0.15	K221L	25.314	112.861	270.927	8.045	0.13864	3.05360	2 V
K21T77V	18.0	0.15	K221L	44.166	353.605	13.865	5.281	0.10631	2.77802	4 V
K21T78E	17.4	0.15	K221L	34.754	304.662	75.784	11.612	0.13859	3.03241	4 V
K21T78F	16.7	0.15	K221L	345.180	18.402	76.851	18.789	0.22246	3.15147	5 V
K21T78S	17.4	0.15	K221L	69.028	190.845	150.478	4.854	0.08224	2.78682	5 V
K21T79H	18.0	0.15	K221L	2.803	264.101	151.992	4.881	0.05902	2.75538	4 V
K21T79Q	15.4	0.15	K221L	357.353	236.744	179.569	2.632	0.14614	5.18285	3 V
K21T79V	17.4	0.15	K221L	52.999	300.970	56.223	11.656	0.08522	3.03758	5 V
K21T80B	14.8	0.15	K221L	353.762	131.635	288.707	5.975	0.07729	5.15339	5 V
K21T80C	14.7	0.15	K221L	5.269	172.515	231.986	12.526	0.05219	5.23128	2 V
K21T80T	17.3	0.15	K221L	357.780	80.585	343.548	8.575	0.07007	3.05286	5 V
K21T80W	17.3	0.15	K221L	110.471	318.942	323.119	11.581	0.15859	2.77628	4 V
K21T81B	16.9	0.15	K221L	90.586	302.427	348.103	15.782	0.26131	3.09018	2 V
K21T82H	17.0	0.15	K221L	353.572	22.387	43.833	13.341	0.12121	2.97890	4 V
K21T82K	17.7	0.15	K221L	69.017	109.738	223.877	14.008	0.16733	2.87586	3 V
K21T82Q	17.5	0.15	K221L	87.349	109.659	205.790	3.898	0.11725	2.99906	4 V
K21T87U	17.3	0.15	K221L	75.995	111.812	216.235	9.077	0.06737	3.13015	3 V
K21T87W	17.2	0.15	K221L	27.605	334.597	48.506	9.215	0.09242	3.05986	5 V
K21T88D	14.8	0.15	K221L	344.265	221.211	208.209	12.950	0.05151	5.23439	5 V
K21T88H	14.7	0.15	K221L	343.480	26.909	41.385	19.510	0.16228	5.14722	3 V
K21T88Q	14.8	0.15	K221L	0.795	4.171	39.852	16.482	0.13194	5.11231	3 V
K21T89J	14.8	0.15	K221L	12.139	20.114	10.874	25.852	0.03074	5.15958	3 V
K21T89Y	17.8	0.15	K221L	21.744	333.222	58.247	14.550	0.17300	3.12210	2 V
K21T90B	17.7	0.15	K221L	346.222	217.698	218.728	0.796	0.15616	3.11532	4 V
K21T90N	17.1	0.15	K221L	110.856	233.946	58.023	8.531	0.09310	3.08849	5 V
K21T90U	17.6	0.15	K221L	27.587	329.180	55.186	6.296	0.14062	2.90835	4 V
K21T91F	17.5	0.15	K221L	47.889	312.793	41.319	10.929	0.13418	3.10495	2 V
K21T91M	14.8	0.15	K221L	300.091	281.141	193.292	25.985	0.10629	5.17886	3 V
K21T91V	16.7	0.15	K221L	322.322	9.283	85.432	16.485	0.07028	3.17819	4 V
K21T92D	17.1	0.15	K221L	20.234	257.236	135.662	10.803	0.05088	3.09202	4 V
K21T92J	17.4	0.15	K221L	103.250	264.925	28.218	3.920	0.12183	3.08094	5 V
K21T92L	15.0	0.15	K221L	352.403	225.067	194.911	5.401	0.04690	5.20563	3 V
K21T92M	14.8	0.15	K221L	49.658	289.930	69.164	8.509	0.03033	5.28519	5 V
K21T92O	14.6	0.15	K221L	332.619	50.339	29.060	3.651	0.09374	5.19516	7 V
K21T92V	17.7	0.15	K221L	301.330	283.332	203.173	3.588	0.08522	2.96630	4 V
K21T93E	17.6	0.15	K221L	52.265	157.399	200.435	9.520	0.10877	2.99264	4 V
