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MPEC 2019-V146 : DAILY ORBIT UPDATE (2019 November 12)

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M.P.E.C. 2019-V146

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DAILY ORBIT UPDATE (2019 November 12)

Update to 2019-V143

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

New identifications:

K19U04Y	K19T07J	Veres
K19U03R	K05N71C	Williams
K19U04X	K18G03P	Williams

New multiple-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Opp	C
J97U03H	17.5	0.15	K194R	292.674	39.021	43.133	24.468	0.27784	2.37284	5	X
K00R56U	16.8	0.15	K194R	8.324	1.677	310.967	21.462	0.21708	2.79252	3	X
K01Q34C	20.1	0.15	K194R	128.357	215.379	271.640	6.236	0.18747	1.12833	4	X
K01T00Q	17.9	0.15	K194R	319.408	12.915	22.127	26.438	0.22826	2.33744	3	X
K01T01S	17.1	0.15	K194R	341.006	344.162	4.262	26.088	0.32907	2.32986	5	X
K01TL6H	17.0	0.15	K194R	320.069	48.941	355.896	9.111	0.26990	2.71945	6	X
K01U74K	17.6	0.15	K194R	310.490	333.236	47.628	13.011	0.25245	2.35696	8	X
K02GJ0N	16.7	0.15	K194R	209.165	96.838	36.236	9.018	0.08842	2.47354	6	X
K02QF6P	16.3	0.15	K194R	3.383	278.874	42.709	14.665	0.10870	2.62418	8	X
K02R07E	18.2	0.15	K194R	305.478	33.383	335.291	13.362	0.21684	1.99468	6	X
K02S75P	15.0	0.15	K194R	232.439	252.997	254.692	20.687	0.00830	3.08766	11	X
K02TD7J	15.5	0.15	K194R	356.885	21.607	6.476	17.778	0.21388	3.11525	7	X
K02TO5E	17.0	0.15	K194R	340.236	278.891	66.283	7.661	0.21041	2.63133	9	X
K02TP2S	15.5	0.15	K194R	17.918	349.014	3.481	12.527	0.08740	3.09922	9	X
K02Ta4C	18.6	0.15	K194R	317.363	316.790	47.056	5.446	0.25955	2.26237	4	X
K02U26D	17.2	0.15	K194R	297.322	44.788	38.157	14.034	0.23873	2.61151	6	X
K02V99B	16.6	0.15	K194R	313.123	123.071	272.456	27.456	0.30312	2.62874	3	X
K02XC1J	17.6	0.15	K194R	317.391	178.264	182.862	5.768	0.32303	2.27687	8	X
K03SW6F	18.3	0.15	K194R	282.711	35.377	21.018	11.914	0.14570	1.90965	6	X
K03UD0R	16.8	0.15	K194R	313.968	109.871	267.879	14.202	0.16107	2.52634	7	X
K03WA0A	15.9	0.15	K194R	348.138	91.127	252.940	25.735	0.26145	3.10848	4	X
K03X36T	17.0	0.15	K194R	276.885	112.957	358.062	6.742	0.20858	2.53101	8	X
K03Y92A	14.5	0.15	K194R	48.274	7.472	276.406	27.546	0.17048	3.14830	13	X
K03YC4J	16.0	0.15	K194R	352.427	226.723	102.964	32.833	0.20538	2.60306	8	X
K03YG2M	16.0	0.15	K194R	357.162	313.607	34.152	10.264	0.25614	2.55937	11	X
K05EU1Y	16.1	0.15	K194R	1.953	347.717	6.518	15.683	0.21744	2.55253	7	X
K05Q45C	17.2	0.15	K194R	310.570	42.849	2.111	6.654	0.10443	2.26434	6	X
K05QE7O	16.9	0.15	K194R	347.601	10.477	1.813	12.805	0.19960	2.72216	7	X
K05R01Q	16.9	0.15	K194R	342.414	36.590	336.111	16.012	0.30642	2.73538	4	X

