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MPEC 2019-W48 : DAILY ORBIT UPDATE (2019 November 18)

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M.P.E.C. 2019-W48

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DAILY ORBIT UPDATE (2019 November 18)

Update to 2019-W05

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

New identifications:

K02W27F	K06SD3N	K16A69R	Weryk
J99TU9L	K15RK8R		Doppler
K02X19W	K17BB9N		Doppler
K04RY6F	K18V60H		Doppler
K05W04N	K19U07K		Doppler
K06G06T	K19J22J		Doppler
K06W78H	K19N05G		Doppler
K07RO2V	K10BD6Y		Doppler
K07U32K	K10B63X		Doppler
K08CD6U	K10OD1A		Doppler
K08Y66C	K10B14U		Doppler
K09F66Q	K06UF6U		Doppler
K10AA4L	K10MD9R		Doppler
K10AC6P	K14X09K		Doppler
K10B08T	K14WV3L		Doppler
K10B98J	K18Y03V		Doppler
K10CN8T	K17A14S		Doppler
K10EG0Q	K16AC1U		Doppler
K10F49U	K15E49A		Doppler
K10FA2M	K16A11Q		Doppler
K10FB9F	K19V05N		Doppler
K10G59E	K15H14M		Doppler
K10G86D	K16E18U		Doppler
K10H58Y	K16G23X		Doppler
K10H74Q	K19G18N		Doppler
K10K73U	K15KE7U		Doppler
K10K75N	K16H04N		Doppler
K10L22K	K16GH9N		Doppler
K10M52D	K19O03G		Doppler
K10M75J	K15R12Y		Doppler
K10N59G	K16B27R		Doppler
K10N66W	K17W25V		Doppler
K10N97J	K15Q01W		Doppler
K10O02T	K10B85B		Doppler
K10O11X	K15P72C		Doppler

K10TC3E	K10TI9S			Doppler
K11BD5J	K14QQ2A	K18L14A		Doppler
K11H00U	K19G21C			Doppler
K11R19L	K10CD0V			Doppler
K12004S	K19H03A			Doppler
K13V15K	K13YA3P			Doppler
K14DD7D	K14E20N			Doppler
K14DD9N	K06Y32C			Doppler
K14E46N	K14F39Y			Doppler
K14OP3W	K14QV2U			Doppler
K14OP8H	K10AE5G			Doppler
K14QB5E	K10067X			Doppler
K14QZ2N	K14SX6W			Doppler
K14WJ6Q	K14Wh9U			Doppler
K14WY8S	K15BR0E			Doppler
K14Wg0X	K08S19T	K10C26C		Doppler
K14Wk6H	K14X35G			Doppler
K14X13A	K10KD4E			Doppler
K14X26U	K19T07O			Doppler
K14Y47G	K10P69A			Doppler
K15A00C	K14T02Z	K19T03N		Doppler
K15BV1F	K16R18Z			Doppler
K15Bu7F	K04RS6S	K08H47X	K13W87F	Doppler
K15Bu7U	K09C46N			Doppler
K15Bu7Z	K04T23D			Doppler
K15Fc1P	K10P67T			Doppler
K15MBOG	K15PN2B			Doppler
K15P99K	K10CI6N			Doppler
K15TB5Q	K15XP5X			Doppler
K15TE4K	K15M91F			Doppler
K15TW4E	K06U58O			Doppler
K15U00D	K19R04C			Doppler
K15XC8G	K19T04X			Doppler
K15Xb8N	K19T06D			Doppler
K16E06J	K10FD2T			Doppler
K16E12K	K10G37G			Doppler
K16L46L	K10BB8M			Doppler
K16Q43V	K07TY5F			Doppler
K16Q48V	K16T73T			Doppler
K16T28T	K10MD5Y			Doppler
K16U88X	K10LE5Y			Doppler
K16UA3V	K19J20O			Doppler
K17R02A	K19J06O			Doppler
K18F05C	K07E58Y			Doppler
K18F05R	K14O09V			Doppler
K18M04H	K14M42E			Doppler
K18P12R	K15AK0M			Doppler
K18V49U	K06WD7H			Doppler
K18V53B	K16GA4U			Doppler
K18V81Q	K16L47J			Doppler
K18V85J	K16CI6L			Doppler
K18VA6H	K14A30S			Doppler
K19J09C	K08G65P			Doppler
K19J09J	K13C57G			Doppler
K19J14P	K15PO8O			Doppler
K19J24J	K06K96F	K10GA1V	K10NC0V	Doppler
K19J32Y	K06J13S			Doppler
K19J36C	K11B01W			Doppler
K19N00M	K12Q00H			Doppler
K19N03F	K03O02Z			Doppler
K19Q04Q	K19S06L			Doppler
K19Q06A	K19U03P			Doppler
K19R00S	K19U11D			Doppler
K19R01K	K19T05M			Doppler
K19R02K	K19S10F			Doppler
K19R02Z	K19U04V			Doppler
K19R03S	K19T07Q			Doppler
K19S01Z	K06R14T			Doppler
K19S05T	K19U10P			Doppler
K19T02O	K19U12B			Doppler
K19T06U	K08V48Y			Doppler
K19T07E	K16AD2J			Doppler
K19T07Y	K15G10J			Doppler
K19U01D	K16E43C			Doppler
K19U02Z	K12H06F			Doppler
K19V00P	K15A21R			Doppler
K17P39Z	K10CM0G			Doppler
K17P39Z	K10CM0G			Lopez
K07A19R	K18Y01X			Doppler
K07A19R	K18Y01X			Odasso
K13H18F	K19L04N			Doppler
K13H18F	K19L04N			Odasso
K11B84A	K19P00S			Odasso
K12X16O	K16V03E			Odasso

New multiple-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Opp	C
J95S11G	19.0	0.15	K194R	343.472	330.364	15.869	2.580	0.26913	2.26546	3	X
J96T16K	17.0	0.15	K194R	163.567	300.408	260.010	4.620	0.03711	2.41599	10	X
J98S48V	17.5	0.15	K194R	356.529	141.334	216.365	4.448	0.28268	3.00632	6	X
J98T07V	17.4	0.15	K194R	315.931	26.754	22.578	4.901	0.14925	2.58300	10	X
J99TU9L	17.6	0.15	K194R	261.868	321.751	20.004	13.186	0.23741	3.06256	3	V
K00CC7A	18.6	0.15	K194R	292.745	100.849	326.232	1.755	0.16649	2.25657	6	X

K00R56U	16.8	0.15	K194R	8.324	1.677	310.967	21.462	0.21708	2.79252	3 X
K00S37Z	18.1	0.15	K194R	349.465	202.227	140.012	3.514	0.32560	2.41999	4 X
K01P60K	18.0	0.15	K194R	323.647	229.196	146.145	4.872	0.33559	2.32986	3 X
K01P65V	17.9	0.15	K194R	353.860	169.616	165.112	1.349	0.27249	2.32255	4 X
K01R22V	18.0	0.15	K194R	344.030	149.268	205.323	1.902	0.20798	2.32441	10 X
K01SG8V	17.9	0.15	K194R	333.496	329.525	29.302	5.799	0.30779	2.34435	7 X
K01T01S	17.1	0.15	K194R	341.006	344.162	4.262	26.088	0.32907	2.32986	5 X
K01T26M	16.5	0.15	K194R	356.379	131.933	216.274	13.065	0.19956	2.71416	9 X
K01TL6H	17.1	0.15	K194R	320.069	48.941	355.896	9.111	0.26990	2.71945	6 X
K01U18C	18.9	0.15	K205V	41.979	134.111	277.008	6.220	0.52002	2.72512	4 X
K01UC9S	18.6	0.15	K194R	335.807	313.626	52.824	2.849	0.22596	2.33804	4 X
K01UN0J	17.2	0.15	K205V	63.632	340.353	46.049	10.747	0.22093	2.70976	5 X
K01VA0C	18.0	0.15	K194R	337.497	103.233	248.812	19.870	0.07157	1.87828	7 X
K01W51B	18.1	0.15	K194R	230.227	235.486	228.947	20.945	0.05751	1.87510	7 X
K01XC0F	17.6	0.15	K194R	302.113	23.820	66.326	6.231	0.38420	2.71824	6 X
K01XM9R	17.3	0.15	K194R	326.534	120.704	261.683	10.990	0.34958	2.73678	4 X
K01XQ4P	18.3	0.15	K194R	335.617	120.106	239.471	20.201	0.02011	1.87606	6 X
K02C14M	18.1	0.15	K194R	246.699	148.821	325.985	19.893	0.07213	1.88920	5 X
K02L64M	17.3	0.15	K205V	90.571	353.613	353.603	2.833	0.26746	2.57019	5 X
K02N60J	17.3	0.15	K194R	333.056	169.050	208.115	5.848	0.29400	2.58392	8 X
K02N65D	17.4	0.15	K194R	322.604	206.946	186.005	4.941	0.25333	2.56813	6 X
K02N82O	17.2	0.15	K194R	318.559	78.530	309.635	11.823	0.28707	2.58731	6 X
K02P36Z	16.7	0.15	K194R	353.297	133.045	220.523	11.235	0.19963	2.56781	6 X
K02P95G	15.8	0.15	K194R	20.209	336.411	350.795	18.024	0.19592	3.10792	8 X
K02PD8E	17.0	0.15	K205V	41.764	87.787	292.408	14.306	0.32886	3.13447	4 X
K02PJ4F	16.2	0.15	K194R	34.059	14.616	304.396	17.371	0.07639	3.10592	7 X
K02PK3F	16.0	0.15	K194R	47.728	354.300	296.132	15.874	0.18970	3.11294	7 X
K02QF2U	16.1	0.15	K205V	97.785	330.735	0.841	8.082	0.16161	3.09015	9 X
K02QF8K	16.4	0.15	K194R	298.052	234.761	200.195	8.616	0.17516	2.57442	14 X
K02R00R	15.9	0.15	K194R	1.131	358.227	3.361	10.853	0.26440	3.12480	10 X
K02R01M	16.2	0.15	K194R	338.225	142.375	241.661	10.846	0.06842	2.56473	8 X
K02R26N	15.7	0.15	K194R	10.440	36.141	307.618	13.468	0.20078	3.12014	10 X
K02RA9D	18.2	0.15	K194R	327.209	218.696	153.835	6.416	0.20372	2.24026	5 X
K02RC8D	17.7	0.15	K194R	310.315	75.216	317.390	18.523	0.07772	1.97717	6 X
K02RD0F	15.8	0.15	K194R	359.571	11.403	335.931	16.942	0.18486	3.14543	6 X
K02RO7D	16.2	0.15	K194R	306.565	75.195	342.456	22.128	0.06439	2.56084	3 X
K02RT1H	17.7	0.15	K194R	341.430	262.237	95.672	5.997	0.20681	2.23494	7 X
K02S13U	16.9	0.15	K194R	306.636	156.621	254.206	13.510	0.20991	2.60748	5 X
K02TA1C	17.2	0.15	K194R	313.903	43.858	355.184	6.739	0.15791	2.24303	9 X
K02TE1Y	17.2	0.15	K194R	328.273	318.033	71.585	14.574	0.26718	2.61059	5 X
K02TJ6X	15.8	0.15	K194R	355.910	89.941	260.718	22.758	0.23852	3.16904	6 X
K02TQ8K	15.4	0.15	K194R	18.686	332.474	354.074	19.641	0.18930	3.14715	10 X
K02TU9O	16.8	0.15	K194R	2.354	305.046	52.784	11.070	0.23155	3.13752	5 X
K02TV4X	15.7	0.15	K194R	40.283	205.154	117.563	11.415	0.04820	3.16729	13 X
K02Tb7C	17.3	0.15	K194R	335.458	170.841	219.979	12.868	0.16588	2.59369	6 X
K02Tc6V	16.4	0.15	K194R	353.385	252.849	105.433	12.998	0.34123	3.14983	6 X
K02U13L	18.1	0.15	K194R	330.708	246.440	129.820	6.314	0.38463	2.61818	4 X
K02U24R	17.1	0.15	K194R	308.359	18.568	38.221	14.600	0.09579	2.61211	6 X
K02U26D	17.2	0.15	K194R	297.322	44.788	38.157	14.034	0.23873	2.61151	6 X
K02U27R	16.8	0.15	K194R	352.727	324.269	32.705	16.503	0.19769	2.61363	5 X
K02U47N	16.1	0.15	K194R	12.602	277.178	67.895	10.740	0.23001	3.14782	10 X
K02U70H	16.7	0.15	K194R	315.999	225.588	198.110	13.781	0.27351	3.16233	5 X
K02U71R	17.7	0.15	K194R	353.933	325.147	11.984	8.145	0.24098	2.25513	6 X
K02V25K	16.6	0.15	K194R	278.219	90.151	44.281	27.654	0.39309	2.61261	4 X
K02VD7E	16.5	0.15	K194R	282.307	240.768	230.432	8.005	0.15802	3.17365	7 X
K02W05F	16.2	0.15	K194R	313.783	180.965	248.662	16.381	0.19650	3.18707	6 X
K02W13Q	15.7	0.15	K194R	302.461	317.579	133.542	9.899	0.24569	3.18634	6 X
K02W27F	18.2	0.15	K194R	339.591	124.495	244.134	3.740	0.27624	2.62638	5 V
K02X15N	15.6	0.15	K194R	344.657	134.310	245.578	12.589	0.16964	3.18001	9 X
K02X19W	18.1	0.15	K194R	306.310	349.484	43.336	7.179	0.22625	2.26923	4 V
K02X39W	20.3	0.15	K194R	303.633	77.316	5.546	7.020	0.50177	2.62785	3 X
K03N10Q	18.3	0.15	K194R	296.781	108.639	287.781	18.141	0.08036	1.89477	5 X
K03O34S	17.9	0.15	K194R	30.276	225.823	83.053	2.723	0.10941	2.13122	12 X
K03Q28L	18.0	0.15	K194R	333.576	142.966	220.309	3.043	0.13620	2.14457	9 X
K03Q43C	16.6	0.15	K194R	344.302	205.335	158.841	4.073	0.35978	3.02260	7 X
K03SN6P	16.2	0.15	K194R	353.511	94.166	285.619	1.189	0.30228	3.92293	5 X
K03T46M	15.9	0.15	K194R	6.565	134.136	235.301	7.163	0.02345	2.99942	11 X
K03T51W	16.9	0.15	K194R	307.545	241.391	190.914	18.235	0.23363	3.02397	3 X
K03T55X	16.9	0.15	K194R	2.344	306.728	54.539	9.429	0.13633	3.01182	8 X
K03U80E	16.9	0.15	K194R	324.734	216.767	179.419	13.960	0.37279	3.04583	5 X
K03UJ4C	15.5	0.15	K194R	351.234	199.997	181.607	7.090	0.30529	3.95073	7 X
K03UO5A	18.1	0.15	K194R	295.863	174.610	231.710	20.062	0.07934	1.92219	5 X
K03UO7Z	16.8	0.15	K194R	345.699	147.428	229.699	1.875	0.19585	3.02858	6 X
K03W43J	17.0	0.15	K194R	309.308	203.069	227.015	9.259	0.24027	3.03856	6 X
K03W58U	15.5	0.15	K194R	358.168	315.246	57.805	3.856	0.28389	4.00335	9 X
K03WA0N	17.5	0.15	K194R	276.216	31.246	40.399	21.659	0.10427	1.92943	7 X
K03Y73S	16.5	0.15	K194R	314.617	139.782	259.160	27.200	0.27304	3.08404	5 X
K03Y92A	14.5	0.15	K194R	48.274	7.472	276.406	27.546	0.17048	3.14830	13 X
K03YG2M	16.0	0.15	K194R	357.162	313.607	34.152	10.264	0.25614	2.55937	11 X
K04A23G	18.2	0.15	K194R	330.549	109.997	263.576	3.069	0.12267	2.20440	9 X
K04C96T	18.4	0.15	K194R	244.175	147.346	330.219	18.203	0.07874	1.94373	6 X
K04D01X	18.4	0.15	K194R	236.941	75.054	36.671	23.625	0.19228	1.94299	6 X
K04EB0L	16.1	0.15	K194R	320.884	237.766	184.624	14.942	0.17437	3.20617	11 X
K04H12K	20.1	0.15	K194R	163.762	275.709	210.971	18.372	0.04814	1.38081	4 X
K04J46U	16.5	0.15	K194R	305.035	22.190	40.204	15.327	0.03419	2.67165	10 X
K04RD6W	18.0	0.15	K194R	331.106	206.696	175.365	5.758	0.21935	2.38551	8 X
K04RU5T	17.9	0.15	K194R	337.838	195.581	159.470	7.935	0.24342	2.40066	4 X
K04RY6F	17.9	0.15	K194R	71.879	248.293	101.103	2.703	0.31808	2.75275	3 V
K04TB2K	17.3	0.15	K194R	299.180	93.041	0.149	21.355	0.31709	2.39314	4 X
K04TT9Z	17.7	0.15	K194R	313.061	113.531	295.889	7.229	0.21127	2.40072	4 X
K04TW6L	16.7	0.15	K194R	351.050	16.201	343.683	13.294	0.23593	2.90543	6 X
K04V17H	17.9	0.15	K194R	327.790	331.055	54.119	2.420	0.19076	2.40583	8 X
K05E36N	17.2	0.15	K194R	310.225	190.951	258.078	7.044	0.50499	2.94079	4 X