K21T93K	17.4	0.15	K221L	133.508	207.411	72.104	6.662	0.02385	2.93677	4 V
K21T93S	17.8	0.15	K221L	357.961	0.808	58.106	4.852	0.05888	2.75700	5 V
K21T93T	17.9	0.15	K221L	49.741	293.693	49.739	10.138	0.23214	2.97427	2 V
K21T94A	14.5	0.15	K221L	52.241	314.125	42.407	13.470	0.08516	5.19039	6 V
K21T94C	17.1	0.15	K221L	350.742	222.972	200.606	4.309	0.03902	3.03876	7 V
K21T95D	14.7	0.15	K221L	3.867	166.728	245.373	31.381	0.07001	5.25128	2 V
K21T95S	15.2	0.15	K221L	355.547	290.411	127.097	2.412	0.11471	5.20826	3 V
K21T95T	15.1	0.15	K221L	341.382	219.294	211.656	13.658	0.02862	5.30668	3 V
K21T95U	17.7	0.15	K221L	36.671	208.825	174.776	14.241	0.24203	3.12939	3 V
K21T95V	17.8	0.15	K221L	333.045	46.225	50.812	13.886	0.10219	2.76155	6 V
K21T97E	15.1	0.15	K221L	11.334	238.232	167.758	15.618	0.05059	5.15187	3 V
K21T97J	15.0	0.15	K221L	14.734	223.785	173.267	17.959	0.12610	5.23016	3 V
K21T98A	18.0	0.15	K221L	48.664	283.068	61.268	14.022	0.31232	3.16252	2 V
K21T98Y	18.1	0.15	K221L	358.156	333.240	85.973	2.319	0.16875	3.09973	3 V
K21T99B	17.7	0.15	K221L	54.991	261.909	96.825	6.192	0.06715	2.76841	5 V
K21T99H	16.9	0.15	K221L	6.324	353.463	64.853	17.936	0.14255	3.18709	4 V
K21TA0B	18.0	0.15	K221L	51.956	107.638	247.330	8.326	0.21979	2.79241	3 V
K21TA0D	16.7	0.15	K221L	343.002	187.523	256.203	10.017	0.05776	3.14894	5 V
K21TA1X	14.7	0.15	K221L	344.662	314.212	100.283	8.752	0.08643	5.27896	4 V
K21TA3E	17.7	0.15	K221L	328.066	285.622	194.742	10.888	0.26014	3.05230	4 V
K21TA3T	17.5	0.15	K221L	338.157	291.149	149.843	10.345	0.13503	3.05685	3 V
K21TA4X	16.7	0.15	K221L	214.064	248.721	305.211	8.510	0.06258	3.14026	5 V
K21TA5C	17.4	0.15	K221L	343.712	200.107	241.996	13.887	0.23010	3.18599	2 V
K21TA6W	15.1	0.15	K221L	2.484	274.223	125.715	8.708	0.04802	5.18883	4 V
K21TA6X	14.8	0.15	K221L	331.410	92.017	345.651	5.277	0.11259	5.22138	7 V
K21TA8P	18.0	0.15	K221L	33.535	291.589	74.433	3.096	0.09480	2.82841	4 V
K21TA8U	17.7	0.15	K221L	133.587	123.054	147.130	4.896	0.02142	2.75557	6 V
K21TA8W	15.1	0.15	K221L	352.883	351.584	54.538	8.215	0.08418	5.13642	3 V
K21TA9J	17.1	0.15	K221L	59.694	54.527	283.636	8.233	0.10643	3.06397	5 V
K21TA9M	17.2	0.15	K221L	334.151	349.164	102.938	16.958	0.22031	3.17705	3 V
K21TA9T	20.2	0.15	K221L	16.989	8.850	48.235	21.739	0.08394	1.85627	2 V
K21U03S	16.4	0.15	K221L	325.931	211.457	251.701	18.507	0.13646	3.10371	3 V
K21U06N	19.3	0.15	K221L	272.962	224.934	297.723	17.093	0.03733	1.93488	2 V
K21U07X	17.3	0.15	K221L	315.379	169.757	294.349	8.416	0.07276	3.00865	5 V
K21U08D	19.0	0.15	K221L	273.409	322.019	211.459	11.793	0.23877	1.93574	5 V

K21U08F	18.1	0.15	K221L	344.997	220.634	228.217	10.986	0.32341	2.98897	2 V