K05SD0M	16.3	0.15	K194R	311.993	347.467	40.023	13.712	0.27760	2.80565	6	X
K05UE4Z	17.0	0.15	K194R	344.206	324.800	34.421	17.858	0.26668	2.79563	5	X
K05UL5C	17.6	0.15	K194R	313.350	295.854	75.241	7.467	0.23835	2.31380	6	X
K05V02C	17.6	0.15	K194R	332.312	167.697	221.814	37.138	0.58901	2.75541	4	X
K05W37E	18.1	0.15	K194R	289.361	340.606	72.980	7.971	0.25408	2.32606	4	X
K05YD9T	17.4	0.15	K194R	350.107	224.355	92.949	6.155	0.24080	2.38225	6	X
K06A09D	17.1	0.15	K194R	264.144	169.460	307.761	23.557	0.21615	2.34204	5	X
K06M00A	19.0	0.15	K194R	336.088	81.693	241.038	24.752	0.53045	2.64695	3	X
K06Q40B	17.6	0.15	K194R	323.037	264.606	88.718	7.087	0.36825	2.66378	3	X
K06Q44H	17.4	0.15	K194R	334.362	278.546	75.727	5.665	0.22714	2.62445	6	X
K06R11M	17.1	0.15	K194R	332.961	186.735	151.562	3.609	0.32413	2.66509	6	X
K06SC2E	17.2	0.15	K194R	290.409	144.587	274.973	12.677	0.23143	2.67105	4	X
K06W01M	18.8	0.15	K194R	303.454	294.018	74.752	26.872	0.28208	1.89279	4	X
K06WE0L	17.9	0.15	K194R	264.182	159.328	262.526	19.082	0.10519	1.91011	4	X
K06X45S	17.3	0.15	K194R	317.328	111.583	261.295	22.713	0.28519	2.20334	3	X
K07X39Q	16.4	0.15	K194R	248.396	165.143	289.029	21.291	0.01896	2.62159	5	X
K07Y50B	17.4	0.15	K194R	331.312	287.441	94.580	5.369	0.26777	2.56394	7	X
K08A61F	17.6	0.15	K194R	306.458	251.137	148.267	4.849	0.20457	2.60356	5	X
K08C82S	17.4	0.15	K194R	329.576	69.335	305.539	28.453	0.36044	2.58083	3	X
K08Q29V	16.5	0.15	K194R	359.067	125.504	195.268	18.738	0.29561	3.08431	6	X
K08TF7Q	18.1	0.15	K194R	332.972	250.245	90.493	9.190	0.28056	2.38165	5	V
K08U53S	16.9	0.15	K194R	315.092	15.170	54.537	6.667	0.37057	3.12474	4	X
K08Ua4M	16.4	0.15	K194R	339.879	30.969	327.084	17.567	0.28319	3.13818	4	X
K08V14P	16.6	0.15	K194R	311.535	77.336	357.746	22.933	0.43145	3.13742	4	X
K08WA1Y	19.6	0.15	K194R	267.488	168.439	248.205	11.920	0.21395	1.69731	5	X
K09BE4H	17.0	0.15	K194R	319.506	273.428	125.011	4.812	0.45678	3.22261	5	X
K09W26B	15.0	0.15	K194R	314.595	268.472	141.476	32.420	0.20120	3.19830	12	X
K09X01A	17.6	0.15	K194R	248.178	162.411	261.950	20.161	0.04039	1.87028	4	X
K09X21T	18.1	0.15	K194R	257.520	143.714	278.463	17.868	0.08963	1.88339	4	X
K10A10B	15.4	0.15	K194R	216.569	200.910	297.145	24.672	0.06356	3.16888	6	X
K10A15L	16.0	0.15	K194R	308.525	117.073	309.527	8.918	0.09973	3.02372	10	X
K10AE3S	16.1	0.15	K194R	327.591	91.793	276.439	14.581	0.23336	3.12055	6	X
K10C77R	16.0	0.15	K194R	336.808	56.261	338.536	21.853	0.22978	3.12631	6	X
K10D58C	16.5	0.15	K194R	13.114	23.454	270.400	15.325	0.24108	2.60962	7	X
K10E59Q	15.7	0.15	K194R	255.510	163.885	293.442	27.255	0.13543	3.08335	7	X
K10LD2E	17.8	0.15	K194R	327.571	358.733	28.441	10.236	0.28589	2.68734	4	X
K10R42O	15.6	0.15	K194R	247.394	186.165	259.762	20.939	0.04271	2.64097	10	X
K10S38N	16.8	0.15	K194R	306.012	118.579	281.853	12.175	0.19998	2.72113	6	X
K10U07H	19.1	0.15	K194R	326.401	0.459	9.392	15.649	0.53591	2.71761	3	X
K10VH9E	16.6	0.15	K194R	332.800	300.239	62.125	6.100	0.17030	2.78690	8	X
K11Q23D	17.3	0.15	K194R	308.895	199.894	184.842	6.754	0.37920	2.55479	5	X
K11SJ1D	16.7	0.15	K194R	324.717	106.892	268.768	25.674	0.46993	2.55354	4	X
K11SP9Q	16.8	0.15	K194R	290.620	125.103	286.323	14.583	0.16926	2.55267	5	X
K11T10D	17.6	0.15	K194R	293.379	100.406	329.551	17.543	0.09137	1.87878	5	X
K11U28S	16.6	0.15	K194R	320.062	340.072	10.465	6.675	0.31522	2.58386	9	X
K11U63F	17.5	0.15	K194R	332.612	54.500	281.723	17.795	0.08206	1.94487	5	X
K11UB8G	16.9	0.15	K194R	315.377	78.483	303.089	13.888	0.12806	2.53977	4	X
K11Ud4M	16.5	0.15	K194R	306.283	4.366	90.015	7.461	0.29012	2.58021	10	X
K11W39H	17.3	0.15	K194R	322.019	177.128	195.430	11.827	0.29471	2.56045	4	X
K11Y38J	16.1	0.15	K194R	317.668	119.211	278.001	13.674	0.19121	2.61762	8	X
K11Y39U	17.1	0.15	K194R	297.994	90.377	335.379	27.764	0.35413	2.59848	5	X
K11Y48H	16.7	0.15	K194R	304.677	67.394	4.999	12.001	0.13674	2.56686	11	X
K11Y62S	19.7	0.15	K194R	310.020	357.183	58.577	21.612	0.58217	2.50486	3	X
K12U81S	18.1	0.15	K194R	312.514	295.772	82.723	7.422	0.22119	2.33126	4	X
K12V69B	18.3	0.15	K194R	291.925	332.104	70.982	5.736	0.07281	2.34710	4	V
K12Y07Y	17.1	0.15	K194R	290.273	149.943	312.438	22.015	0.22734	2.28454	4	X
K13AB8U	17.1	0.15	K194R	331.366	59.675	304.079	10.365	0.34009	2.38476	7	X
K13B78H	17.0	0.15	K194R	272.485	133.541	323.427	24.556	0.21850	2.40416	5	X
K13E71W	16.3	0.15	K194R	356.601	335.000	12.531	11.214	0.19079	2.57210	8	X
K13H07H	18.2	0.15	K194R	258.310	10.736	61.728	23.060	0.11071	1.87792	4	V
K13J08K	16.7	0.15	K194R	296.945	88.588	340.629	7.361	0.14103	2.55603	7	X
K13P12U	16.0	0.15	K194R	354.282	41.584	295.876	15.495	0.20772	3.16270	7	X
K13Q69O	16.5	0.15	K194R	323.567	262.775	145.656	25.044	0.38096	3.14533	5	X
K13Q74Y	15.7	0.15	K194R	3.680	4.299	319.510	25.521	0.26182	3.15605	7	X
K13R52Y	16.1	0.15	K194R	325.076	106.211	324.395	12.703	0.29793	3.11186	7	X
K13S16U	16.6	0.15	K194R	323.523	33.184	22.618	14.546	0.33184	3.12635	5	X
K13S50R	16.2	0.15	K194R	359.108	335.768	24.340	15.762	0.26913	3.18321	3	X
K13S73E	16.0	0.15	K194R	315.612	39.560	23.620	26.427	0.20712	3.16834	4	X
K13T36V	15.7	0.15	K194R	335.004	18.061	20.569	20.809	0.16492	3.17491	5	X
K13TE3M	16.4	0.15	K194R	331.717	21.162	21.507	14.619	0.25826	3.15827	4	X
K14OK5O	17.0	0.15	K194R	308.413	339.627	63.926	6.315	0.26172	2.78648	6	X
K14OL5R	16.9	0.15	K194R	303.380	123.806	308.686	30.413	0.34894	2.62282	4	X
K14OV0S	17.5	0.15	K194R	308.758	107.792	312.435	11.505	0.23187	2.63970	5	X
K14Q65V	17.2	0.15	K194R	320.698	81.647	299.970	11.929	0.22640	2.78311	3	X
K14U52Z	16.6	0.15	K194R	312.971	165.200	251.504	27.711	0.27951	2.87699	4	X
K14U57K	16.7	0.15	K194R	304.549	183.053	267.913	20.460	0.53915	2.88816	5	X
K14WZ5J	16.2	0.15	K194R	321.756	127.907	274.006	22.316	0.35478	3.15334	5	X
K14Wa2N	18.0	0.15	K194R	238.660	182.119	263.553	19.980	0.10033	1.87636	5	X
K14Wr5A	16.7	0.15	K194R	315.099	183.023	242.316	14.419	0.25259	3.15358	4	X
K14Y16P	15.7	0.15	K194R	340.140	75.549	286.652	15.652	0.11705	3.18581	5	X
K14Y42O	17.4	0.15	K194R	74.992	309.699	288.203	18.990	0.04950	1.92300	9	X
K15AF6J	18.1	0.15	K194R	294.170	82.745	300.240	17.145	0.10040	1.94427	4	X
K15B53D	17.3	0.15	K194R	316.545	268.377	128.148	18.239	0.47767	3.06306	3	X
K15BK4J	16.0	0.15	K194R	337.813	110.107	286.745	14.069	0.22565	3.16344	7	X
K15BK5W	15.9	0.15	K194R	331.451	84.654	297.457	20.097	0.23590	3.18094	5	X
K15BL4R	16.5	0.15	K194R	329.673	83.906	294.885	20.424	0.29049	3.16301	3	X
K15FE3N	16.8	0.15	K194R	310.422	269.884	190.460	23.560	0.41704	3.14083	5	X
K15N19R	17.8	0.15	K194R	303.257	286.057	132.672	20.998	0.36026	2.42154	3	X
K15O76D	16.3	0.15	K194R	341.508	150.697	164.313	9.317	0.19318	2.59430	16	X
K15Q01K	17.7	0.15	K194R	339.495	72.994	296.507	6.189	0.19245	2.29910	5	X
K15Q11K	16.6	0.15	K194R	324.668	330.136	40.830	14.299	0.18654	2.58303	6	X
K15R27U	17.3	0.15	K194R	321.692	178.239	191.335	19.346	0.27382	2.56981	6	X
K15R35Z	18.9	0.15	K194R	308.327	195.686	243.227	10.243	0.70352	2.48377	3	X