K05GK8H	15.7	0.15	K194R	324.564	218.455	196.284	11.125	0.09487	3.11009	10	X
K05J53H	17.2	0.15	K194R	305.091	215.503	210.112	3.613	0.14877	2.54984	8	X
K05M06Y	17.1	0.15	K194R	355.854	145.349	202.125	13.153	0.25112	2.68051	7	X
K05O18Q	18.4	0.15	K194R	336.237	138.737	220.076	1.735	0.22698	2.28066	5	X
K05Q45C	17.2	0.15	K194R	310.570	42.849	2.111	6.654	0.10443	2.26434	6	X
K05Q77T	17.1	0.15	K194R	316.793	233.303	171.397	9.775	0.22522	2.76019	7	X
K05S45L	17.0	0.15	K194R	123.209	210.584	14.220	26.250	0.11900	2.28241	5	X
K05S53K	17.0	0.15	K194R	326.182	183.859	212.986	4.246	0.16546	2.75401	8	X
K05S76Z	17.2	0.15	K194R	24.332	304.692	20.551	3.516	0.19223	2.74522	6	X
K05T30M	17.6	0.15	K194R	284.309	211.402	225.217	7.644	0.18028	2.29753	7	X
K05T50A	17.6	0.15	K194R	310.633	193.953	209.938	23.087	0.14358	2.29257	7	X
K05T99M	16.9	0.15	K194R	346.885	62.863	294.233	6.315	0.15068	2.27280	8	X
K05U68E	18.2	0.15	K194R	316.875	310.410	74.186	5.173	0.23916	2.30309	4	X
K05U75Z	16.0	0.15	K205V	78.446	124.456	243.572	23.720	0.15966	2.76859	7	X
K05U90L	16.3	0.15	K194R	155.912	333.836	243.344	12.842	0.07147	2.77497	8	X
K05UF8R	18.1	0.15	K194R	280.631	228.492	223.802	21.305	0.27517	2.30551	4	X
K05UJ0C	18.2	0.15	K194R	337.615	129.938	233.648	1.412	0.22565	2.30017	6	X
K05UM3B	17.3	0.15	K194R	10.112	41.024	314.676	1.695	0.07593	2.77225	10	X
K05Ua0O	17.1	0.15	K194R	298.934	33.592	49.189	16.817	0.25623	2.79576	5	X
K05Uf3W	17.7	0.15	K194R	295.237	38.266	48.344	8.476	0.20817	2.78133	5	X
K05Uk3H	16.6	0.15	K194R	302.203	25.497	51.300	13.688	0.08351	2.76513	9	X
K05Uo2Q	17.2	0.15	K194R	328.724	303.638	75.579	7.118	0.19618	2.28807	8	X
K05V51F	18.1	0.15	K194R	332.152	293.634	78.800	6.733	0.20492	2.29390	5	X
K05V51K	18.0	0.15	K194R	321.768	325.389	63.571	7.579	0.18371	2.29763	5	X
K05V86N	17.3	0.15	K194R	335.612	147.313	249.290	5.108	0.06470	2.77997	4	X
K05W00D	21.9	0.15	K194R	308.280	160.967	227.679	26.157	0.56005	2.30736	3	X
K05W04N	19.9	0.15	K194R	333.193	261.008	66.874	23.039	0.15592	1.76873	2	V
K05W98G	17.3	0.15	K194R	324.361	164.532	243.114	9.630	0.16107	2.77201	3	X
K05X54W	18.6	0.15	K194R	341.270	6.504	350.960	1.334	0.20233	2.31684	5	X
K05Y07P	18.8	0.15	K194R	296.929	343.682	80.415	2.191	0.17057	2.33255	7	X
K05YE9U	17.3	0.15	K194R	320.436	305.125	97.786	13.968	0.26813	2.84539	6	X
K05YI7U	18.8	0.15	K194R	291.983	208.932	223.816	0.465	0.17012	2.33123	6	X
K05YK6O	18.3	0.15	K194R	310.390	266.667	142.320	2.600	0.19791	2.32604	7	X
K06B66A	18.4	0.15	K194R	288.181	40.582	37.282	2.027	0.14605	2.34564	6	X
K06F07W	17.5	0.15	K194R	224.272	118.060	29.316	6.214	0.07961	2.41078	9	X
K06G06T	18.0	0.15	K194R	13.696	109.978	91.682	4.976	0.14591	2.63594	4	V
K06J00U	19.6	0.15	K205V	125.008	90.084	213.500	5.354	0.46851	2.15863	3	X
K06K90W	17.0	0.15	K194R	283.286	218.767	230.591	12.926	0.13701	2.43822	7	X
K06M14R	16.3	0.15	K194R	60.140	282.761	355.032	14.216	0.19424	2.53961	6	X
K06O18E	16.5	0.15	K194R	13.828	301.481	28.388	7.858	0.17950	2.56676	8	X
K06P28H	16.9	0.15	K194R	29.696	264.010	56.439	15.020	0.14181	2.57043	6	X
K06QB1G	17.9	0.15	K194R	331.585	272.240	101.235	6.655	0.14712	2.16809	7	X
K06S02G	16.1	0.15	K194R	44.044	40.729	269.765	12.833	0.06129	2.59996	9	X
K06S09D	17.4	0.15	K194R	328.949	188.519	201.212	7.679	0.31497	2.63277	5	X
K06SD4L	17.4	0.15	K194R	342.183	317.077	36.118	34.001	0.36213	2.66368	3	X
K06SD8B	17.5	0.15	K194R	316.014	0.960	47.818	14.463	0.25307	2.62447	3	X
K06SF3Z	17.1	0.15	K194R	353.398	297.186	41.900	14.173	0.30797	2.63060	5	X
K06SL7H	18.4	0.15	K194R	344.174	292.126	59.502	3.685	0.19295	2.17491	5	X
K06SM4O	17.6	0.15	K194R	316.045	128.036	280.587	3.869	0.21816	2.59354	7	X
K06SN0D	17.9	0.15	K194R	284.563	95.063	357.048	12.807	0.21657	2.62668	5	X
K06SZ9K	16.9	0.15	K194R	358.965	293.750	43.916	12.233	0.31397	2.64589	7	X
K06Sa7A	17.0	0.15	K194R	343.138	285.529	72.924	12.855	0.27359	2.64139	5	X
K06T39Q	18.5	0.15	K194R	5.758	111.553	221.469	3.297	0.13006	2.18476	6	X
K06T69K	16.9	0.15	K194R	346.664	321.260	43.053	18.754	0.22949	2.62670	6	X
K06T78E	17.2	0.15	K194R	343.672	118.683	231.652	10.554	0.32145	2.64694	5	X
K06TB3Y	18.1	0.15	K194R	301.335	275.946	126.420	7.386	0.12680	2.18916	5	X
K06TD1B	17.1	0.15	K194R	272.704	68.046	39.266	12.852	0.17129	2.63165	6	X
K06U70E	18.3	0.15	K194R	310.639	186.697	211.795	5.079	0.14516	2.18745	6	X
K06U84X	17.2	0.15	K194R	309.811	12.235	47.520	14.988	0.12256	2.66036	5	X
K06UC0T	18.1	0.15	K194R	317.643	7.115	43.176	7.573	0.22469	2.63937	3	X
K06UG9S	18.1	0.15	K194R	332.435	308.239	61.777	5.019	0.14731	2.18262	6	X
K06UM5J	17.8	0.15	K194R	235.917	232.595	229.374	16.500	0.07128	1.88755	7	X
K06Ua1G	17.7	0.15	K194R	340.737	96.736	262.654	6.798	0.17671	2.18674	7	X
K06V01W	18.1	0.15	K194R	326.065	310.538	54.750	23.145	0.08528	1.88632	4	X
K06V29H	18.0	0.15	K194R	334.423	93.626	270.956	3.610	0.36293	2.67177	4	X
K06V52A	17.5	0.15	K194R	278.762	90.334	41.490	29.053	0.29956	2.61503	5	X
K06VD4Q	16.9	0.15	K194R	350.069	304.840	56.839	13.944	0.27349	2.65721	7	X
K06W07J	17.1	0.15	K194R	313.591	344.656	71.392	15.183	0.23877	2.65803	6	X
K06W15A	16.4	0.15	K194R	307.019	156.979	251.388	27.903	0.14994	2.69661	7	X
K06W78H	19.7	0.15	K194R	325.426	297.976	55.552	1.980	0.46662	2.68282	2	V
K06WA6W	16.9	0.15	K194R	327.160	304.462	76.043	13.666	0.17983	2.67400	4	X
K06WC7J	16.8	0.15	K194R	336.807	317.843	74.427	6.875	0.06392	2.66518	10	X
K06WE0L	17.9	0.15	K194R	264.182	159.328	262.526	19.082	0.10519	1.91011	4	X
K06WF1C	17.4	0.15	K194R	341.396	127.517	241.261	4.622	0.19445	2.65386	9	X
K06WG7F	16.9	0.15	K194R	33.124	87.644	238.110	5.360	0.10498	2.67103	10	X
K06X42Q	18.4	0.15	K194R	310.602	141.907	280.666	3.852	0.28171	2.68847	4	X
K06X45S	17.3	0.15	K194R	317.328	111.583	261.295	22.713	0.28519	2.20334	3	X
K06X52M	16.8	0.15	K194R	291.055	163.782	273.476	12.655	0.20119	2.70662	5	X
K06X61X	18.2	0.15	K205V	9.103	222.447	255.044	18.348	0.10740	1.90581	4	X
K07A19R	17.5	0.15	K194R	18.713	117.092	305.610	30.186	0.30058	2.57771	2	V
K07EC8R	16.8	0.15	K194R	12.738	357.276	355.291	2.428	0.09601	2.83617	10	X
K07R14G	16.1	0.15	K194R	330.626	98.753	325.032	24.799	0.29436	3.17556	6	X
K07RO2V	17.5	0.15	K194R	108.825	164.083	141.869	5.905	0.23718	2.35326	10	V
K07RP0H	16.0	0.15	K194R	225.227	287.820	234.727	7.669	0.04767	3.16551	7	X
K07RR2X	16.7	0.15	K194R	327.132	46.925	0.444	14.656	0.13338	3.23566	7	X
K07T36G	15.9	0.15	K194R	16.344	4.939	335.367	17.838	0.07134	3.16349	8	X
K07U32K	16.6	0.15	K194R	315.746	276.539	172.695	10.371	0.09594	3.20083	6	V
K07VJ3X	15.9	0.15	K194R	11.877	3.139	3.485	26.193	0.10531	3.16360	3	X
K07VW3L	18.0	0.15	K194R	318.879	343.661	56.903	2.437	0.23004	2.52226	4	X
K07W07Q	17.5	0.15	K194R	326.937	47.916	344.359	3.531	0.19935	2.52429	5	X
K07X39Q	16.4	0.15	K194R	248.396	165.143	289.029	21.291	0.01896	2.62159	5	X
K07X60K	18.0	0.15	K194R	298.146	24.465	49.870	1.889	0.13981	2.53504	6	X
K07Y50B	17.4	0.15	K194R	331.312	287.441	94.580	5.369	0.26777	2.56394	7	X