K21U08L	17.5	0.15	K221L	1.800	204.725	227.577	14.190	0.23665	3.16433	3 V
K21U08T	17.1	0.15	K221L	246.024	253.629	286.271	11.932	0.14703	2.77513	5 V
K21U10G	17.9	0.15	K221L	8.174	183.218	223.642	17.090	0.18465	3.14753	3 V
K21U10K	19.4	0.15	K221L	356.739	300.175	111.095	25.277	0.07999	2.00277	3 V
K21U10X	17.2	0.15	K221L	152.549	20.068	233.796	26.217	0.04451	3.09272	2 V
K21U11O	14.9	0.15	K221L	23.772	219.402	164.728	9.565	0.03303	5.20902	3 V
K21U11Y	18.8	0.15	K221L	236.545	305.191	258.929	18.046	0.07048	1.94828	6 V
K21U12W	16.8	0.15	K221L	344.148	125.551	304.475	9.183	0.05879	2.99422	3 V
K21U15B	19.6	0.15	K221L	308.624	63.725	65.618	21.550	0.02129	1.85571	4 V
K21U15E	14.8	0.15	K221L	212.020	63.583	141.302	27.757	0.04318	5.18125	6 V
K21U15Y	17.4	0.15	K221L	75.428	141.333	180.520	7.634	0.11502	3.00756	7 V
K21U16B	17.1	0.15	K221L	305.275	295.913	174.802	9.272	0.05273	3.17316	5 V
K21U16D	17.1	0.15	K221L	4.641	37.409	7.540	9.998	0.14183	3.08318	5 V
K21U16L	17.4	0.15	K221L	61.954	194.661	155.770	10.989	0.11883	2.93100	4 V
K21U16R	16.7	0.15	K221L	58.076	259.303	87.705	12.332	0.09646	3.50394	4 V
K21U16S	16.8	0.15	K221L	99.552	210.732	94.824	10.669	0.08386	3.16177	4 V
K21U17H	17.4	0.15	K221L	309.157	341.370	150.143	8.718	0.16772	2.78033	6 V
K21U18D	17.0	0.15	K221L	3.911	195.350	219.384	20.893	0.14922	3.14690	4 V
K21U19T	16.0	0.15	K221L	344.987	226.401	210.308	3.125	0.08237	3.93825	7 V
K21U22B	17.7	0.15	K221L	337.864	123.048	325.190	4.211	0.11189	3.03300	5 V
K21U22G	17.8	0.15	K221L	327.696	220.146	253.591	10.264	0.20475	2.78067	4 V
K21U22J	17.5	0.15	K221L	340.124	216.789	232.318	16.765	0.16236	3.06718	4 V
K21U22Q	17.6	0.15	K221L	347.606	238.334	207.239	20.448	0.21534	3.16298	2 V
K21U22R	17.3	0.15	K221L	325.491	36.518	66.307	17.830	0.11475	3.06074	2 V
K21U22S	17.7	0.15	K221L	48.849	279.404	70.230	15.184	0.21518	3.15988	2 V
K21U22Y	17.1	0.15	K221L	61.422	220.240	121.259	2.371	0.18318	3.10954	4 V
K21U23V	17.7	0.15	K221L	0.356	140.661	277.353	0.942	0.06848	2.86975	6 V
K21U24T	17.9	0.15	K221L	353.466	202.629	234.107	16.012	0.23520	3.02064	2 V
K21U25Z	16.9	0.15	K221L	222.923	253.021	300.323	10.173	0.12544	3.04359	3 V
K21U27U	18.6	0.15	K221L	353.001	328.140	122.825	6.763	0.25991	2.60877	3 V
K21U29H	15.0	0.15	K221L	21.951	175.953	201.647	22.746	0.15120	5.16159	4 V
K21U29J	14.7	0.15	K221L	320.589	4.343	79.859	8.473	0.05366	5.22690	5 V
K21U29Z	15.0	0.15	K221L	16.301	231.160	152.896	5.966	0.05636	5.18420	3 V
K21U31A	17.8	0.15	K221L	344.027	308.907	133.101	4.116	0.11366	2.93539	4 V
K21U31E	18.4	0.15	K221L	2.033	204.189	217.049	9.821	0.19462	2.79114	2 V