K15R91Q	17.2	0.15	K194R	314.725	185.468	238.805	7.032	0.20375	2.30124	7 X
K15S17N	17.6	0.15	K194R	334.171	348.303	17.717	6.190	0.24391	2.41935	7 X
K15T99P	16.9	0.15	K194R	307.389	12.790	15.105	4.849	0.27579	2.60264	8 X
K15TC4Q	17.7	0.15	K194R	328.898	178.378	182.651	13.825	0.25607	2.56357	5 X
K15TE7Y	16.8	0.15	K194R	317.883	334.292	44.990	10.823	0.11517	2.58753	6 X
K15TK5O	17.3	0.15	K194R	302.450	106.658	317.350	3.922	0.10266	2.39821	7 X
K15TS6B	16.3	0.15	K194R	283.573	69.000	356.062	33.289	0.15064	2.57344	3 X
K15VB4A	17.6	0.15	K194R	304.085	5.646	39.260	7.773	0.34526	2.59509	3 X
K15W13H	18.9	0.15	K194R	326.012	25.931	280.879	10.956	0.79791	2.49396	4 X
K15X08U	17.9	0.15	K194R	330.378	170.094	179.734	7.332	0.36265	2.59752	3 X
K15X80M	15.8	0.15	K194R	237.360	185.978	304.570	20.815	0.06055	2.73554	6 X
K15XQ1X	17.5	0.15	K194R	340.772	99.828	274.767	25.444	0.48507	2.57204	2 V
K15Y02G	16.7	0.15	K194R	311.904	138.874	273.354	12.518	0.24686	2.65388	5 X
K15Y19G	17.2	0.15	K194R	327.048	21.658	7.875	13.847	0.21218	2.56105	5 X
K16B00X	17.0	0.15	K194R	307.568	104.277	324.998	28.120	0.37345	2.59939	4 X
K16CP1M	16.5	0.15	K194R	334.583	335.713	55.642	15.148	0.20377	2.74207	6 X
K16E63M	16.4	0.15	K194R	296.249	121.130	304.828	14.507	0.21368	3.08359	5 X
K16O00S	17.6	0.15	K194R	307.565	242.686	139.983	23.710	0.08130	1.90251	7 X
K16S23B	17.7	0.15	K194R	337.723	345.405	10.386	22.647	0.14223	2.00773	7 X
K17BC9S	15.5	0.15	K194R	14.952	123.413	182.801	26.031	0.23691	3.19123	5 X
K17F45L	16.7	0.15	K194R	333.780	323.752	37.435	7.343	0.11286	2.71256	8 X
K17FC8Z	16.3	0.15	K194R	302.905	6.765	28.631	9.997	0.19550	2.71489	9 X
K19M01U	18.1	0.15	K194R	332.721	152.512	194.825	19.687	0.34434	2.57563	3 X
K19N06O	16.6	0.15	K194R	335.521	61.648	310.957	29.887	0.31166	2.56378	6 X
K19O00F	17.2	0.15	K194R	323.510	89.105	279.822	27.142	0.34075	2.56464	4 X
K19R03F	17.1	0.15	K194R	319.357	74.814	306.813	15.275	0.27788	2.54235	3 X
K19S01H	18.2	0.15	K194R	296.103	44.500	22.738	7.772	0.53438	2.45168	3 X
K19T02P	18.5	0.15	K194R	2.688	236.311	66.352	7.288	0.29792	2.22277	4 X
K19T03D	18.1	0.15	K194R	248.328	168.238	264.574	19.133	0.13076	1.83139	6 X
K19U03R	18.4	0.15	K194R	116.927	293.650	281.976	16.734	0.05445	1.93392	5 W
K19U04J	17.8	0.15	K194R	74.366	319.298	290.039	19.402	0.05361	1.85420	6 X
K19U04X	19.9	0.15	K194R	222.116	95.078	29.795	32.491	0.18043	1.80087	2 W
K19U10A	18.8	0.15	K194R	357.661	251.726	70.035	1.574	0.25068	2.14177	5 X
K19V05G	17.1	0.15	K194R	339.115	326.742	49.253	14.663	0.26144	2.69129	4 X