K08CB4V	17.5	0.15	K194R	337.627	142.925	237.238	3.440	0.18961	2.57785	7	X
K08CD6U	17.4	0.15	K194R	86.360	333.285	317.165	12.224	0.08532	2.62262	5	V
K08CG3B	18.0	0.15	K205V	37.143	106.230	326.976	1.528	0.23352	2.58048	5	X
K08FC8R	16.5	0.15	K194R	299.915	236.824	194.369	14.823	0.05243	2.70935	7	X
K08J39A	17.5	0.15	K194R	305.779	299.276	105.942	7.943	0.11872	2.20732	9	X
K08Q17B	18.0	0.15	K194R	30.286	347.998	323.793	1.788	0.15106	2.31063	10	X
K08Q33Y	16.2	0.15	K194R	346.840	183.473	173.467	11.858	0.22149	3.07622	8	X
K08Q44S	18.0	0.15	K194R	326.591	12.521	7.925	5.714	0.17203	2.34663	4	X
K08R24B	16.8	0.15	K194R	340.902	58.574	311.535	8.970	0.33354	3.07836	5	X
K08R69J	17.2	0.15	K194R	301.666	31.765	55.032	2.134	0.18923	3.02932	7	X
K08RC6C	18.4	0.15	K194R	334.464	118.212	261.335	1.580	0.06093	2.34990	4	X
K08RC9L	17.9	0.15	K194R	333.186	178.114	192.558	2.786	0.26026	2.37943	4	X
K08RD6T	16.6	0.15	K194R	340.969	293.608	92.580	2.672	0.21181	3.04517	5	X
K08S02O	17.6	0.15	K194R	346.357	309.479	32.831	9.871	0.34682	2.35936	2	X
K08SA4S	16.1	0.15	K194R	329.533	11.998	34.116	6.136	0.11446	3.08062	8	X
K08SB3D	18.1	0.15	K194R	303.622	28.133	28.384	3.864	0.18412	2.33806	5	X
K08SB8Z	18.8	0.15	K194R	295.467	229.603	201.682	2.062	0.20281	2.35975	4	X
K08SI9F	16.3	0.15	K194R	345.498	25.496	342.569	16.600	0.18765	3.04824	4	X
K08SL9H	16.4	0.15	K205V	93.799	339.834	354.994	5.068	0.17399	3.04694	11	X
K08SS0D	17.0	0.15	K194R	2.484	323.896	39.600	10.030	0.14656	3.04893	6	X
K08SS1S	18.4	0.15	K194R	321.389	315.677	76.827	2.328	0.19167	2.37585	6	X
K08SU3W	17.1	0.15	K194R	333.852	109.275	287.301	0.253	0.14172	3.06483	6	X
K08T02S	16.7	0.15	K194R	344.983	165.335	217.652	9.255	0.23219	3.04441	4	X
K08T21H	17.1	0.15	K194R	314.655	203.182	220.434	2.459	0.20760	3.10318	7	X
K08T33S	17.0	0.15	K194R	335.415	311.912	85.566	2.425	0.18707	3.07205	5	X
K08T77O	17.1	0.15	K194R	354.760	199.001	167.187	1.956	0.20453	3.05362	4	X
K08TD0H	16.9	0.15	K194R	271.766	212.468	266.197	3.488	0.11663	3.05664	6	X
K08TG3R	18.6	0.15	K194R	304.678	160.970	255.466	1.539	0.20283	2.36259	5	X
K08U02D	16.5	0.15	K194R	16.750	62.857	270.978	7.691	0.21980	3.06649	7	X
K08U40X	17.6	0.15	K194R	341.394	321.402	37.730	7.486	0.18572	2.37978	6	X
K08U40Z	16.1	0.15	K194R	301.615	210.435	231.567	9.404	0.09001	3.10571	7	X
K08U76F	18.0	0.15	K194R	327.928	192.116	189.252	2.419	0.21917	2.37247	5	X
K08U77N	16.1	0.15	K194R	269.247	232.114	247.753	11.297	0.12224	3.13963	6	X
K08U82A	18.5	0.15	K194R	336.831	125.444	228.275	19.244	0.08273	1.96228	4	X
K08UB0A	16.3	0.15	K194R	264.483	224.143	258.024	8.212	0.05732	3.07426	6	X
K08UB5G	18.3	0.15	K194R	334.688	62.265	307.281	3.812	0.19962	2.37395	6	X
K08UC6A	16.8	0.15	K205V	64.230	112.543	251.691	14.834	0.23918	3.13061	3	X
K08UF8L	16.0	0.15	K205V	109.849	43.530	286.351	10.209	0.06217	3.15117	7	X
K08UL5K	15.5	0.15	K194R	317.875	169.155	252.902	11.011	0.02181	3.07993	11	X
K08UM7N	16.4	0.15	K194R	344.503	128.058	254.296	9.495	0.15235	3.13792	8	X
K08UQ0N	16.7	0.15	K194R	323.718	203.809	208.871	16.316	0.17897	3.10638	5	X
K08UQ5B	16.4	0.15	K194R	312.601	180.098	249.245	8.143	0.10460	3.08812	8	X
K08UQ6D	18.3	0.15	K194R	304.583	154.102	263.162	3.728	0.17474	2.36567	3	X
K08UX8H	15.9	0.15	K194R	295.539	46.198	38.479	17.183	0.19356	3.15240	5	X
K08UY1F	15.9	0.15	K194R	321.147	145.360	261.839	17.003	0.19726	3.10249	4	X
K08Ua0E	16.4	0.15	K194R	332.682	0.878	47.923	10.670	0.04987	3.13786	6	X
K08V14P	16.6	0.15	K194R	311.535	77.336	357.746	22.933	0.43145	3.13742	4	X
K08V30M	18.5	0.15	K194R	330.174	21.890	357.591	2.406	0.20045	2.37392	5	X
K08V38M	16.9	0.15	K194R	304.253	31.327	51.151	14.330	0.16569	3.13013	3	X
K08W27K	18.6	0.15	K194R	307.359	9.038	42.048	3.152	0.20800	2.37627	3	X
K08W33J	16.1	0.15	K194R	356.247	277.333	88.195	17.283	0.24754	3.09108	6	X
K08W60Y	17.9	0.15	K194R	295.009	157.627	241.638	19.282	0.08855	1.96975	5	X
K08W78W	16.3	0.15	K205V	346.732	224.167	236.575	26.703	0.19272	3.18211	4	X
K08W93Q	16.1	0.15	K205V	359.160	182.821	263.687	13.682	0.19213	3.17808	5	X
K08WA1Y	19.6	0.15	K194R	267.488	168.439	248.205	11.920	0.21395	1.69731	5	X
K08WB5G	18.7	0.15	K194R	300.303	165.378	259.966	1.740	0.16098	2.38174	5	X
K08WC5Q	16.5	0.15	K194R	315.308	317.816	117.002	6.310	0.21590	3.19489	6	X
K08WD6U	18.1	0.15	K194R	317.510	112.521	266.800	9.913	0.38041	2.39004	2	X
K08WD7E	15.8	0.15	K194R	331.816	332.877	73.149	15.842	0.22440	3.13162	8	X
K08X35J	17.6	0.15	K194R	4.893	286.829	51.023	6.963	0.14377	2.40300	10	X
K08Y01O	16.6	0.15	K194R	325.972	0.231	50.336	17.436	0.17936	3.13053	3	X
K08Y25D	15.9	0.15	K194R	320.803	345.249	80.028	11.951	0.23194	3.16204	5	X
K08Y37O	18.3	0.15	K194R	270.161	225.652	238.001	0.546	0.15453	2.42812	7	X
K08Y66C	16.5	0.15	K194R	19.890	316.993	250.929	15.431	0.13970	2.67715	9	V
K08Y69R	16.2	0.15	K194R	309.822	143.444	296.916	26.400	0.18735	3.19986	5	X
K08Y98W	17.5	0.15	K194R	330.270	272.082	112.093	6.616	0.12074	2.43620	9	X
K08YB7N	18.4	0.15	K194R	320.598	147.001	243.928	2.579	0.19147	2.42642	5	X
K09F66Q	17.7	0.15	K194R	33.358	90.265	188.084	9.990	0.16266	2.68018	7	V
K09H56W	16.8	0.15	K194R	255.698	65.006	45.901	23.090	0.04592	2.56314	6	X
K09H59B	17.2	0.15	K194R	301.293	6.586	59.324	8.650	0.13141	2.55487	8	X
K09Q03H	17.0	0.15	K194R	317.185	208.257	206.466	2.527	0.15342	2.80994	9	X
K09Q45A	16.3	0.15	K194R	71.892	299.297	342.093	25.353	0.15761	2.79860	6	X
K09R40C	18.9	0.15	K194R	340.916	108.608	239.433	4.688	0.24688	2.21199	5	X
K09SI1C	19.1	0.15	K194R	306.332	69.296	333.540	1.870	0.14132	2.19910	4	X
K09V41Y	18.6	0.15	K194R	315.955	129.713	261.563	6.719	0.24634	2.22704	3	X
K09VA9K	17.3	0.15	K194R	5.290	271.267	56.862	10.186	0.20545	2.23987	11	X
K09Y20X	16.1	0.15	K194R	316.166	106.434	305.556	10.262	0.17372	3.03004	8	X
K10A20P	15.8	0.15	K194R	256.089	350.639	137.487	10.926	0.04228	3.06784	10	X
K10A86Z	15.7	0.15	K194R	326.323	340.106	72.132	28.968	0.17785	3.20089	6	X
K10AA4L	16.1	0.15	K194R	334.255	143.576	292.324	15.368	0.02337	3.17571	7	V
K10AC6P	17.3	0.15	K194R	305.376	197.034	262.973	7.530	0.28273	2.85838	3	V
K10AC6T	15.7	0.15	K194R	299.000	30.838	57.085	21.934	0.18288	3.18707	6	X
K10B08T	18.0	0.15	K194R	331.171	288.639	76.233	14.774	0.35078	2.92948	2	V
K10B98J	17.2	0.15	K194R	333.916	71.260	92.602	14.334	0.10475	2.62443	3	V
K10C42F	16.2	0.15	K194R	266.121	176.148	324.288	27.317	0.10180	3.04923	7	X
K10C56Y	16.8	0.15	K194R	201.492	190.561	344.338	25.038	0.18775	2.32506	5	X
K10C65Y	16.0	0.15	K194R	301.118	141.794	308.578	20.018	0.15543	3.06138	7	X
K10C84U	16.2	0.15	K194R	292.828	110.148	344.344	15.286	0.24326	3.07636	6	X
K10CN8T	17.4	0.15	K194R	161.701	242.350	290.517	13.810	0.10325	2.45727	3	V
K10D21O	16.2	0.15	K194R	280.262	141.770	323.384	15.739	0.21794	3.06531	5	X
K10E59Q	15.7	0.15	K194R	255.510	163.885	293.442	27.255	0.13543	3.08335	7	X
K10EB7R	16.4	0.15	K194R	295.145	202.777	239.694	15.187	0.04983	3.00864	8	X
K10EC5R	15.7	0.15	K194R	258.076	308.577	196.810	16.368	0.18711	3.12044	7	X