K21U32K	17.4	0.15	K221L	94.375	168.982	158.669	0.861	0.07603	2.81663	6 V
K21U32M	14.7	0.15	K221L	325.679	90.029	358.695	18.461	0.09469	5.26267	4 V
K21U32V	17.2	0.15	K221L	319.908	148.123	315.259	11.035	0.09060	3.06274	6 V
K21U32W	17.2	0.15	K221L	81.490	347.971	322.330	13.984	0.15244	3.13152	5 V
K21U33B	17.9	0.15	K221L	56.266	145.947	199.379	5.826	0.14410	2.98773	2 V
K21U33E	17.5	0.15	K221L	81.373	265.327	68.754	6.181	0.12680	2.78053	5 V
K21U33Y	17.0	0.15	K221L	103.538	353.697	290.782	14.191	0.23511	2.88959	4 V
K21U34B	17.1	0.15	K221L	322.748	91.373	4.085	19.185	0.07976	3.16642	4 V
K21U34F	19.9	0.15	K221L	95.324	128.529	204.345	21.529	0.07037	1.82835	4 V
K21U34S	17.7	0.15	K221L	39.943	264.582	119.144	8.753	0.08852	2.92835	4 V
K21U35B	17.7	0.15	K221L	37.090	330.778	46.924	11.949	0.08579	2.96349	2 V
K21U35Q	17.6	0.15	K221L	30.354	243.086	155.185	8.135	0.09231	2.76955	7 V
K21U35S	18.1	0.15	K221L	354.825	1.957	60.536	5.448	0.09453	2.79538	4 V
K21U36S	17.4	0.15	K221L	86.757	27.943	285.770	11.417	0.14175	2.86772	4 V
K21U36W	17.4	0.15	K221L	35.023	121.591	255.602	13.938	0.10357	2.96067	5 V
K21U37G	17.9	0.15	K221L	49.375	285.962	76.427	5.466	0.08540	2.77886	4 V
K21U37H	17.6	0.15	K221L	36.719	149.004	224.577	0.425	0.15362	3.07119	5 V
K21U37R	16.8	0.15	K221L	296.856	105.576	43.985	26.274	0.21313	3.06623	2 V
K21U37Z	14.6	0.15	K221L	17.300	180.219	223.106	3.758	0.10311	5.23910	8 V
K21U38B	14.7	0.15	K221L	349.825	182.301	243.890	12.302	0.04547	5.23145	4 V
K21U38S	17.6	0.15	K221L	54.576	99.904	261.386	9.810	0.07627	2.99076	4 V
K21U38X	17.9	0.15	K221L	349.822	284.479	165.287	0.378	0.17200	3.07599	6 V
K21U39O	17.6	0.15	K221L	68.556	62.498	261.612	16.745	0.19421	3.07758	2 V
K21U39U	17.5	0.15	K221L	332.655	37.614	56.685	15.799	0.11288	2.89760	5 V
K21U40A	14.9	0.15	K221L	8.214	302.366	90.230	11.999	0.06189	5.15289	4 V
K21U40D	17.2	0.15	K221L	161.456	155.610	94.420	16.506	0.09205	2.85575	5 V
K21U40H	18.9	0.15	K221L	36.647	47.056	328.230	6.967	0.23825	2.72778	2 V
K21U40M	14.9	0.15	K221L	21.967	178.184	220.969	6.887	0.09070	5.21448	5 V
K21U40O	19.6	0.15	K221L	58.334	2.207	352.339	0.931	0.14029	2.17770	4 V
K21U40R	17.6	0.15	K221L	345.686	351.702	92.507	12.429	0.06684	2.89100	4 V
K21U40V	17.8	0.15	K221L	9.233	266.138	143.973	1.866	0.15606	3.13390	4 V
K21U41C	19.9	0.15	K221L	104.821	227.412	79.949	22.924	0.15021	1.86004	3 V
K21U41O	17.2	0.15	K221L	309.322	31.216	97.083	11.706	0.17725	3.14291	3 V
K21U41S	17.2	0.15	K221L	79.159	248.143	78.711	18.446	0.14702	3.13814	2 V
K21U41V	15.3	0.15	K221L	28.257	163.098	213.544	8.142	0.12546	5.25247	3 V
K21U42B	19.3	0.15	K221L	60.793	189.733	168.100	7.408	0.12105	2.23666	4 V