New perturbed one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc C
K18N02E	20.7	0.15	K194R	62.097	126.188	170.255	30.065	0.54783	2.64121	86 X
K19N07K	17.9	0.15	K194R	333.155	81.632	280.974	27.217	0.37405	2.57331	144 X
K19N07L	18.6	0.15	K194R	326.275	90.450	269.175	21.012	0.32142	2.33648	107 X
K19O01L	21.9	0.15	K194R	271.142	141.146	221.982	10.644	0.28832	1.46406	107 X
K19O02P	20.9	0.15	K194R	293.692	130.909	265.368	8.202	0.46445	2.03331	132 X
K19O05B	16.9	0.15	K194R	340.804	6.963	345.375	15.364	0.48066	2.96838	105 X
K19P02Y	20.6	0.15	K194R	318.805	116.441	239.364	7.895	0.39478	2.34511	80 X
K19P03F	21.0	0.15	K194R	337.766	348.909	303.977	19.315	0.32070	1.73897	81 X
K19P03K	18.5	0.15	K194R	335.415	213.158	122.009	7.382	0.37268	2.23226	85 X
K19Q01G	18.0	0.15	K194R	326.410	47.662	300.834	10.447	0.29059	2.38210	93 X
K19Q02L	19.8	0.15	K194R	311.632	227.747	152.583	8.960	0.38178	2.40281	70 X
K19Q03B	20.4	0.15	K194R	327.764	152.071	213.268	13.195	0.47989	2.63459	77 X
K19Q03L	19.9	0.15	K194R	313.886	157.310	243.389	13.476	0.48949	2.62855	75 X
K19Q04N	19.3	0.15	K194R	320.238	94.756	253.791	6.239	0.30395	2.20880	66 X
K19Q05L	18.4	0.15	K194R	327.271	69.540	297.102	7.096	0.37257	2.67314	73 X
K19Q06W	17.6	0.15	K194R	324.490	252.830	131.082	15.241	0.32785	2.65909	96 X
K19Q07H	17.7	0.15	K194R	356.047	287.108	30.306	29.371	0.35177	2.59052	70 X
K19Q08E	18.6	0.15	K194R	319.495	210.122	188.631	14.387	0.44979	2.67931	71 X
K19R02A	24.0	0.15	K194R	324.608	61.688	336.442	6.001	0.65493	3.00147	48 X
K19S00M	20.8	0.15	K194R	320.430	164.789	209.286	19.333	0.53981	2.56038	48 X
K19S05D	19.1	0.15	K194R	320.668	335.008	40.899	16.291	0.44393	2.59962	40 X
K19S08G	20.9	0.15	K194R	313.710	315.779	59.165	7.382	0.36787	2.24837	36 V
K19S11A	20.1	0.15	K194R	324.605	227.995	145.118	14.283	0.43370	2.64504	35 V
K19T03N	18.8	0.15	K194R	306.235	103.984	342.284	14.804	0.53567	2.91137	44 X
K19T07B	26.8	0.15	K194R	328.880	192.415	18.775	10.066	0.12914	0.89596	14 X
K19U01H	24.2	0.15	K194R	289.021	190.530	243.724	5.560	0.54652	2.09639	24 X
K19U04Y	20.1	0.15	K194R	307.599	181.688	226.457	26.662	0.37740	2.35021	26 V
K19U04Y	20.1	0.15	K194R	307.605	181.687	226.457	26.663	0.37744	2.35039	29 V
K19U05B	19.2	0.15	K194R	180.560	271.736	246.067	17.381	0.14028	1.93586	14 V
K19U08Q	25.7	0.15	K194R	272.133	280.418	27.513	8.688	0.28465	1.17025	5 V
K19U08R	22.8	0.15	K194R	317.355	43.563	300.763	2.504	0.37431	2.04683	65 V
K19U10O	21.8	0.15	K194R	220.649	99.952	28.782	29.882	0.29169	1.72217	5 V
K19U11R	21.0	0.15	K194R	282.137	218.950	72.132	12.661	0.46902	1.24841	20 V
K19U12J	22.4	0.15	K194R	321.241	40.534	211.063	27.525	0.94353	2.42433	5 X
K19U12N	22.0	0.15	K194R	290.301	297.737	226.419	4.994	0.84217	2.27449	16 X
K19U12R	24.2	0.15	K194R	247.116	342.805	39.723	10.110	0.24013	1.32413	11 V
K19U13D	23.6	0.15	K194R	237.244	346.558	39.077	43.885	0.18377	1.25876	7 X
K19U13J	18.6	0.15	K194R	256.910	345.596	151.659	5.800	0.49260	2.48680	56 V
K19U13O	23.8	0.15	K194R	308.295	344.908	23.427	1.822	0.55436	2.14672	9 V
K19V00C	28.9	0.15	K194R	246.675	167.451	218.270	1.448	0.25543	1.33409	8 V
K19V00J	24.7	0.15	K194R	284.411	286.255	47.703	10.630	0.36655	1.45151	2 V
K19V00N	24.9	0.15	K194R	278.627	62.935	43.498	4.733	0.59662	2.02532	17 X
K19V00S	24.2	0.15	K194R	287.503	55.146	265.026	1.822	0.47490	1.48964	3 V
K19V00T	24.5	0.15	K194R	205.428	241.001	17.785	4.572	0.61412	0.87643	2 V
K19V00V	25.3	0.15	K194R	240.757	26.440	255.600	0.306	0.29558	0.94084	7 V
K19V00W	26.8	0.15	K194R	293.878	15.757	219.825	5.206	0.14641	0.88226	4 V
K19V01B	18.4	0.15	K194R	60.185	355.867	272.692	18.095	0.04738	1.93853	3 V
K19V01R	27.0	0.15	K194R	317.923	191.870	228.950	3.252	0.65798	2.86298	10 V
K19V01Y	21.9	0.15	K194R	309.650	335.087	345.679	7.543	0.58673	1.92086	6 V
K19V02D	21.4	0.15	K194R	310.472	257.205	38.812	33.642	0.73913	1.99617	7 X
K19V02T	24.2	0.15	K194R	83.416	293.083	228.860	9.269	0.21444	1.03447	9 V
K19V03D	25.9	0.15	K194R	314.491	152.422	227.682	1.631	0.60160	2.43266	3 X
K19V03K	25.5	0.15	K194R	122.637	302.205	232.351	4.958	0.63224	1.03427	9 X
K19V04K	26.7	0.15	K194R	262.931	79.118	32.297	5.885	0.56403	1.81432	11 V
K19V04M	26.7	0.15	K194R	29.142	319.807	222.543	26.872	0.10660	0.96869	3 V
K19V04R	20.9	0.15	K194R	322.892	112.822	235.891	23.117	0.21235	1.85724	4 V

K19V05E	25.7	0.15	K194R	131.978	78.194	47.282	30.201	0.17311	1.09725	3	X
K19V05F	27.5	0.15	K194R	216.308	92.594	46.945	11.591	0.56878	1.42820	4	V
K19V05K	22.7	0.15	K194R	302.651	35.400	21.070	7.312	0.44832	2.30974	46	B
K19V05L	25.9	0.15	K194R	89.781	229.649	287.035	1.559	0.27975	1.00205	3	B