K10EG0Q	16.9	0.15	K194R	239.138	142.223	320.210	9.761	0.18857	3.12818	4	V
K10F07B	15.4	0.15	K194R	186.082	144.358	60.814	19.620	0.09701	3.21535	8	X
K10F08G	16.5	0.15	K194R	321.365	35.342	7.359	2.146	0.10414	3.02339	11	X
K10F10M	16.1	0.15	K194R	260.529	85.246	49.783	12.469	0.15926	3.15136	9	X
K10F41A	16.0	0.15	K194R	12.791	286.436	73.300	4.089	0.04081	3.02530	11	X
K10F49U	17.4	0.15	K194R	246.216	29.690	174.802	24.839	0.31762	3.15664	2	V
K10FA2M	16.3	0.15	K194R	231.261	330.872	101.286	18.220	0.15372	3.23769	2	V
K10FB9F	17.9	0.15	K194R	293.405	62.598	328.383	22.130	0.25016	2.28811	4	V
K10G59E	17.4	0.15	K194R	329.669	348.653	185.800	8.016	0.15205	2.74961	3	V
K10G86D	17.4	0.15	K194R	203.970	88.987	77.641	14.172	0.25494	3.16964	2	V
K10GA8E	16.9	0.15	K194R	97.473	224.942	41.981	8.192	0.03443	2.41919	10	X
K10H13U	16.8	0.15	K194R	310.015	91.897	328.539	15.357	0.21553	3.04662	4	X
K10H42Q	17.3	0.15	K194R	348.489	261.521	97.857	13.260	0.23444	2.62260	7	X
K10H58Y	17.3	0.15	K194R	252.467	256.393	216.871	9.095	0.20474	3.12504	3	V
K10H74Q	17.2	0.15	K194R	49.918	310.296	181.794	28.251	0.07656	2.64944	6	V
K10H90S	17.2	0.15	K205V	92.572	59.975	280.507	9.484	0.23894	2.63656	7	X
K10J98J	16.6	0.15	K194R	274.711	48.043	62.700	10.019	0.06786	3.11915	6	X
K10JF3V	19.6	0.15	K194R	218.585	185.168	129.933	5.941	0.47092	2.22607	2	V
K10K73U	16.6	0.15	K194R	203.107	236.396	111.120	24.769	0.32759	3.12193	3	V
K10K75N	16.8	0.15	K194R	228.576	321.399	195.053	10.009	0.18292	3.16187	3	V
K10L22K	17.0	0.15	K194R	219.568	109.793	56.524	13.273	0.22059	3.18652	2	V
K10L65E	17.4	0.15	K194R	249.991	193.598	266.274	18.095	0.06620	1.98634	10	X
K10LD2E	17.8	0.15	K194R	327.571	358.733	28.441	10.236	0.28589	2.68734	4	X
K10M27W	16.8	0.15	K194R	358.714	239.678	102.211	15.932	0.17795	2.68194	7	X
K10M52D	17.7	0.15	K194R	331.415	61.274	274.853	18.854	0.34790	2.76320	3	V
K10M75J	18.1	0.15	K194R	346.276	149.901	141.972	9.562	0.15647	2.58066	3	V
K10MA7R	16.2	0.15	K194R	3.981	46.560	299.148	13.542	0.13438	2.67601	10	X
K10N59G	17.9	0.15	K194R	289.793	325.260	101.536	8.398	0.29219	2.74496	3	V
K10N66W	18.3	0.15	K194R	176.365	234.052	136.434	11.977	0.27940	2.29317	2	V
K10N97J	16.7	0.15	K194R	237.935	168.883	131.260	29.839	0.20005	3.18571	2	V
K10O02T	15.7	0.15	K194R	1.568	325.568	315.529	5.277	0.17464	3.98021	8	V
K10O11X	17.2	0.15	K194R	229.906	17.368	297.095	5.680	0.17124	3.18975	3	V
K10O41J	17.2	0.15	K194R	339.855	246.450	121.112	10.581	0.34162	2.71405	7	X
K10P79C	16.9	0.15	K194R	344.958	16.534	336.083	13.301	0.25964	2.66633	3	X
K10R62D	17.0	0.15	K194R	313.345	135.172	279.700	4.307	0.27350	2.68224	6	X
K10R80N	20.1	0.15	K194R	185.404	46.023	349.369	8.726	0.53936	2.25061	2	V
K10T05H	16.8	0.15	K194R	336.740	3.294	14.163	14.441	0.20666	2.67813	6	X
K10T11O	17.0	0.15	K194R	313.636	179.341	237.342	11.325	0.28590	2.68201	5	X
K10TJ4L	17.5	0.15	K194R	297.411	37.889	43.779	3.147	0.15903	2.67916	7	X
K10U18D	16.5	0.15	K194R	251.046	94.222	35.195	10.852	0.13604	2.69963	9	X
K10V28L	17.0	0.15	K194R	311.129	21.098	44.097	13.771	0.24568	2.68500	4	X
K10VG4X	17.0	0.15	K194R	344.786	116.499	257.661	11.162	0.20443	2.71308	6	X
K10VJ9X	17.1	0.15	K194R	317.304	297.265	99.504	11.205	0.22316	2.74909	4	X
K10VL1X	16.5	0.15	K194R	89.770	37.757	232.088	11.744	0.12989	2.68386	9	X
K10W15B	17.4	0.15	K194R	308.630	196.031	226.453	7.705	0.18961	2.73669	5	X
K10W46W	17.0	0.15	K194R	187.243	304.561	245.794	4.057	0.09403	2.76470	11	X
K10X11P	17.2	0.15	K194R	330.244	312.392	76.768	14.936	0.16806	2.73901	5	X
K10X39J	17.3	0.15	K205V	30.108	134.574	293.048	7.491	0.27040	2.76778	3	X
K11A17G	17.4	0.15	K194R	317.052	332.258	75.895	15.405	0.20825	2.73916	3	X
K11A38C	18.4	0.15	K194R	336.892	306.667	54.890	0.770	0.10973	2.13061	9	X
K11B50C	16.0	0.15	K194R	350.659	250.267	110.144	9.762	0.09730	2.99968	9	X
K11B84A	18.0	0.15	K194R	70.399	125.151	83.093	4.391	0.29841	2.31974	6	V
K11BD5J	16.9	0.15	K194R	282.372	278.437	110.472	12.480	0.06888	3.03596	5	V
K11BF2U	17.2	0.15	K194R	319.910	168.382	235.574	12.786	0.25315	2.68923	4	X
K11D20F	15.3	0.15	K194R	178.303	126.173	75.701	14.627	0.04529	2.99476	10	X
K11E49K	16.1	0.15	K194R	359.576	264.419	98.086	9.862	0.13912	3.00114	12	X
K11G54Z	22.0	0.15	K205V	315.325	15.321	213.634	9.967	0.13925	1.33267	3	X
K11H00U	19.1	0.15	K194R	333.935	197.725	55.386	33.180	0.16577	1.89647	2	V
K11H58B	15.7	0.15	K194R	348.289	295.462	94.224	12.115	0.08029	3.12755	9	X
K11H80J	15.7	0.15	K194R	344.699	270.205	119.296	11.613	0.06754	3.14227	9	X
K11J15P	17.0	0.15	K194R	22.123	241.874	70.037	24.212	0.12200	2.30705	5	X
K11O36K	18.0	0.15	K194R	344.377	307.093	51.895	3.450	0.21638	2.41759	7	X
K11O36S	18.2	0.15	K194R	335.637	349.739	18.073	1.724	0.19901	2.42080	6	X
K11O39Q	17.7	0.15	K194R	352.685	5.567	339.275	1.259	0.23829	2.44218	6	X
K11O60X	17.3	0.15	K194R	7.507	33.513	289.678	11.732	0.20321	2.42469	5	X
K11Q02L	18.3	0.15	K194R	337.808	45.539	336.100	13.996	0.20719	2.44187	3	X
K11Q08L	17.1	0.15	K194R	3.573	179.281	162.431	6.918	0.19251	2.42874	10	X
K11Q31W	18.7	0.15	K194R	13.907	355.960	315.327	18.439	0.05038	1.88533	4	X
K11Q34Z	17.5	0.15	K194R	12.016	9.558	315.987	1.935	0.20087	2.43341	7	X
K11R18G	18.7	0.15	K194R	296.252	190.552	243.017	1.697	0.19908	2.44397	6	X
K11R19L	16.3	0.15	K194R	292.746	57.593	261.495	25.957	0.08130	2.68114	5	V
K11S33T	19.2	0.15	K194R	289.799	38.974	3.499	14.879	0.22509	1.92056	4	X
K11S39Y	16.5	0.15	K194R	340.779	342.540	54.619	1.326	0.32216	3.95736	5	X
K11SB4M	17.9	0.15	K194R	252.794	84.005	14.887	22.302	0.05800	1.89092	6	X
K11SB5J	17.6	0.15	K194R	15.378	244.747	81.576	2.546	0.20521	2.45372	8	X
K11SJ1D	16.7	0.15	K194R	324.717	106.892	268.768	25.674	0.46993	2.55354	4	X
K11U47F	15.8	0.15	K194R	347.812	141.428	247.098	6.259	0.34471	3.96094	6	X
K11U63F	17.5	0.15	K194R	332.612	54.500	281.723	17.795	0.08206	1.94487	5	X
K11U63H	17.0	0.15	K194R	317.490	66.234	325.499	15.666	0.28647	2.52975	4	X
K11UG0Z	17.1	0.15	K194R	244.933	217.511	279.920	2.542	0.15432	2.52594	10	X
K11UU9S	16.4	0.15	K194R	346.130	345.892	13.777	14.728	0.09287	2.53931	5	X
K11Ua2G	18.1	0.15	K194R	322.305	183.982	216.381	4.233	0.11836	2.52897	4	X
K11W24F	18.2	0.15	K194R	332.149	207.109	166.207	0.070	0.24413	2.53750	6	X
K11W30S	17.9	0.15	K194R	68.655	201.388	60.716	22.993	0.05440	1.93094	4	X
K11W40R	17.8	0.15	K194R	345.706	121.454	244.444	3.290	0.19508	2.53308	6	X
K11W41Z	18.4	0.15	K194R	243.822	244.148	218.174	20.041	0.10169	1.92971	6	X
K11W49U	18.0	0.15	K205V	351.712	250.866	242.302	17.824	0.06958	1.94744	6	X
K11W67Y	17.2	0.15	K194R	285.143	243.433	205.407	2.980	0.17433	2.55090	5	X
K11W68W	17.2	0.15	K194R	324.039	338.394	49.019	5.016	0.24113	2.54261	7	X
K11W72A	18.4	0.15	K194R	318.236	96.878	290.356	3.393	0.30731	2.54867	3	X
K11W76C	15.9	0.15	K194R	348.795	126.389	230.497	15.611	0.18765	2.55266	8	X
K11W88S	17.4	0.15	K205V	50.927	140.163	272.965	5.373	0.12479	2.54685	6	X
K11WA0R	15.8	0.15	K194R	336.727	339.412	74.196	5.312	0.20034	3.93773	5	X