K21U42L	18.5	0.15	K221L	1.526	260.273	171.843	8.969	0.18610	2.77124	4 V
K21U42R	18.8	0.15	K221L	14.794	225.971	197.899	6.010	0.16825	2.27272	5 V
K21U42S	17.8	0.15	K221L	330.309	160.285	313.600	7.124	0.17344	2.80141	4 V
K21U42U	17.9	0.15	K221L	71.174	195.354	148.860	3.428	0.15892	2.59623	5 V
K21U42V	18.1	0.15	K221L	37.989	280.316	110.048	5.338	0.08824	2.58606	5 V
K21U42X	18.6	0.15	K221L	350.590	287.922	164.335	4.938	0.22570	2.62626	3 V
K21U42Z	17.2	0.15	K221L	353.757	232.205	210.107	12.657	0.14739	3.06331	4 V
K21U43A	17.7	0.15	K221L	311.428	293.416	212.673	12.710	0.21713	2.60095	3 V
K21U43B	19.5	0.15	K221L	29.707	292.399	93.891	4.874	0.26215	2.55226	2 V
K21U43D	16.8	0.15	K221L	316.124	31.128	92.477	11.342	0.05538	3.00434	6 V
K21U48A	17.7	0.15	K221L	354.992	262.331	192.446	12.408	0.14881	2.69198	4 V
K21U63H	17.5	0.15	K221L	23.303	15.870	29.747	9.404	0.08331	3.09657	5 V
K21U63Q	14.6	0.15	K221L	338.732	40.351	44.930	2.684	0.00559	5.32725	8 V
K21U63X	17.3	0.15	K221L	306.909	58.468	73.448	2.790	0.04734	2.96861	3 V
K21U64J	16.8	0.15	K221L	102.221	223.341	79.933	11.356	0.21451	3.12388	8 V
K21X01O	18.1	0.15	K221L	335.822	159.361	67.168	23.898	0.79252	2.35268	4 V

New perturbed one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc C
K11A78W	18.1	0.15	K221L	114.954	86.486	78.588	2.035	0.11467	2.73599	18 V
K16F76H	18.8	0.15	K221L	225.446	305.748	234.630	4.129	0.16416	2.34821	29 V

K16G12Q	16.6	0.15	K221L	280.224	256.993	34.799	14.848	0.14872	3.24484	8	V
K17R49N	17.5	0.15	K221L	302.949	309.540	18.692	0.969	0.16213	3.10919	8	V
K17SC4A	17.1	0.15	K221L	237.992	9.532	36.145	13.705	0.11832	3.21718	30	V
K21P15B	21.8	0.15	K221L	39.426	73.613	0.150	7.864	0.18342	1.17791	131	X
K21S00S	19.7	0.15	K221L	17.303	158.983	218.896	22.138	0.50273	3.04427	82	V
K21T07V	22.7	0.15	K221L	10.399	195.670	230.585	2.152	0.61685	2.84233	76	X
K21U07L	25.7	0.15	K221L	341.914	118.558	21.375	0.660	0.11522	1.08018	54	X
K21U70F	22.0	0.15	K221L	0.727	28.789	85.584	14.142	0.63361	2.70674	51	X
K21W01T	23.1	0.15	K221L	356.081	244.781	262.283	7.057	0.61575	2.12158	24	X
K21W03J	26.1	0.15	K221L	13.687	24.408	76.816	7.617	0.24675	1.31986	27	V
K21X00D	25.2	0.15	K221L	12.000	89.748	342.003	1.876	0.58734	2.53915	21	V
K21X02P	25.5	0.15	K221L	20.635	176.492	253.521	7.976	0.44580	1.78031	15	X
K21X02T	22.4	0.15	K221L	355.074	60.297	100.461	12.318	0.56867	1.88974	17	X
K21X03J	26.1	0.15	K221L	11.173	353.890	103.526	4.422	0.37882	1.65773	15	X
K21X05J	21.1	0.15	K221L	51.227	112.900	272.375	12.153	0.39628	1.43105	12	X
K21X06A	24.8	0.15	K221L	170.451	223.065	79.399	6.737	0.16078	0.89045	8	X
K21X06K	22.7	0.15	K221L	18.639	178.144	269.324	20.959	0.31271	1.45538	5	X