New one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc	C
K14SK3K	16.7	0.15	K149K	54.761	269.033	37.923	8.542	0.04107	3.17756	25	W
K19Q05J	18.2	0.15	K199E	359.428	31.949	341.515	25.599	0.28324	2.23373	71	W
K19Q06N	18.4	0.15	K199E	24.484	324.445	333.416	24.213	0.49453	2.75700	70	W
K19R04C	18.6	0.15	K19A4	15.742	296.212	45.152	30.582	0.41190	2.56220	54	W
K19R04K	18.6	0.15	K19A4	357.107	297.588	94.490	17.470	0.32868	2.63093	55	W
K19R04O	6.9	0.15	K199E	291.891	262.325	136.894	19.296	0.09316	42.22470	52	W
K19S00B	13.3	0.15	K19A4	299.299	137.488	277.634	26.625	0.02140	5.18238	46	W
K19S02V	20.9	0.15	K19A4	349.872	28.938	15.980	9.028	0.41720	2.27805	62	W
K19S04U	21.2	0.15	K19A4	2.089	355.916	18.218	12.992	0.49324	2.68585	41	W
K19S06D	19.6	0.15	K19A4	348.126	217.263	188.190	12.980	0.39148	2.61178	37	W
K19S06K	18.9	0.15	K198P	81.968	2.261	259.155	20.131	0.03379	1.83126	100	W
K19S06L	18.5	0.15	K19A4	11.049	176.813	186.328	27.490	0.30092	2.20994	38	W
K19S07T	20.0	0.15	K19A4	34.370	37.417	276.561	4.897	0.35555	2.11416	38	W
K19S09P	17.7	0.15	K19A4	65.868	13.151	272.271	9.071	0.25002	2.24741	38	W
K19S09S	21.1	0.15	K19A4	3.109	260.275	106.184	9.324	0.45643	2.45943	33	W
K19S10S	20.0	0.15	K199E	358.404	11.219	348.746	17.526	0.43073	3.02796	57	W
K19S11G	18.5	0.15	K19A4	357.411	25.243	13.186	13.823	0.36906	2.76860	43	W
K19T01D	19.4	0.15	K19A4	352.103	73.674	321.087	5.100	0.38143	2.57354	31	W
K19T02Y	18.4	0.15	K19A4	17.980	300.900	49.760	33.929	0.34140	2.74615	59	W
K19T02Z	19.1	0.15	K19A4	350.917	270.641	138.677	19.360	0.35800	2.41303	29	W
K19T03J	18.2	0.15	K19A4	90.298	292.837	339.907	18.531	0.07574	1.92668	59	W
K19T03T	19.9	0.15	K199E	24.214	324.076	12.229	21.817	0.13022	1.69454	70	W
K19T07D	20.3	0.15	K19A4	3.861	93.843	271.341	4.705	0.32491	2.20090	29	W
K19T07Y	16.9	0.15	K19AO	353.334	46.048	26.798	27.560	0.42571	3.13496	28	W
K19T08C	20.3	0.15	K19A4	24.649	306.611	41.146	25.867	0.14523	1.81199	24	W
K19T08F	19.3	0.15	K19A4	15.532	289.457	68.116	28.323	0.47415	2.66398	27	W
K19U01D	18.1	0.15	K199E	345.254	120.465	283.151	12.452	0.33814	2.72924	72	W
K19U01W	19.3	0.15	K19AO	167.095	204.933	19.000	20.517	0.08630	1.84012	17	W
K19U02Z	18.7	0.15	K19A4	66.206	167.007	130.317	8.469	0.20947	2.15713	37	W
K19U04W	20.9	0.15	K19AO	357.603	62.301	341.728	5.947	0.43083	2.63963	13	W
K19U05A	16.8	0.15	K199E	26.125	345.283	344.248	8.764	0.43074	2.57891	104	W
K19U05R	20.3	0.15	K19A4	349.723	217.792	198.895	31.473	0.46532	3.02328	38	W
K19U05Y	21.7	0.15	K19AO	1.813	126.500	261.599	7.277	0.42385	2.26910	13	W
K19U06F	18.9	0.15	K19AO	1.966	261.218	125.990	17.029	0.43830	3.27628	9	W
K19U06Z	19.3	0.15	K19A4	183.074	290.710	262.847	17.747	0.08393	1.91517	30	W
K19U07K	20.0	0.15	K19A4	40.221	261.022	66.877	23.036	0.15590	1.76858	23	W
K19U09Q	19.0	0.15	K19A4	69.612	97.660	189.983	20.963	0.32779	2.36743	37	W
K19U10R	18.6	0.15	K19AO	192.722	273.396	294.360	13.834	0.11426	1.98261	12	W
K19U10W	21.4	0.15	K19AO	335.820	25.924	39.699	27.137	0.08538	1.68340	11	W
K19U11E	20.2	0.15	K19A4	1.229	260.529	137.226	10.593	0.36440	2.30307	20	W
K19U11P	18.8	0.15	K19AO	13.486	276.774	97.011	28.622	0.40284	2.69588	17	W
K19U11S	21.4	0.15	K19AO	357.534	300.229	96.254	9.311	0.45596	2.56400	14	W
K19U11T	19.9	0.15	K19AO	256.990	253.033	255.485	17.738	0.08693	1.81252	11	W
K19U11W	19.0	0.15	K19AO	346.723	349.121	75.683	38.747	0.36369	2.63418	19	W
K19U11Y	19.9	0.15	K19AO	38.390	276.187	70.224	30.281	0.17388	1.72983	7	W
K19U12B	19.1	0.15	K19AO	23.048	282.730	70.660	29.570	0.36707	2.56662	12	W
K19U12V	20.0	0.15	K19A4	353.724	44.327	3.943	10.921	0.46323	3.20851	35	W
K19U12W	19.8	0.15	K19AO	186.645	328.018	238.643	18.191	0.08551	1.89354	13	W
K19U12Z	19.4	0.15	K19A4	358.594	155.197	231.896	33.956	0.31383	2.54754	28	W
K19U13C	18.4	0.15	K19AO	15.438	288.953	113.786	29.439	0.43091	2.57210	9	W
K19U13S	18.2	0.15	K19AO	25.833	259.188	95.158	29.053	0.38008	2.63579	16	W
K19U14G	20.2	0.15	K19AO	339.106	230.028	214.698	20.359	0.33310	2.11371	14	W
K19V03N	17.9	0.15	K19AO	352.965	103.774	315.692	21.392	0.42818	3.08577	4	W
K19V05M	17.9	0.15	K19AO	341.827	2.925	125.735	18.821	0.39860	2.70593	9	B
K19V05N	18.0	0.15	K198P	327.556	62.628	328.382	22.131	0.25015	2.28783	129	W

New observations:

K01Q34C	S2019	11	09.54172	22	01	32.34	+13	48	48.6	20	RLEV146C51
K01Q34C	s2019	11	09.54172	1	+	6259.0203	-	1718.8631	+ 2200.8839		EV146C51
K01Q34C	S2019	11	09.67250	22	01	37.44	+13	46	18.0		LEV146C51
K01Q34C	s2019	11	09.67250	1	+	6272.8171	-	1703.3608	+ 2173.5715		EV146C51
K01Q34C	S2019	11	09.80327	22	01	42.68	+13	43	49.5		LEV146C51
K01Q34C	s2019	11	09.80327	1	+	6286.4574	-	1687.7740	+ 2146.2284		EV146C51
K01Q34C	S2019	11	09.86873	22	01	45.29	+13	42	34.6		LEV146C51
K01Q34C	s2019	11	09.86873	1	+	6279.0921	-	1682.0058	+ 2171.9837		EV146C51
K01Q34C	S2019	11	10.06495	22	01	53.19	+13	38	50.4		LEV146C51
K01Q34C	s2019	11	10.06495	1	+	6285.2738	-	1660.6304	+ 2170.4452		EV146C51
K01Q34C	S2019	11	10.13041	22	01	55.82	+13	37	35.0		LEV146C51
K01Q34C	s2019	11	10.13041	1	+	6277.7854	-	1654.8830	+ 2196.1842		EV146C51
K01Q34C	S2019	11	10.19573	22	01	58.46	+13	36	21.9		LEV146C51
K01Q34C	s2019	11	10.19573	1	+	6298.8091	-	1644.9445	+ 2143.0710		EV146C51
K01Q34C	S2019	11	10.26118	22	02	01.36	+13	35	07.0		LEV146C51
K01Q34C	s2019	11	10.26118	1	+	6291.3978	-	1639.2318	+ 2168.8766		EV146C51
K01Q34C	S2019	11	10.52286	22	02	12.22	+13	30	09.6		LEV146C51
K01Q34C	s2019	11	10.52286	1	+	6289.8952	-	1612.1195	+ 2193.1434		EV146C51
K05V02C	S2019	11	08.79221	08	26	24.40	-21	43	16.8		LEV146C51
K05V02C	s2019	11	08.79221	1	-	5408.7420	+	1813.4035	- 3814.6518		EV146C51
K05V02C	S2019	11	08.92299	08	26	30.95	-21	48	37.4		LEV146C51
K05V02C	s2019	11	08.92299	1	-	5429.3625	+	1801.9803	- 3790.6887		EV146C51
K05V02C	S2019	11	09.05389	08	26	37.46	-21	53	57.8		LEV146C51
K05V02C	s2019	11	09.05389	1	-	5402.3490	+	1788.2910	- 3835.6124		EV146C51
K05V02C	S2019	11	09.18467	08	26	43.97	-21	59	17.8		LEV146C51
K05V02C	s2019	11	09.18467	1	-	5423.0098	+	1776.8353	- 3811.6951		EV146C51
K05V02C	S2019	11	09.18479	08	26	43.98	-21	59	18.2		LEV146C51
K05V02C	s2019	11	09.18479	1	-	5374.9554	+	1774.6206	- 3880.2956		EV146C51
K06M00A	.C2019	10	29.93685	23	32	33.27	+37	00	24.2	18.6	RLEV146950