K11WB2M	17.4	0.15	K194R	322.764	55.060	345.812	3.649	0.21470	2.52500	5	X
K11WD6O	17.4	0.15	K194R	350.980	302.172	60.917	5.294	0.13877	2.55552	5	X
K11WF1X	17.1	0.15	K194R	339.462	69.764	293.114	12.530	0.13364	2.53175	4	X
K11WF9M	16.8	0.15	K194R	2.545	288.005	67.979	14.469	0.11378	2.59044	6	X
K11Y07Y	17.4	0.15	K194R	304.233	160.202	259.608	7.178	0.18569	2.58472	6	X
K11Y15H	17.4	0.15	K194R	302.575	202.287	223.804	4.836	0.25860	2.58274	5	X
K11Y38J	16.1	0.15	K194R	317.668	119.211	278.001	13.674	0.19121	2.61762	8	X
K11Y43Z	16.4	0.15	K194R	266.668	160.925	283.992	21.116	0.04475	2.65798	7	X
K11Y65Y	18.1	0.15	K194R	307.384	154.831	261.530	6.083	0.32228	2.56851	4	X
K12A05E	17.5	0.15	K194R	272.482	62.809	42.033	1.740	0.13644	2.58726	9	X
K12A10J	17.4	0.15	K194R	246.688	121.355	357.363	20.866	0.06291	1.93753	9	X
K12B13O	17.3	0.15	K194R	280.193	234.016	227.197	26.398	0.34217	2.57192	3	X
K12B26W	17.7	0.15	K194R	253.266	265.947	244.421	10.798	0.33183	2.60977	3	X
K12B89P	18.6	0.15	K194R	315.562	285.572	121.432	7.797	0.31270	2.56582	3	X
K12BC1G	17.7	0.15	K194R	258.949	155.760	301.063	19.802	0.08320	1.96401	6	X
K12BC9X	17.4	0.15	K194R	305.319	36.960	32.337	4.903	0.20918	2.60643	8	X
K12BF1U	17.7	0.15	K194R	297.273	213.475	226.272	6.904	0.33339	2.57873	4	X
K12C37P	17.2	0.15	K194R	311.506	18.371	43.243	14.436	0.23751	2.58523	5	X
K12D00W	17.8	0.15	K194R	211.176	118.542	12.583	18.425	0.11151	1.99047	6	X
K12D03V	17.1	0.15	K194R	277.678	102.767	10.039	28.538	0.36561	2.61044	4	X
K12D11B	17.0	0.15	K194R	256.428	35.180	90.069	10.010	0.16647	2.65405	6	X
K12D38B	17.3	0.15	K194R	238.380	116.027	40.595	8.271	0.21851	2.65527	6	X
K12F00L	17.2	0.15	K194R	272.536	278.078	208.079	27.521	0.36992	2.60871	4	X
K12F27A	16.4	0.15	K194R	306.586	57.818	10.239	13.013	0.15253	2.73003	8	X
K12F87F	17.4	0.15	K194R	312.624	72.495	18.064	29.740	0.28896	2.59329	6	X
K12H17F	15.6	0.15	K194R	27.548	201.455	120.222	9.398	0.08389	3.04889	9	X
K12J48C	16.1	0.15	K194R	15.559	278.876	50.022	13.458	0.29540	3.16928	7	X
K12K16N	16.6	0.15	K194R	33.091	103.325	228.849	10.659	0.07654	3.03913	8	X
K12K50E	15.5	0.15	K194R	344.698	263.387	116.630	11.804	0.06476	3.03808	12	X
K12L16N	16.0	0.15	K194R	351.235	112.207	250.282	24.409	0.29374	3.19999	4	X
K12O04S	19.4	0.15	K194R	339.216	64.955	209.362	10.834	0.39353	2.32089	2	V
K12R11M	17.6	0.15	K194R	324.256	53.959	325.222	5.092	0.24203	2.27012	5	X
K12R17K	17.8	0.15	K194R	318.703	211.089	173.812	4.892	0.14232	2.26566	10	X
K12S55B	18.6	0.15	K194R	342.911	305.971	41.726	4.506	0.25761	2.29588	4	X
K12T02D	17.5	0.15	K194R	349.473	173.713	183.571	7.225	0.09786	2.25371	8	X
K12T44T	17.6	0.15	K194R	29.217	42.509	259.299	5.210	0.21915	2.24690	7	X
K12TD3D	17.9	0.15	K194R	30.860	207.060	93.046	1.466	0.21306	2.23790	8	X
K12TT1B	18.3	0.15	K194R	309.716	349.937	52.242	5.815	0.13824	2.26702	8	X
K12TU2N	18.1	0.15	K194R	312.754	353.127	45.257	3.346	0.14183	2.27075	4	X
K12U50F	15.3	0.15	K194R	48.079	279.179	50.051	18.541	0.09772	3.55902	5	X
K12U80Q	18.4	0.15	K194R	359.361	96.771	241.666	9.057	0.17903	2.28972	4	X
K12V34M	17.3	0.15	K194R	298.225	120.613	275.839	19.172	0.25564	2.32421	6	X
K12V56W	18.2	0.15	K194R	289.679	302.850	134.636	5.269	0.21004	2.29378	5	X
K12VA1N	18.3	0.15	K194R	292.654	205.784	224.169	8.006	0.13104	2.29093	4	X
K12X16O	19.0	0.15	K194R	220.535	337.919	70.207	37.641	0.29203	2.54354	2	V
K12X33N	18.1	0.15	K194R	337.677	111.652	253.524	5.649	0.21612	2.32280	6	X
K12XD0V	18.2	0.15	K194R	302.235	200.868	218.230	6.145	0.17926	2.31843	3	X
K12XD9B	18.1	0.15	K194R	287.869	48.470	25.097	4.641	0.22669	2.32901	4	X
K13A27U	18.9	0.15	K194R	238.089	169.126	297.025	32.551	0.24594	1.43672	4	X
K13A68D	18.4	0.15	K194R	294.714	37.913	28.839	1.718	0.17133	2.36662	5	X
K13A80B	18.5	0.15	K194R	316.820	274.874	118.385	6.594	0.26864	2.36889	5	X
K13A97C	17.9	0.15	K194R	277.067	308.418	139.231	6.409	0.25669	2.36186	5	X
K13AB8U	17.1	0.15	K194R	331.366	59.675	304.079	10.365	0.34009	2.38476	7	X
K13B69Q	17.5	0.15	K194R	331.204	28.546	357.355	4.130	0.14534	2.40009	9	X
K13C35W	21.0	0.15	K194R	95.670	198.098	339.258	5.884	0.41283	1.93961	2	V
K13C63C	17.9	0.15	K194R	276.297	208.625	245.356	5.047	0.10202	2.41164	4	X
K13C89K	18.2	0.15	K194R	299.369	243.291	171.552	23.074	0.50450	2.34038	4	X
K13CF0F	17.8	0.15	K194R	297.129	35.910	33.938	4.918	0.16959	2.43575	7	X
K13CJ1U	17.2	0.15	K194R	231.868	90.137	50.736	7.424	0.08249	2.46337	8	X
K13CM2N	18.9	0.15	K194R	6.496	115.888	149.440	9.102	0.67747	3.17412	2	V
K13E27S	17.1	0.15	K194R	39.908	257.889	55.792	2.771	0.11978	2.59969	11	X
K13E71W	16.3	0.15	K194R	356.601	335.000	12.531	11.214	0.19079	2.57210	8	X
K13F14C	15.9	0.15	K194R	347.709	242.504	127.277	12.299	0.20016	2.54599	8	X
K13G37K	17.8	0.15	K194R	287.070	59.969	32.207	22.416	0.34489	2.41107	5	X
K13G83V	16.6	0.15	K194R	145.914	159.116	65.398	9.654	0.04663	2.62767	11	X
K13H18F	16.6	0.15	K194R	340.919	122.136	149.072	17.302	0.39641	3.24600	2	V
K13H36T	17.2	0.15	K194R	312.808	174.229	233.776	13.303	0.15681	2.57843	3	X
K13J05X	18.6	0.15	K194R	277.272	18.020	33.148	22.319	0.07640	1.88924	5	X
K13J29D	15.3	0.15	K194R	332.480	131.085	256.833	26.044	0.21725	3.20365	5	X
K13J47H	16.9	0.15	K194R	243.534	35.823	73.821	22.822	0.04231	2.68049	7	X
K13K04Q	17.1	0.15	K194R	275.833	45.468	51.155	22.587	0.11999	2.59519	4	X
K13L36J	16.0	0.15	K194R	330.159	109.470	272.958	24.823	0.19684	3.17922	4	X
K13N01C	18.2	0.15	K194R	334.396	105.052	248.186	18.857	0.09448	1.94457	4	X
K13N31S	17.4	0.15	K194R	323.764	86.764	298.986	13.716	0.28230	3.15569	3	X
K13O07L	16.3	0.15	K194R	354.043	87.504	267.808	18.860	0.22966	3.10412	5	X
K13P11S	15.5	0.15	K194R	310.125	151.444	268.831	8.883	0.13878	3.11237	10	X
K13P40T	16.8	0.15	K194R	323.211	108.315	311.256	17.010	0.28276	3.08051	5	X
K13P51O	16.2	0.15	K194R	303.868	96.135	330.441	24.194	0.22471	3.17335	6	X
K13Q01S	17.8	0.15	K194R	264.315	136.593	307.798	18.888	0.08201	1.97832	5	X
K13Q47T	16.1	0.15	K194R	5.282	357.316	347.265	16.847	0.20930	3.15806	6	X
K13Q66A	15.6	0.15	K194R	357.429	46.469	306.693	15.192	0.19606	3.17100	8	X
K13Q69U	15.8	0.15	K194R	343.754	246.581	125.729	12.053	0.28154	3.16010	7	X
K13R06J	16.6	0.15	K194R	320.540	57.825	345.378	25.981	0.26599	3.18566	3	X
K13R16H	15.8	0.15	K194R	12.821	52.885	275.062	21.993	0.28012	3.14302	5	X
K13R19L	15.7	0.15	K194R	349.356	28.529	358.203	18.106	0.09499	3.09438	8	X
K13R33Y	15.5	0.15	K194R	27.047	13.682	313.475	11.684	0.13568	3.12233	10	X
K13R59T	16.3	0.15	K194R	346.288	52.908	327.353	10.816	0.07128	3.11458	7	X
K13R95C	16.0	0.15	K194R	332.822	241.395	158.732	9.793	0.10718	3.17053	8	X
K13R97S	16.1	0.15	K194R	4.493	55.123	293.146	15.185	0.22905	3.20122	4	X
K13R97W	16.2	0.15	K194R	10.348	26.635	317.883	12.327	0.13874	3.14237	9	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
K13S61U	16.0	0.15	K194R	343.930	278.473	114.875	6.421	0.16107	3.09705	12	X