K21X06L	21.1	0.15	K221L	34.290	343.800	59.898	23.186	0.33899	1.47636	16	X
K21X06R	26.4	0.15	K221L	97.796	286.237	63.137	5.060	0.24224	1.09179	8	V
K21Y00C	25.8	0.15	K221L	28.759	351.348	85.933	6.641	0.22379	1.27745	3	X
K21Y00E	25.8	0.15	K221L	29.514	336.328	76.357	3.414	0.40871	1.65927	2	V
K21Y00F	20.8	0.15	K221L	19.498	97.421	350.440	7.864	0.31455	1.94976	2	V
K21Y00G	20.9	0.15	K221L	10.954	198.316	266.370	20.767	0.47785	2.30142	40	V
K21Y00H	27.0	0.15	K221L	15.298	343.226	80.164	5.796	0.57276	2.25392	3	V

New observations:

K05YC8X	KC2021	12	18.18061907	36	08.68	+18	23	26.5	16.6	GXEY044C95	
K05YC8X	KC2021	12	18.21094307	36	07.03	+18	23	14.9	18.2	GXEY044C95	
K06A00N	DC2021	12	20.30968	03	02	49.99	+30	22	41.7	22.3	GVEY044695
K06A00N	DC2021	12	20.32179	03	02	47.52	+30	22	01.4	22.6	GVEY044695
K06A00N	DC2021	12	20.33389	03	02	45.07	+30	21	21.2	22.7	GVEY044695
K06005A	KC2021	12	18.77929	22	51	13.45	+64	34	58.8	18.1	GXEY044Z43
K06005A	KC2021	12	18.80208	22	51	38.26	+64	36	07.8	18.4	GXEY044Z43
K06005A	KC2021	12	18.82284	22	52	00.99	+64	37	10.1	17.6	GXEY044Z43
K06005A	KC2021	12	18.83986	22	52	19.61	+64	38	00.3	16.8	GXEY044Z43
K07T23C	KC2021	12	19.88175	03	49	05.34	+65	05	13.3	18.1	GXEY044B88
K07T23C	KC2021	12	19.91716	03	49	19.24	+65	06	54.4	19.1	GXEY044B88
K07T23C	KC2021	12	19.95432	03	49	33.87	+65	08	38.8	19.1	GXEY044B88
K10W07Q	KC2021	12	19.77609	05	33	45.23	+13	01	25.6	16.5	GVEY044K83
K10W07Q	KC2021	12	19.78633	05	33	44.33	+13	01	40.7	17.5	GVEY044K83
K12UD6S	KC2021	12	19.76293	22	43	42.38	+50	32	16.8	XEY044B88	
K12UD6S	KC2021	12	19.79744	22	43	45.68	+50	32	00.5	20.7	GXEY044B88
K12UD6S	KC2021	12	19.83323	22	43	49.17	+50	31	42.8	XEY044B88	
K17W15A	C2021	11	11.18676221	33	59.816+31	39	34.41	19.56	GVEY044T12		
K17W15A	C2021	11	11.18728021	33	59.910+31	39	34.05	19.71	GVEY044T12		
K17W15A	C2021	11	11.18821021	34	00.082+31	39	33.30	19.66	GVEY044T12		
K17W15A	C2021	11	11.18864721	34	00.167+31	39	32.91	19.47	GVEY044T12		
K19N01C	C2021	09	22.32975517	19	03.315+36	46	39.33	20.88	zUEY044F51		
K19N01C	C2021	09	22.34042117	19	01.080+36	46	47.50	20.85	zUEY044F51		
K19N01C	C2021	09	22.35103817	18	58.901+36	46	55.16	21.52	zUEY044F51		
K21P15B	DC2021	12	19.52044	14	03	37.83	+37	46	43.5	21.1	GoEY044695
K21P15B	DC2021	12	19.52482	14	03	37.85	+37	46	36.3	21.3	GoEY044695
K21P15B	DC2021	12	19.52921	14	03	37.86	+37	46	29.2	21.2	GoEY044695
K21T07V	DC2021	12	20.44131	04	59	44.50	+12	17	57.1	19.6	GVEY044695
K21T07V	DC2021	12	20.44569	04	59	46.06	+12	17	58.2	20.4	GVEY044695
K21T07V	DC2021	12	20.45008	04	59	47.64	+12	17	59.2	19.6	GVEY044695
K21U07L	DC2021	12	20.23932	00	19	10.36	+09	35	48.9	23.5	GVEY044695