K06M00A .C2019 10 29.94059 23 32 33.73 +37 00 14.9
K06M00A .C2019 10 29.94431 23 32 34.18 +37 00 05.6
K06M00A .C2019 10 29.94800 23 32 34.64 +36 59 56.5
K10U07H C2019 11 11.18167001 35 23.22 +45 12 14.7
K10U07H C2019 11 11.21916001 35 22.24 +45 12 42.5
K10U07H C2019 11 11.23468101 35 21.81 +45 12 53.8
K11Y62S C2019 11 11.50792207 03 40.59 +01 36 54.6
K11Y62S C2019 11 11.51076007 03 41.71 +01 37 34.4
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K15R35Z C2019 09 12.28956 21 58 28.83 +33 25 25.1
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K15R35Z C2019 09 19.36973 21 26 53.97 +37 57 35.2
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K15W13H C2019 11 11.28008005 52 28.50 +51 42 59.3
K15W13H C2019 11 11.50583105 50 14.11 +51 35 03.3
K15W13H C2019 11 11.50977705 50 11.74 +51 34 54.7
K15W13H C2019 11 11.51698805 50 07.39 +51 34 39.3
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K18N02E KC2018 08 03.25380317 28 21.871+48 59 19.09
K19O01L KC2019 11 01.19552722 39 14.528+06 58 33.13
K19O02P KC2019 11 09.80148422 08 01.35 +23 42 44.8
K19O02P KC2019 11 09.81485622 08 05.37 +23 42 50.3
K19P03F C2019 11 01.38950323 11 54.601+42 24 14.13
K19P03F C2019 11 01.39532623 11 54.738+42 24 07.62
K19R02A C2019 10 24.19644722 19 14.350+65 53 30.94
K19R02A C2019 10 24.19774522 19 14.678+65 53 43.61
K19S00M KC2019 11 02.24398301 57 26.69 -03 01 06.2
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K19U08R ^C2019 10 27.36802 00 30 45.205+12 30 52.62
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18.3 VqEV146850
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K19V00C	KC2019	11	02.13544401	49	02.08	+06	49	38.8	18.8	VuEV146H21	
K19V00C	KC2019	11	02.13673001	49	07.63	+06	49	53.9	18.5	VuEV146H21	
K19V00C	KC2019	11	02.13801601	49	13.17	+06	50	08.8	18.7	VuEV146H21	
K19V00C	KC2019	11	02.13930401	49	18.67	+06	50	24.3	18.6	VuEV146H21	
K19V00C	C2019	11	08.41109	05	14	31.17	+11	33	18.6	GVEV146G96	
K19V00C	C2019	11	08.41536	05	14	33.07	+11	33	18.0	GVEV146G96	
K19V00C	C2019	11	08.41963	05	14	34.98	+11	33	18.8	GVEV146G96	
K19V00C	C2019	11	08.42390	05	14	36.87	+11	33	18.8	GVEV146G96	
K19V00J	C2019	11	03.36060	02	10	35.21	-04	40	09.8	GVEV146I52	
K19V00J	C2019	11	03.36484	02	10	34.78	-04	39	29.6	GVEV146I52	
K19V00J	C2019	11	03.36734	02	10	34.52	-04	39	06.3	GVEV146I52	
K19V00N	KC2019	11	11.73673219	38	29.16	+47	01	04.6	17.2	GVEV146J95	
K19V00N	KC2019	11	11.73803619	38	02.58	+47	00	34.6	17.3	GVEV146J95	
K19V00N	KC2019	11	11.73978119	37	27.07	+46	59	53.4	17.2	GVEV146J95	
K19V00N	KC2019	11	11.74101719	37	01.91	+46	59	24.3	17.2	GVEV146J95	
K19V00S	C2019	11	04.10000	00	44	01.09	+24	16	01.1	19.5	GVEV146I52
K19V00S	C2019	11	04.10042	00	44	01.35	+24	16	00.0	19.4	GVEV146I52
K19V00S	C2019	11	04.10083	00	44	01.64	+24	15	58.3	19.8	GVEV146I52
K19V00S	C2019	11	04.10125	00	44	01.95	+24	15	57.3	19.9	GVEV146I52
K19V00T	C2019	11	04.09550	00	17	19.65	+33	06	50.1	19.6	GVEV146I52
K19V00T	C2019	11	04.09592	00	17	19.68	+33	06	44.5	19.3	GVEV146I52
K19V00T	C2019	11	04.09634	00	17	19.72	+33	06	38.7	19.7	GVEV146I52
K19V00T	C2019	11	04.09675	00	17	19.78	+33	06	33.3	19.7	GVEV146I52
K19V00V	C2019	11	04.32693	05	06	32.13	+31	37	24.6	18.2	GVEV146I52
K19V00V	C2019	11	04.32706	05	06	31.69	+31	37	23.6	18.2	GVEV146I52
K19V00V	C2019	11	04.32961	05	06	22.83	+31	37	01.2	17.2	GVEV146I52
K19V00V	C2019	11	04.33133	05	06	16.84	+31	36	46.2	17.6	GVEV146I52
K19V00V	C2019	11	05.40549	04	17	00.23	+28	39	20.7	17.6	GVEV146G96
K19V00V	C2019	11	05.41059	04	16	48.05	+28	38	28.6	17.8	GVEV146G96
K19V00V	C2019	11	05.41571	04	16	35.96	+28	37	36.2	18.8	GVEV146G96
K19V00V	C2019	11	05.42083	04	16	23.79	+28	36	43.9	17.9	GVEV146G96
K19V00W	C2019	11	04.32438	03	39	59.35	+07	50	35.4	18.5	GVEV146I52
K19V00W	C2019	11	04.32451	03	39	59.18	+07	50	32.5	18.4	GVEV146I52
K19V00W	C2019	11	04.32464	03	39	58.99	+07	50	29.6	18.3	GVEV146I52
K19V00W	C2019	11	04.32477	03	39	58.80	+07	50	26.7	18.6	GVEV146I52
K19V00W	C2019	11	06.30343	03	04	15.23	-03	31	03.5	18.7	GVEV146703
K19V00W	C2019	11	06.31399	03	04	03.40	-03	34	12.0	18.8	GVEV146703
K19V00W	C2019	11	06.31927	03	03	57.45	-03	35	47.3	18.7	GVEV146703
K19V00Y	C2019	11	04.29080	02	15	58.98	+40	25	56.4	20.7	GVEV146I52
K19V00Y	C2019	11	04.29246	02	15	59.35	+40	25	48.0	22.0	GVEV146I52
K19V00Y	C2019	11	04.29413	02	15	59.70	+40	25	40.7	21.2	GVEV146I52
K19V00Y	C2019	11	04.29580	02	16	00.05	+40	25	33.0	21.1	GVEV146I52
K19V01R	C2019	11	05.10371	23	55	50.70	+38	51	59.3	18.7	GVEV146I52
K19V01R	C2019	11	05.10384	23	55	51.06	+38	52	06.0	18.8	GVEV146I52
K19V01R	C2019	11	05.10397	23	55	51.37	+38	52	11.7	18.7	GVEV146I52
K19V01R	C2019	11	05.10410	23	55	51.69	+38	52	18.0	18.4	GVEV146I52
K19V01Y	C2019	11	08.21751	23	30	36.66	+36	19	09.9	20.3	GVEV146654
K19V01Y	C2019	11	08.24998	23	30	52.04	+36	18	45.3	20.1	GVEV146654
K19V01Y	C2019	11	08.29269	23	31	12.27	+36	18	11.6	20.1	GVEV146654
K19V02D	.C2019	11	11.38671	23	49	55.05	+08	55	24.2	19.1	RoEV146F65
K19V02D	.C2019	11	11.38915	23	49	55.50	+08	55	42.9	19.1	RoEV146F65
K19V02D	.C2019	11	11.39037	23	49	55.74	+08	55	53.9	18.9	RoEV146F65
K19V02T	KC2019	11	06.22930	02	31	57.18	+24	35	23.7	20.0	RqEV146H36
K19V02T	KC2019	11	06.24128	02	31	54.78	+24	34	26.3	19.7	RqEV146H36
K19V02T	KC2019	11	06.25323	02	31	52.37	+24	33	29.3	20.2	RqEV146H36
K19V02T	KC2019	11	06.26480	02	31	50.03	+24	32	33.4	20.0	RqEV146H36
K19V03D	KC2019	11	06.82971103	21	20.36	+28	54	47.8	18.8	GVEV146B37	
K19V03D	KC2019	11	06.82971103	21	20.36	+28	54	47.8	18.8	GVEV146B37	
K19V03D	KC2019	11	06.83418403	21	43.82	+28	54	14.1	18.5	GVEV146B37	
K19V03D	KC2019	11	06.83418403	21	43.82	+28	54	14.1	18.5	GVEV146B37	
K19V03D	KC2019	11	06.83865703	22	07.09	+28	53	38.9	17.7	GVEV146B37	
K19V03D	KC2019	11	06.83865703	22	07.09	+28	53	38.9	17.7	GVEV146B37	
K19V03K	.C2019	11	11.34390	23	27	14.52	+14	00	45.0	19.4	RoEV146F65
K19V03K	.C2019	11	11.34741	23	26	57.54	+13	58	51.9	19.1	RoEV146F65
K19V03K	.C2019	11	11.34800	23	26	54.71	+13	58	33.4	18.2	RoEV146F65
K19V03K	.C2019	11	11.34859	23	26	51.94	+13	58	15.2	19.5	RoEV146F65
K19V03K	KC2019	11	11.76108022	53	47.06	+09	58	13.9	19.4	GVEV146J95	
K19V03K	KC2019	11	11.76818122	53	10.96	+09	53	51.3	19.4	GVEV146J95	
K19V04K	C2019	10	27.45627201	50	25.880	+12	12	38.79	22.1	GVEV146F51	
K19V04K	C2019	10	27.46909801	50	23.585	+12	13	13.11	23.1	GVEV146F51	
K19V04K	C2019	10	27.48179601	50	21.322	+12	13	47.55	22.3	GVEV146F51	
K19V04K	C2019	11	04.45354301	06	33.606	+24	49	35.87	21.1	GVEV146F51	
K19V04K	C2019	11	04.46704701	06	23.156	+24	52	05.38	21.5	GVEV146F51	
K19V04K	C2019	11	04.48064301	06	12.461	+24	54	37.81	20.6	GVEV146F51	
K19V04K	C2019	11	04.49446601	06	01.727	+24	57	12.26		VEV146F51	
K19V04M	C2019	11	08.17113	02	08	12.67	-06	14	23.5	21.6	GVEV146G96
K19V04M	C2019	11	08.17762	02	08	11.63	-06	17	33.1		VEV146G96
K19V04M	C2019	11	08.18086	02	08	11.23	-06	19	10.2	21.1	GVEV146G96
K19V05E	.C2019	11	11.41941	03	12	31.64	+43	40	16.7	19.5	RoEV146F65
K19V05E	.C2019	11	11.42133	03	12	26.84	+43	41	47.0	19.2	RoEV146F65
K19V05E	.C2019	11	11.42326	03	12	22.01	+43	43	17.7	19.4	RoEV146F65
K19V05E	.C2019	11	11.42391	03	12	20.45	+43	43	47.3	19.1	RoEV146F65
K19V05F	KC2019	11	09.37961	04	11	32.99	+05	53	19.7	17.7	VqEV146850
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K19V05F	KC2019	11	09.38882	04	12	04.95	+05	59	24.0	17.6	VqEV146850
K19V05F	KC2019	11	09.39682	04	12	33.62	+06	04	49.2	17.6	VqEV146850
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K19V05F	KC2019	11	09.41282	04	13	33.81	+06	16	04.4	17.5	VqEV146850
01620	S2019	11	08.36321	22	05	38.02	+08	15	54.5	18	RLEV146C51
01620	s2019	11	08.36321	1	+	6442.6135	-	1806.5502	+ 1490.9203		EV146C51
01620	S2019	11	08.49399	22	05	54.14	+08	17	04.9		LEV146C51
01620	s2019	11	08.49399	1	+	6453.7338	-	1789.9896	+ 1462.6572		EV146C51
01620	S2019	11	08.62489	22	06	10.34	+08	18	11.9		LEV146C51