K13S73E	16.0	0.15	K194R	315.612	39.560	23.620	26.427	0.20712	3.16834	4	X
K13T04B	15.5	0.15	K194R	6.049	79.952	256.506	23.501	0.34302	3.17202	5	X
K13T12Z	16.6	0.15	K194R	350.145	154.266	227.302	15.259	0.17518	3.11134	4	X
K13T36V	15.7	0.15	K194R	335.004	18.061	20.569	20.809	0.16492	3.17491	5	X
K13T74E	16.1	0.15	K194R	16.512	328.777	31.916	30.632	0.22805	3.17273	4	X
K13T96G	16.4	0.15	K194R	332.193	175.558	227.718	8.806	0.15918	3.19288	6	X
K13TC3K	16.5	0.15	K194R	342.694	195.166	196.285	5.072	0.17802	3.15281	5	X
K13TE3M	16.4	0.15	K194R	331.717	21.162	21.507	14.619	0.25826	3.15827	4	X
K13YA6U	18.0	0.15	K194R	329.998	257.073	110.698	3.517	0.16594	2.14446	9	X
K14B05E	17.5	0.15	K194R	13.605	199.314	118.524	7.558	0.17402	2.19526	9	X
K14B22A	18.3	0.15	K194R	258.411	255.678	213.756	0.969	0.20036	2.14556	9	X
K14DD9N	18.4	0.15	K194R	242.263	27.588	65.266	2.263	0.15067	2.25877	6	V
K14E70H	17.5	0.15	K194R	28.360	55.447	267.929	3.208	0.01618	2.26914	10	X
K14F10V	17.3	0.15	K194R	333.624	6.644	359.644	7.573	0.23957	2.31131	7	X
K14F47P	22.3	0.15	K205V	241.915	271.582	28.815	5.035	0.25974	1.16650	4	X
K14J48T	16.7	0.15	K194R	7.691	86.172	238.845	3.980	0.28289	2.55912	11	X
K14L12O	16.2	0.15	K194R	16.627	244.104	78.340	10.426	0.21439	2.58035	11	X
K14L20D	17.1	0.15	K194R	346.803	218.274	147.969	5.745	0.23057	2.54732	6	X
K14M74U	16.9	0.15	K194R	319.406	98.135	298.636	23.632	0.16816	2.67918	4	X
K14N18X	17.1	0.15	K205V	60.610	151.405	246.629	12.736	0.12124	2.63281	5	X
K14N20E	16.4	0.15	K194R	268.883	188.741	269.396	17.525	0.11981	2.63481	8	X
K14N29P	16.8	0.15	K194R	356.564	71.756	280.871	12.850	0.14935	2.66817	6	X
K14N56D	16.9	0.15	K194R	336.557	304.816	81.056	8.586	0.26762	2.74302	6	X
K14N63Q	16.1	0.15	K194R	356.353	55.080	297.736	31.984	0.33831	2.76696	4	X
K14N68X	17.5	0.15	K194R	8.460	295.680	40.720	9.451	0.21570	2.72490	5	X
K14OF6B	17.5	0.15	K194R	305.428	20.507	47.061	4.894	0.20314	2.58718	7	X
K14OO7E	17.6	0.15	K194R	359.062	273.470	84.695	3.952	0.13506	2.62005	5	X
K14OP8H	16.1	0.15	K194R	273.953	266.389	105.780	17.484	0.24230	3.10030	6	V
K14OP9S	17.0	0.15	K194R	314.715	64.674	337.084	14.419	0.14250	2.66871	6	X
K14OR6A	17.0	0.15	K194R	20.340	266.022	64.438	9.717	0.18702	2.66857	6	X
K14OT2H	17.2	0.15	K194R	333.226	8.534	19.894	7.179	0.13832	2.70595	8	X
K14OT7Q	17.3	0.15	K194R	344.403	353.261	23.977	5.572	0.17653	2.80274	5	X
K14OZ2U	17.1	0.15	K194R	317.364	196.469	213.025	3.423	0.05946	2.58673	11	X
K14P81C	17.1	0.15	K194R	91.468	210.104	60.045	3.910	0.03889	2.58863	10	X
K14Q51Z	17.5	0.15	K194R	276.545	220.527	234.483	2.184	0.09158	2.56498	8	X
K14Q73P	17.0	0.15	K194R	331.298	106.800	282.584	12.492	0.26268	2.73404	6	X
K14QB5E	18.4	0.15	K194R	176.619	89.098	162.962	6.012	0.22230	2.31047	6	V
K14QG1G	17.2	0.15	K194R	343.704	274.333	96.975	13.756	0.17403	2.67800	3	X
K14QN3C	16.9	0.15	K194R	1.393	345.319	12.699	2.959	0.11474	2.71888	10	X
K14QP2N	16.7	0.15	K194R	289.954	43.051	39.640	10.157	0.05329	2.71317	8	X
K14QU6J	16.4	0.15	K194R	296.324	128.673	285.238	14.454	0.13784	2.97032	4	X
K14Qc7T	16.2	0.15	K194R	39.401	294.118	4.473	10.297	0.10337	2.79913	4	X
K14Qc8U	16.7	0.15	K194R	37.916	326.902	334.650	11.868	0.18957	2.78703	3	X
K14Qe4W	16.6	0.15	K194R	19.245	9.084	312.392	13.095	0.17825	2.79054	7	X
K14Ql6Y	17.3	0.15	K194R	338.186	148.101	240.741	4.858	0.07394	2.71941	7	X
K14R04U	16.7	0.15	K194R	221.567	126.408	25.337	11.621	0.06716	2.57591	10	X
K14R12W	15.7	0.15	K194R	358.913	293.696	73.360	32.524	0.10039	2.76212	7	X
K14R62B	18.0	0.15	K194R	329.752	191.495	187.984	17.085	0.38824	2.86408	2	X
K14R64Y	17.3	0.15	K194R	351.403	97.579	275.726	2.480	0.10773	2.77600	10	X
K14S40H	17.2	0.15	K194R	36.047	280.205	37.705	9.784	0.12064	2.69478	5	X
K14S81K	17.0	0.15	K194R	347.951	281.977	87.955	4.479	0.20578	2.73801	8	X
K14SL6L	16.5	0.15	K194R	290.559	312.472	142.384	8.696	0.14344	2.96978	6	X
K14SM1W	16.9	0.15	K194R	19.336	103.442	227.092	9.019	0.15120	2.74073	6	X
K14SM9Y	17.1	0.15	K194R	29.990	277.237	52.659	5.066	0.10552	2.80948	6	X
K14SN4M	16.3	0.15	K194R	144.273	347.608	236.892	12.278	0.13672	2.62517	9	X
K14SN9W	17.2	0.15	K194R	355.824	306.238	50.026	14.228	0.21504	2.73087	6	X
K14SS8B	16.7	0.15	K194R	332.199	351.170	33.750	7.600	0.13788	2.85528	5	X
K14T70Q	16.2	0.15	K194R	282.143	40.476	58.404	13.618	0.08026	2.89026	8	X
K14T87X	17.1	0.15	K194R	290.511	84.648	25.446	24.813	0.17951	2.74448	4	X
K14U10Z	17.2	0.15	K194R	295.523	219.579	230.673	15.339	0.21214	2.86991	4	X
K14U24R	17.9	0.15	K194R	71.785	38.913	217.504	21.267	0.04774	1.84948	6	X
K14U42A	16.7	0.15	K194R	304.910	23.749	54.416	6.056	0.10266	2.93753	10	X
K14U52Z	16.6	0.15	K194R	312.971	165.200	251.503	27.711	0.27951	2.87699	4	X
K14U54N	17.5	0.15	K194R	331.425	171.110	229.981	11.708	0.12648	2.90865	5	X
K14U57K	16.6	0.15	K194R	304.549	183.053	267.913	20.460	0.53915	2.88816	5	X
K14UA5R	16.4	0.15	K194R	239.161	278.592	233.150	18.387	0.11402	2.87832	7	X
K14UA6K	16.5	0.15	K194R	224.495	289.098	234.140	10.829	0.10990	2.89025	5	X
K14UB5O	16.1	0.15	K194R	309.101	159.398	260.063	31.472	0.32400	3.14474	3	X
K14UL8E	16.2	0.15	K194R	275.781	136.860	342.643	24.670	0.10701	2.72816	6	X
K14UN1H	16.5	0.15	K205V	32.607	116.425	292.525	8.688	0.22430	3.14040	5	X
K14UN1U	17.1	0.15	K194R	327.640	155.215	247.616	8.390	0.18367	2.90111	4	X
K14V31X	16.8	0.15	K194R	310.227	193.228	235.581	15.058	0.13179	2.97267	3	X
K14W05V	17.9	0.15	K205V	172.283	263.679	52.595	21.021	0.05111	1.85584	6	X
K14W64G	16.5	0.15	K194R	15.651	288.119	56.581	16.027	0.15472	2.84777	6	X
K14W73P	16.2	0.15	K194R	323.197	2.083	47.581	9.867	0.10847	2.99215	7	X
K14W85G	16.9	0.15	K194R	4.116	294.525	63.173	12.091	0.16587	2.89200	3	X
K14WB4R	16.3	0.15	K194R	32.594	33.402	280.543	13.739	0.15034	2.76950	8	X
K14WC8P	16.4	0.15	K194R	323.894	13.411	34.381	9.995	0.13409	2.97680	5	X
K14WG5J	16.8	0.15	K194R	354.110	127.898	245.188	8.516	0.09740	2.97883	8	X
K14WN4U	15.4	0.15	K194R	217.774	241.865	268.752	25.133	0.20034	3.18082	5	X
K14WN6D	16.4	0.15	K194R	309.504	100.708	317.182	10.607	0.09069	2.99434	8	X
K14Wa2N	18.0	0.15	K194R	238.660	182.119	263.553	19.980	0.10033	1.87636	5	X
K14Wa3P	18.3	0.15	K194R	345.620	88.066	240.700	20.284	0.11721	1.87678	6	X
K14Wc1L	17.0	0.15	K194R	341.490	329.720	54.861	21.073	0.20824	3.08143	3	X
K14Wc1Z	16.6	0.15	K194R	329.738	93.447	300.903	24.847	0.23494	3.09232	3	X
K14We4X	16.7	0.15	K194R	321.390	150.794	244.774	8.477	0.19497	3.05144	5	X
K14Wg0X	17.1	0.15	K194R	312.714	268.153	138.767	8.362	0.29766	3.05881	5	V
K14Wh2F	16.7	0.15	K194R	337.225	332.352	56.328	21.464	0.20023	2.97718	4	X
K14Wk4W	16.3	0.15	K194R	307.721	349.577	83.922	3.191	0.15324	2.98003	11	X
K14Wk6H	17.3	0.15	K194R	278.297	192.457	250.896	7.462	0.03057	3.08536	2	V
K14Wn8U	16.0	0.15	K194R	311.787	40.319	25.404	7.207	0.23506	2.98345	8	X
K14Wq1V	16.9	0.15	K194R	260.742	56.598	66.292	10.429	0.05368	3.02468	5	X
K14X12R	16.2	0.15	K194R	319.313	338.762	73.285	20.589	0.09814	3.00097	6	X