K21U07L	DC2021	12	20.24809	00	19	10.14	+09	35	50.3	22.7	GVEY044695
K21U70F	6C2021	12	20.10786	01	36	53.01	+00	20	05.8	20.3	GVEY044290
K21U70F	6C2021	12	20.11097	01	36	52.47	+00	20	20.9	20.4	GVEY044290
K21U70F	6C2021	12	20.11605	01	36	51.55	+00	20	45.9	20.4	GVEY044290
K21U70F	6C2021	12	20.11944	01	36	50.94	+00	21	02.6	20.2	GVEY044290
K21W01T	6C2021	12	20.13815	01	43	23.45	+08	58	28.6	20.1	GVEY044290
K21W01T	6C2021	12	20.13971	01	43	22.60	+08	58	15.1	20.0	GVEY044290
K21W01T	6C2021	12	20.14132	01	43	21.69	+08	58	00.9	20.2	GVEY044290
K21W01T	6C2021	12	20.14284	01	43	20.85	+08	57	47.9	20.2	GVEY044290
K21X02P	DC2021	12	19.48234	09	34	42.32	-24	33	41.9	21.9	GVEY044695
K21X02P	DC2021	12	19.49516	09	34	41.06	-24	33	55.2	22.3	GVEY044695
K21X02P	DC2021	12	19.50797	09	34	39.87	-24	34	08.1	22.0	GVEY044695
K21X02T	6C2021	12	20.45801	11	12	12.02	+00	00	41.0	22.0	GVEY044290
K21X02T	6C2021	12	20.46764	11	12	21.08	+00	00	36.7	22.0	GVEY044290
K21X02T	6C2021	12	20.47742	11	12	30.27	+00	00	33.1	21.5	GVEY044290
K21X03J	DC2021	12	20.39281	06	59	37.95	+01	29	29.3	20.8	GVEY044695
K21X03J	DC2021	12	20.39658	06	59	40.23	+01	29	44.0	21.4	GVEY044695
K21X03J	DC2021	12	20.40034	06	59	42.51	+01	29	59.0	VEY044695	
K21X05J	6C2021	12	20.39974	10	07	07.71	+05	32	50.3	19.2	GVEY044290
K21X05J	6C2021	12	20.40185	10	07	07.01	+05	32	44.4	19.2	GVEY044290
K21X05J	6C2021	12	20.40395	10	07	06.31	+05	32	38.5	19.3	GVEY044290
K21X05J	6C2021	12	20.40610	10	07	05.59	+05	32	32.4	19.1	GVEY044290
K21X06A	KC2021	12	19.86915601	24	53.99	+49	03	10.4	18.5	GVEY044203	
K21X06A	KC2021	12	19.88182301	24	56.21	+49	03	24.4	19.0	GVEY044203	
K21X06A	KC2021	12	19.89499701	24	58.59	+49	03	37.8	18.3	GVEY044203	
K21X06K	KC2021	12	19.95802609	01	35.02	+26	14	34.8	15.8	GVEY044203	
K21X06K	KC2021	12	19.96122409	01	31.89	+26	11	11.0	15.9	GVEY044203	
K21X06K	KC2021	12	19.96467709	01	28.49	+26	07	30.6	15.9	GVEY044203	
K21X06K	KC2021	12	19.97033709	01	22.88	+26	01	29.7	16.0	GVEY044203	
K21X06L	6C2021	12	20.08919	23	05	56.25	+31	36	36.2	20.8	GVEY044290
K21X06L	6C2021	12	20.09229	23	05	56.65	+31	36	57.2	20.7	GVEY044290
K21X06L	6C2021	12	20.09538	23	05	57.03	+31	37	18.3	20.6	GVEY044290
K21X06L	6C2021	12	20.09848	23	05	57.42	+31	37	39.3	20.6	GVEY044290
K21Y00C	KC2021	12	19.92766008	34	19.08	+39	36	30.2	17.7	GVEY044203	
K21Y00C	KC2021	12	19.93533308	34	30.77	+39	39	13.2	17.9	GVEY044203	
K21Y00C	KC2021	12	19.94325008	34	42.69	+39	42	00.5	17.7	GVEY044203	

p8678 LC2021 12 19.15321204 12 15.23 -56 30 32.6
p8678 LC2021 12 19.18030704 12 28.85 -56 29 39.0

15.8 GXEY044807
15.9 GXEY044807

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