s2019 11 08.62489 1 + 6444.4028 - 1779.1344 + 1515.5555 EV146C51
01620 S2019 11 08.75567 22 06 26.25 +08 19 24.3 LEV146C51
01620 s2019 11 08.75567 1 + 6455.5459 - 1762.5672 + 1487.3395 EV146C51
01620 S2019 11 08.88644 22 06 42.37 +08 20 33.7 LEV146C51
01620 s2019 11 08.88644 1 + 6466.5347 - 1745.9244 + 1459.0706 EV146C51
01620 S2019 11 08.88657 22 06 42.32 +08 20 33.0 LEV146C51
01620 s2019 11 08.88657 1 + 6445.9614 - 1751.7198 + 1540.2451 EV146C51
01620 S2019 11 09.14812 22 07 14.45 +08 22 52.3 LEV146C51
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01620 C2019 11 11.31862122 11 40.01 +08 41 47.6 17.82oVEV146T05
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01620 C2019 11 11.32747222 11 41.04 +08 41 52.1 17.37oVEV146T05
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m1394	C2019	11	10.78790	03	13	48.33	+18	07	59.9	13.8	RqEV146C23
m1394	C2019	11	10.79632	03	13	45.18	+18	06	59.7	13.8	RqEV146C23
m1394	C2019	11	10.81177	03	13	39.36	+18	05	08.0	13.8	RqEV146C23
m1394	C2019	11	10.83404	03	13	30.87	+18	02	26.5	13.7	RqEV146C23
m1394	C2019	11	10.85403	03	13	23.11	+18	00	00.8	13.7	RqEV146C23
m1394	C2019	11	10.87230	03	13	15.92	+17	57	46.9	13.7	RqEV146C23
m1394	C2019	11	10.90727	03	13	01.99	+17	53	28.7	13.8	RqEV146C23
n2143	S2019	11	08.62349	22	17	56.17	+01	09	17.3	18	RLEV146C51
n2143	s2019	11	08.62349	1	+	6613.9755	-	1701.0785	+	612.2442	EV146C51
n2143	S2019	11	08.75426	22	18	01.86	+01	06	52.7		LEV146C51
n2143	s2019	11	08.75426	1	+	6621.1920	-	1683.1302	+	583.3887	EV146C51
n2143	S2019	11	08.88504	22	18	07.59	+01	04	28.2		LEV146C51
n2143	s2019	11	08.88504	1	+	6628.2378	-	1665.1314	+	554.5604	EV146C51
n2143	S2019	11	09.01594	22	18	13.45	+01	02	03.2		LEV146C51
n2143	s2019	11	09.01594	1	+	6625.7141	-	1655.8047	+	608.6432	EV146C51
n2143	S2019	11	09.08127	22	18	16.36	+01	00	51.7		LEV146C51
n2143	s2019	11	09.08127	1	+	6634.0096	-	1642.4554	+	552.7822	EV146C51
n2143	S2019	11	09.14672	22	18	19.33	+00	59	38.8		LEV146C51
n2143	s2019	11	09.14672	1	+	6632.7900	-	1637.8104	+	579.8506	EV146C51
n2143	S2019	11	09.21217	22	18	22.35	+00	58	26.8		LEV146C51
n2143	s2019	11	09.21217	1	+	6631.4600	-	1633.1453	+	606.9140	EV146C51
n2143	S2019	11	09.27750	22	18	25.33	+00	57	15.5		LEV146C51
n2143	s2019	11	09.27750	1	+	6639.7040	-	1619.7573	+	550.9924	EV146C51
n2143	S2019	11	09.34295	22	18	28.30	+00	56	03.0		LEV146C51
n2143	s2019	11	09.34295	1	+	6638.4698	-	1615.1190	+	578.0727	EV146C51
n2143	S2019	11	09.47372	22	18	34.36	+00	53	40.1		LEV146C51
n2143	s2019	11	09.47372	1	+	6645.3058	-	1597.0486	+	549.2955	EV146C51
n2143	S2019	11	09.60463	22	18	40.50	+00	51	16.0		LEV146C51
n2143	s2019	11	09.60463	1	+	6642.7227	-	1587.7637	+	603.4330	EV146C51
n2143	S2019	11	09.73540	22	18	46.69	+00	48	53.1		LEV146C51
n2143	s2019	11	09.73540	1	+	6649.5853	-	1569.6972	+	574.6908	EV146C51
o4800	S2019	11	07.25588	21	16	25.50	+31	42	18.9	20	RLEV146C51
o4800	s2019	11	07.25588	1	+	5051.8512	-	1925.5133	+	4206.6785	EV146C51
o4800	S2019	11	07.38678	21	16	38.02	+31	42	58.6		LEV146C51
o4800	s2019	11	07.38678	1	+	5021.8657	-	1910.5521	+	4249.0085	EV146C51
o4800	S2019	11	07.84456	21	17	21.41	+31	45	14.9		LEV146C51
o4800	s2019	11	07.84456	1	+	5074.7616	-	1874.4251	+	4202.0400	EV146C51
o4800	S2019	11	07.91001	21	17	27.73	+31	45	34.9		LEV146C51
o4800	s2019	11	07.91001	1	+	5059.7232	-	1867.0939	+	4223.3005	EV146C51
o4800	S2019	11	08.56415	21	18	30.50	+31	48	46.2		LEV146C51
o4800	s2019	11	08.56415	1	+	5066.4760	-	1808.6931	+	4240.3681	EV146C51
q8609	C2019	11	11.52340207	24	59.95	+42	24	16.1		17.90	oVEV146T08
q8609	C2019	11	11.52620807	24	59.20	+42	24	16.6		18.27	oVEV146T08
q8609	C2019	11	11.53180807	24	57.72	+42	24	17.0		18.23	oVEV146T08
q8609	C2019	11	11.54472407	24	54.24	+42	24	18.0		18.05	oVEV146T08

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