K14X13A	16.8	0.15	K194R	264.955	14.986	77.012	11.797	0.20393	3.18224	3 V
K14X26U	16.7	0.15	K194R	15.863	204.931	101.963	22.838	0.45946	2.93352	2 V
K14X41Z	16.1	0.15	K194R	291.363	130.367	313.218	10.599	0.06192	3.12920	8 X
K14Y06E	16.0	0.15	K194R	327.583	295.822	115.714	13.729	0.20721	3.04614	5 X
K14Y10M	18.8	0.15	K194R	275.725	132.685	287.293	19.066	0.08841	1.91808	3 X
K14Y16B	16.3	0.15	K194R	314.780	130.988	286.352	15.603	0.22410	3.15407	3 X
K14Y21E	15.8	0.15	K205V	214.465	210.103	24.204	11.499	0.02923	2.97750	10 X
K14Y26P	16.2	0.15	K194R	272.327	50.618	63.027	10.820	0.07079	2.99013	5 X
K14Y32R	17.0	0.15	K194R	280.243	46.573	77.870	3.441	0.27554	3.06866	6 X
K14Y32X	18.2	0.15	K194R	355.774	37.787	315.094	23.025	0.05850	1.87888	4 X
K14Y35P	15.8	0.15	K194R	357.162	292.351	57.937	16.454	0.32308	2.98195	3 X
K14Y42O	17.4	0.15	K194R	74.992	309.699	288.203	18.990	0.04950	1.92300	9 X
K14Y47G	15.3	0.15	K194R	232.616	293.171	265.401	24.192	0.19741	3.17643	5 V
K14Y50T	18.6	0.15	K194R	233.418	150.769	313.939	18.574	0.04919	1.89761	3 X
K14Y51Q	18.1	0.15	K194R	301.651	29.214	22.656	22.874	0.13757	1.91562	4 X
K14Y51X	18.5	0.15	K194R	167.511	215.366	329.565	19.663	0.06012	1.89897	4 X
K15A00C	18.6	0.15	K194R	306.233	103.985	342.283	14.803	0.53567	2.91128	2 V
K15A03N	15.5	0.15	K194R	345.659	273.746	114.860	10.987	0.15059	3.13970	9 X
K15A05O	16.7	0.15	K194R	308.050	319.484	109.648	13.205	0.15836	2.91840	6 X
K15A09N	16.0	0.15	K194R	354.498	326.557	52.982	12.964	0.12935	3.16299	6 X
K15A12M	16.8	0.15	K194R	286.976	135.204	321.721	26.627	0.18974	3.16516	5 X
K15A12T	16.5	0.15	K194R	295.367	70.424	13.771	11.092	0.22129	3.18180	4 X
K15A18B	17.3	0.15	K194R	312.480	125.683	296.688	13.729	0.34170	3.06710	2 X
K15AJ7U	17.0	0.15	K194R	299.057	11.327	77.024	2.396	0.16474	3.14364	6 X
K15AM0E	15.5	0.15	K194R	94.745	37.145	238.570	26.653	0.16784	3.20559	8 X
K15AR6J	15.6	0.15	K194R	318.552	74.846	338.896	18.075	0.16216	3.22123	8 X
K15AR9R	18.5	0.15	K194R	260.707	110.106	314.561	17.819	0.11075	1.95457	3 X
K15AS1G	18.1	0.15	K194R	8.591	309.313	24.696	20.227	0.09741	1.92228	6 X
K15B10O	16.4	0.15	K194R	289.217	134.268	312.493	15.626	0.19972	3.18434	4 X
K15B46C	16.3	0.15	K205V	35.852	76.919	312.976	14.966	0.23724	3.18286	7 X
K15B81K	15.5	0.15	K194R	21.135	41.955	305.231	25.553	0.13442	3.22215	6 X
K15BF6N	17.9	0.15	K194R	317.837	56.677	333.172	18.150	0.10388	1.91437	5 X
K15BK5W	15.9	0.15	K194R	331.451	84.654	297.457	20.097	0.23590	3.18094	5 X
K15BK7F	16.2	0.15	K194R	355.241	126.035	244.651	9.550	0.10661	3.05075	11 X
K15BL0G	18.4	0.15	K194R	259.990	144.690	299.208	19.576	0.11998	1.87925	3 X
K15BL4R	16.5	0.15	K194R	329.674	83.906	294.885	20.424	0.29049	3.16301	3 X
K15BL6X	16.0	0.15	K194R	18.002	40.991	299.834	25.689	0.15488	3.21901	5 X
K15BU4T	18.6	0.15	K194R	293.203	79.070	347.336	19.629	0.09854	1.92359	5 X
K15BV1F	19.1	0.15	K194R	347.688	238.008	133.623	30.769	0.09443	1.86555	2 V
K15BY7Q	17.1	0.15	K194R	355.029	299.501	65.276	8.427	0.26033	3.09160	3 X
K15BZ0Q	16.1	0.15	K194R	20.386	293.540	50.723	8.613	0.15204	3.20592	6 X
K15Bb0Z	16.5	0.15	K194R	321.774	328.764	90.803	8.956	0.16773	3.12279	6 X
K15Bo9V	17.9	0.15	K194R	295.704	113.975	281.916	19.795	0.11998	1.92139	5 X
K15Bp3R	17.7	0.15	K194R	337.740	100.273	250.537	17.866	0.08080	1.95941	5 X
K15Bu6T	16.2	0.15	K194R	277.644	211.337	263.756	6.196	0.16486	3.18505	7 X
K15Bu7F	15.3	0.15	K194R	238.548	71.631	11.747	9.323	0.20413	3.95829	5 V
K15Bu7U	16.6	0.15	K194R	325.528	323.149	129.348	12.264	0.03701	3.17796	4 V
K15Bu7Z	17.1	0.15	K194R	40.538	195.120	215.675	4.445	0.11813	2.74572	6 V
K15C05D	16.3	0.15	K194R	267.133	353.534	129.481	2.588	0.07361	3.18563	9 X
K15C13Z	19.0	0.15	K194R	302.736	77.423	145.885	19.037	0.76254	2.80561	3 X
K15C28C	18.0	0.15	K194R	198.339	172.745	339.503	18.463	0.04605	1.94108	6 X
K15C62N	20.0	0.15	K194R	81.588	239.180	326.606	5.476	0.22258	1.47601	5 X
K15C69O	16.8	0.15	K194R	304.184	115.890	342.826	16.231	0.19516	3.08705	5 X
K15DB5X	16.3	0.15	K194R	305.624	103.426	337.310	24.778	0.20748	3.18676	4 X
K15DE4J	15.7	0.15	K194R	307.615	277.341	147.293	14.731	0.12770	3.22534	8 X
K15DE5P	16.8	0.15	K194R	315.574	141.531	280.067	9.631	0.25936	3.14145	3 X
K15F01U	16.1	0.15	K194R	304.558	102.084	357.189	15.744	0.26676	3.07933	7 X
K15F36H	17.8	0.15	K194R	295.887	66.144	356.796	19.818	0.12718	1.94082	5 X
K15FB8H	18.4	0.15	K194R	289.382	61.351	22.174	25.134	0.14708	1.90441	3 X
K15FC2C	16.8	0.15	K194R	208.286	81.872	167.057	15.105	0.08397	3.13804	6 X
K15Fc1P	16.4	0.15	K194R	185.357	302.243	325.474	22.111	0.20029	3.17513	4 V
K15Ff2B	16.9	0.15	K194R	207.026	166.355	138.484	12.917	0.11089	3.01986	6 X
K15K40K	18.4	0.15	K194R	357.018	94.927	236.773	4.170	0.24611	2.25277	5 X
K15KF7H	19.9	0.15	K194R	254.647	51.137	89.436	21.579	0.53196	1.79227	4 X
K15L09C	18.0	0.15	K194R	12.202	58.162	253.092	1.723	0.17769	2.21858	11 X
K15M59U	20.0	0.15	K194R	32.236	187.092	147.557	6.050	0.44298	2.24983	2 V
K15M64O	18.5	0.15	K194R	263.357	259.126	191.871	2.290	0.05177	2.19229	9 X
K15M79G	17.9	0.15	K194R	290.476	272.272	138.889	7.083	0.11342	2.29466	8 X
K15MA8N	18.5	0.15	K194R	356.954	25.981	313.621	1.983	0.20491	2.32145	5 X
K15O12S	18.1	0.15	K194R	321.317	57.473	324.291	8.006	0.22557	2.35891	5 X
K15O19E	16.8	0.15	K194R	258.528	166.262	276.616	18.264	0.03435	2.34919	6 X
K15P32E	18.2	0.15	K194R	311.463	207.100	196.720	5.292	0.25914	2.38892	5 X
K15P99K	16.7	0.15	K194R	133.369	182.319	320.447	11.621	0.18244	2.56243	8 V
K15PS0Z	16.5	0.15	K194R	341.787	23.158	323.340	13.303	0.34370	2.55682	5 X
K15Q09U	16.2	0.15	K194R	328.414	115.864	252.470	23.266	0.28992	2.58257	5 X
K15Q19D	17.3	0.15	K194R	314.979	135.176	269.701	10.506	0.17696	2.63314	5 X
K15R60R	18.4	0.15	K194R	291.738	90.128	345.254	1.423	0.15714	2.39335	5 X
K15R89C	17.2	0.15	K194R	294.357	241.918	196.376	8.564	0.19019	2.40611	9 X
K15R89R	18.0	0.15	K194R	4.008	76.442	254.465	4.054	0.24020	2.43044	5 X
K15RA0X	18.3	0.15	K194R	309.232	91.260	322.278	3.215	0.30256	2.42955	4 X
K15RB7M	17.2	0.15	K194R	317.541	9.349	36.077	14.605	0.19536	2.43774	6 X
K15RC1P	17.8	0.15	K194R	8.188	242.013	91.232	2.389	0.18094	2.38116	6 X
K15RM7K	17.5	0.15	K194R	293.464	19.489	49.950	7.593	0.09214	2.43906	7 X
K15S05R	17.3	0.15	K194R	290.033	229.497	204.471	1.965	0.17801	2.44606	9 X
K15S17N	17.6	0.15	K194R	334.171	348.303	17.717	6.190	0.24391	2.41935	7 X
K15S20S	22.3	0.15	K194R	298.249	164.675	244.948	11.466	0.34627	1.54294	2 V
K15S26K	17.4	0.15	K194R	311.554	344.017	67.464	10.097	0.15379	2.57544	6 X
K15TB1R	17.2	0.15	K194R	345.367	173.740	185.923	8.033	0.19718	2.56552	4 X
K15TB2G	17.5	0.15	K194R	294.707	359.703	77.348	16.657	0.11440	2.53790	4 X
K15TB2U	18.1	0.15	K194R	292.904	297.716	129.953	7.484	0.23351	2.59404	4 X
K15TG7R	18.2	0.15	K194R	325.105	333.057	54.478	5.326	0.18714	2.47482	3 X
K15TH9B	20.5	0.15	K194R	291.922	339.430	101.777	8.079	0.53547	2.58391	2 V
K15TJ7X	18.1	0.15	K194R	349.497	313.580	36.338	4.176	0.21629	2.44991	4 X

K15TJ8E	17.5	0.15	K194R	338.274	322.394	51.178	7.538	0.13279	2.42865	6	X
K15TN7O	18.5	0.15	K205V	297.934	342.009	251.014	27.159	0.47697	1.53937	3	X
K15TW4E	16.8	0.15	K194R	243.758	255.871	182.103	21.804	0.03338	2.65937	5	V
K15Ta5W	16.6	0.15	K194R	358.922	54.885	287.713	11.745	0.16448	2.54755	6	X
K15Tc6A	16.7	0.15	K194R	289.106	350.053	97.075	11.320	0.11828	2.73431	9	X
K15U00D	18.5	0.15	K194R	337.295	296.195	45.154	30.580	0.41191	2.56216	2	V
K15U07M	16.4	0.15	K194R	302.843	269.558	152.666	13.448	0.17362	2.53654	6	X
K15U18E	17.7	0.15	K194R	252.582	325.478	157.624	0.257	0.16070	2.42537	10	X
K15U21S	17.5	0.15	K194R	32.337	240.421	83.319	2.747	0.02702	2.43250	10	X
K15U66G	17.3	0.15	K194R	328.431	276.623	105.228	11.640	0.14275	2.56374	7	X
K15U77U	16.8	0.15	K194R	336.351	302.857	67.834	9.833	0.17797	2.57237	6	X
K15V26M	17.4	0.15	K194R	4.554	95.834	247.883	6.091	0.12298	2.46905	7	X
K15V28J	17.9	0.15	K194R	288.237	190.889	253.393	4.540	0.18331	2.48121	5	X
K15V40Z	16.6	0.15	K194R	266.094	324.037	129.244	7.997	0.08747	2.55448	11	X
K15V72U	17.3	0.15	K194R	294.412	213.906	223.925	7.264	0.21315	2.55604	5	X
K15VB3S	16.8	0.15	K194R	310.588	175.340	228.100	12.815	0.16497	2.59362	9	X
K15VB3W	17.4	0.15	K194R	305.154	233.836	187.700	4.635	0.27783	2.54759	4	X
K15VB3X	17.0	0.15	K194R	310.913	175.320	236.308	12.657	0.19182	2.56647	2	X
K15VC1W	16.6	0.15	K194R	0.499	115.978	235.859	13.789	0.13022	2.57439	8	X
K15VC4M	17.1	0.15	K194R	278.231	251.503	229.604	25.798	0.32462	2.54851	2	X
K15VE1S	18.0	0.15	K194R	305.521	13.319	44.745	4.452	0.22166	2.55362	5	X
K15VE1U	15.7	0.15	K194R	276.726	196.393	245.872	26.635	0.07797	2.59881	6	X
K15VE2L	16.7	0.15	K194R	353.479	276.332	20.777	24.469	0.59606	2.55477	4	X
K15VE2S	16.9	0.15	K194R	16.954	330.395	5.529	24.168	0.21076	2.28434	5	X
K15W03N	18.1	0.15	K194R	336.347	296.881	77.859	2.677	0.18820	2.47591	7	X
K15W03Q	17.0	0.15	K194R	344.344	174.286	185.075	7.813	0.27271	2.54760	4	X
K15W05B	17.9	0.15	K194R	312.919	249.054	160.230	3.864	0.21082	2.52581	5	X
K15W14Z	17.6	0.15	K194R	327.459	304.760	70.323	14.761	0.30752	2.55012	6	X
K15W15V	17.3	0.15	K194R	332.985	168.556	205.175	8.257	0.30336	2.54854	5	X
K15X63G	17.0	0.15	K194R	316.765	174.682	234.246	13.949	0.17237	2.55164	5	X
K15X65F	16.7	0.15	K194R	311.223	211.728	197.132	7.553	0.15260	2.58369	4	X
K15X66C	15.9	0.15	K194R	269.603	192.721	258.290	21.227	0.04114	2.62692	10	X
K15X66G	17.6	0.15	K194R	340.818	296.005	80.274	15.753	0.18502	2.54470	6	X
K15X69E	17.7	0.15	K194R	326.117	216.828	179.341	5.636	0.22147	2.51868	5	X
K15X69U	17.6	0.15	K194R	326.435	325.913	65.650	5.260	0.27027	2.59377	6	X
K15XC8G	18.6	0.15	K194R	341.096	103.663	234.689	26.303	0.45246	2.58632	2	V
K15XD3G	17.4	0.15	K194R	184.000	114.250	72.058	5.174	0.03298	2.55678	9	X
K15XE2C	18.3	0.15	K194R	301.807	215.468	209.692	0.651	0.16124	2.55911	5	X
K15XH1A	17.4	0.15	K194R	326.307	47.880	322.490	5.712	0.35608	2.55665	7	X
K15XH1B	16.6	0.15	K194R	330.971	99.619	281.797	12.614	0.18514	2.55514	7	X
K15XH1V	17.4	0.15	K194R	331.387	302.453	65.715	18.164	0.26200	2.59978	5	X
K15XJ7Y	18.2	0.15	K194R	323.816	120.939	273.372	2.462	0.26246	2.55586	5	X
K15XK7V	17.7	0.15	K194R	274.231	72.333	28.761	3.550	0.13262	2.55102	7	X
K15XK9F	16.6	0.15	K205V	310.563	259.974	249.163	15.130	0.10138	2.63485	7	X
K15XM2P	16.7	0.15	K194R	26.298	77.966	240.364	13.979	0.15286	2.60565	8	X
K15XN9N	17.8	0.15	K194R	353.271	283.890	65.991	6.734	0.25349	2.55164	3	X
K15XP9D	17.2	0.15	K194R	342.205	72.133	288.821	2.165	0.26491	2.57350	8	X
K15XS1M	18.0	0.15	K194R	356.268	131.345	213.500	1.917	0.22712	2.56150	5	X
K15XV0E	17.5	0.15	K194R	5.867	287.478	65.003	4.542	0.09943	2.58916	7	X
K15XV0J	17.2	0.15	K194R	335.419	303.146	70.024	5.697	0.27738	2.55481	8	X
K15XV3J	17.4	0.15	K194R	334.142	167.391	207.715	4.265	0.21702	2.58704	7	X
K15XV5M	16.6	0.15	K194R	334.886	108.383	265.727	12.178	0.20172	2.60841	7	X
K15XZ0H	16.1	0.15	K194R	116.853	346.036	249.309	28.740	0.04614	2.63557	5	X
K15XZ0Y	16.9	0.15	K194R	22.119	264.273	61.629	14.945	0.16524	2.56839	3	X
K15XZ3K	17.1	0.15	K194R	323.493	324.020	72.893	10.838	0.20582	2.57546	4	X
K15Xa2O	17.3	0.15	K194R	339.364	352.603	19.355	4.802	0.17917	2.59491	5	X
K15Xa9H	17.9	0.15	K194R	324.525	42.044	354.195	1.908	0.16483	2.57831	7	X
K15Xb8N	17.8	0.15	K194R	326.243	119.546	278.496	28.902	0.37946	2.59421	2	V
K15Xc1M	17.6	0.15	K194R	287.458	242.802	206.492	13.730	0.26619	2.59159	3	X
K15Xd6V	16.4	0.15	K194R	299.639	326.426	97.627	16.298	0.11830	2.66779	8	X
K15Xe3X	16.4	0.15	K194R	331.471	156.592	241.626	10.601	0.09089	3.00945	9	X
K15Xe5P	17.0	0.15	K194R	307.493	17.077	38.772	14.461	0.18463	2.74601	5	X
K15Xe9Q	16.9	0.15	K194R	251.256	74.169	51.166	15.304	0.04881	2.79347	8	X
K15Xf1O	17.5	0.15	K194R	294.328	206.736	227.280	10.757	0.14665	2.58218	5	X
K15Xf2G	17.1	0.15	K205V	79.348	129.486	248.671	10.806	0.09452	2.58831	5	X
K15Xg0Y	17.5	0.15	K194R	322.129	143.429	260.405	3.913	0.03663	2.66131	7	X
K15Y01B	21.4	0.15	K194R	242.967	65.381	92.568	28.630	0.41044	1.53879	2	V
K15Y02G	16.7	0.15	K194R	311.904	138.874	273.354	12.518	0.24686	2.65388	5	X
K15Y13J	17.0	0.15	K194R	307.265	234.761	187.313	11.311	0.17572	2.58939	10	X
K15Y19G	17.2	0.15	K194R	327.048	21.658	7.875	13.847	0.21218	2.56105	5	X
K16A09Z	17.4	0.15	K194R	283.937	11.107	105.512	10.752	0.40588	2.71206	4	X
K16A18S	16.9	0.15	K194R	7.620	92.770	267.938	5.222	0.03085	2.71943	9	X
K16A39O	17.1	0.15	K194R	287.717	196.327	242.739	1.710	0.13908	2.70363	9	X
K16A63Y	17.4	0.15	K194R	311.681	292.767	119.317	5.771	0.23159	2.63055	6	X
K16A90X	17.0	0.15	K194R	348.901	278.517	84.082	11.578	0.14974	2.60789	9	X
K16AC0C	17.5	0.15	K194R	305.469	321.221	112.884	4.510	0.17716	2.74512	5	X
K16AC1X	16.5	0.15	K194R	286.724	334.725	123.814	7.143	0.08112	2.80500	10	X
K16AC3V	15.4	0.15	K194R	174.430	214.446	331.162	24.288	0.07237	3.14391	5	X
K16AD0H	16.4	0.15	K194R	281.989	207.188	250.605	7.209	0.05938	3.04298	9	X
K16AD8A	17.0	0.15	K194R	333.946	193.866	186.488	10.014	0.25168	2.72695	7	X
K16AH1K	17.3	0.15	K194R	312.705	127.739	281.536	11.625	0.27759	2.60988	5	X
K16AI0W	17.4	0.15	K194R	300.503	206.168	232.351	7.418	0.20059	2.78363	5	X
K16AI3L	16.7	0.15	K194R	294.483	166.304	271.749	14.225	0.11560	2.88107	5	X
K16AJ4B	16.5	0.15	K194R	283.176	229.559	234.640	11.656	0.21752	2.56139	9	X
K16AM3Z	15.5	0.15	K194R	119.561	275.162	329.100	16.742	0.10167	3.21212	8	X
K16AM6K	15.4	0.15	K194R	7.241	45.563	291.866	26.191	0.13783	3.12689	6	X
K16AN8K	17.5	0.15	K194R	312.305	4.568	51.040	14.037	0.17944	2.67437	6	X
K16AN8P	16.7	0.15	K194R	293.899	127.223	326.450	21.834	0.06047	2.66503	6	X
K16AN9E	16.9	0.15	K194R	345.977	308.028	73.691	7.802	0.06694	2.68818	7	X
K16B00X	17.0	0.15	K194R	307.568	104.277	324.998	28.120	0.37345	2.59939	4	X
K16B01Z	17.0	0.15	K194R	271.889	159.590	304.587	21.215	0.09630	2.67995	5	X
K16B15P	20.7	0.15	K194R	65.815	314.929	152.591	11.305	0.35438	1.96049	2	V
K16B39A	21.3	0.15	K194R	228.549	152.449	319.331	23.419	0.31812	1.59623	3	X

K16B91H	15.6	0.15	K194R	318.431	287.227	131.203	12.453	0.08587	3.20106	11	X
K16C32B	18.6	0.15	K194R	253.189	244.307	175.476	2.624	0.59838	2.95931	2	V
K16C32T	18.4	0.15	K194R	292.008	231.413	227.114	4.225	0.31253	2.65165	4	X
K16C69K	15.6	0.15	K194R	5.909	259.945	94.343	12.828	0.06853	3.12922	8	X
K16C97O	16.6	0.15	K194R	115.378	14.240	240.282	6.961	0.11919	3.02601	9	X
K16CH3G	17.1	0.15	K194R	330.373	70.839	312.502	11.712	0.19599	2.77104	4	X
K16CK4O	15.9	0.15	K194R	105.126	292.606	328.276	11.728	0.08258	3.14454	8	X
K16CM6J	16.1	0.15	K194R	67.970	249.707	50.638	9.240	0.10417	3.02445	6	X
K16CM9Z	16.6	0.15	K194R	307.534	334.887	93.979	16.529	0.12602	2.83268	8	X
K16CP4P	16.7	0.15	K194R	336.735	334.439	35.374	13.699	0.37555	2.75835	6	X
K16CS6O	16.3	0.15	K194R	59.164	258.772	54.142	12.359	0.03343	3.03070	6	X
K16CT2T	16.2	0.15	K194R	337.435	21.530	6.429	14.938	0.16960	2.72360	7	X
K16D15O	18.1	0.15	K194R	299.605	85.916	2.687	7.096	0.34212	2.66678	3	X
K16E06J	16.8	0.15	K194R	176.754	41.021	146.293	28.969	0.16746	3.14083	4	V
K16E12K	16.1	0.15	K194R	338.786	333.233	66.602	16.845	0.04812	3.04932	7	V
K16E17H	15.4	0.15	K194R	102.204	213.930	62.663	19.472	0.06968	3.23352	10	X
K16E29Y	17.1	0.15	K194R	294.728	33.415	57.653	7.861	0.27358	2.74751	6	X
K16E40A	17.4	0.15	K194R	303.479	194.470	238.407	8.108	0.12945	2.74600	6	X
K16EF1Y	16.7	0.15	K194R	284.764	34.298	69.165	5.327	0.14140	3.03470	7	X
K16EL6Y	16.3	0.15	K194R	277.269	64.861	53.193	27.021	0.20968	3.12067	6	X
K16EN8Y	16.7	0.15	K194R	336.634	329.169	70.137	10.887	0.10252	3.01284	6	X
K16F01E	20.5	0.15	K194R	111.618	175.996	35.735	22.270	0.38505	1.74222	2	V
K16F42Q	16.1	0.15	K194R	254.331	78.111	57.574	13.200	0.12303	3.04428	8	X
K16G90G	16.5	0.15	K194R	306.671	32.966	43.417	13.061	0.20160	3.05999	6	X
K16G95N	16.8	0.15	K194R	288.964	47.883	50.633	9.408	0.12761	3.12929	6	X
K16GF5B	16.5	0.15	K194R	309.370	8.619	62.800	10.368	0.08593	3.04721	6	X
K16GK3F	16.3	0.15	K194R	274.634	59.906	48.895	11.543	0.03953	3.17203	6	X
K16GM0N	18.9	0.15	K194R	252.411	169.642	148.028	6.982	0.49069	2.30579	2	V
K16L46L	16.1	0.15	K194R	266.850	262.059	239.588	15.235	0.10106	3.21596	4	V
K16N00X	19.4	0.15	K194R	159.747	205.583	101.873	11.127	0.62230	3.35792	2	V
K16N15Y	19.9	0.15	K194R	276.175	10.170	277.835	3.706	0.47954	2.38766	2	V
K16N16B	17.2	0.15	K194R	16.735	39.988	264.127	18.758	0.05851	1.90238	7	X
K16N55O	18.3	0.15	K194R	30.333	12.563	270.457	19.529	0.06224	1.92152	6	X
K16O00U	17.4	0.15	K194R	171.693	233.368	280.880	18.935	0.06301	1.92128	7	X
K16P00N	20.4	0.15	K194R	290.219	23.702	126.078	21.601	0.33213	0.85882	2	V
K16P66X	18.7	0.15	K194R	347.904	277.154	346.043	20.180	0.49616	2.13786	3	X
K16Q01X	18.4	0.15	K194R	263.749	200.673	251.676	7.668	0.22228	1.93152	5	X
K16Q43V	17.5	0.15	K194R	234.368	168.713	159.122	2.368	0.20810	2.68282	6	V
K16Q83Y	20.9	0.15	K194R	18.518	258.484	163.120	34.751	0.26367	1.72417	2	V
K16R02M	18.7	0.15	K194R	289.824	110.827	306.727	17.911	0.10734	1.93389	4	X
K16S09V	18.5	0.15	K194R	272.546	83.034	349.222	17.523	0.11680	1.97569	4	X
K16S12G	18.3	0.15	K194R	288.281	58.069	8.623	19.191	0.12018	1.97220	5	X
K16T28T	17.0	0.15	K194R	139.236	188.768	235.169	27.416	0.18791	3.18269	2	V
K16T54R	22.0	0.15	K205V	70.478	108.998	101.696	7.611	0.44989	0.97491	4	X
K16T92S	20.1	0.15	K194R	341.491	9.621	278.044	14.851	0.59868	2.04853	2	X
K16U80W	24.0	0.15	K194R	263.613	108.475	37.428	12.989	0.16914	1.16418	2	V
K16U88X	17.7	0.15	K194R	200.890	288.826	35.451	22.414	0.27805	3.17561	2	V
K16UA3V	17.1	0.15	K194R	66.102	301.993	208.282	9.704	0.05831	3.00465	5	V
K16V03Y	20.1	0.15	K194R	243.579	356.136	86.692	9.832	0.47070	2.32349	2	V
K16W01J	21.3	0.15	K205V	48.213	87.663	82.047	2.889	0.50310	1.33969	4	X
K16W09T	20.0	0.15	K194R	3.382	350.356	246.294	31.984	0.33641	1.36169	4	X
K16W23K	18.3	0.15	K194R	274.180	220.276	213.267	21.040	0.08286	1.98248	7	X
K16X01H	20.3	0.15	K194R	256.714	246.666	271.628	32.443	0.59167	2.12216	2	V
K17A06Y	17.3	0.15	K194R	325.601	278.801	99.528	8.216	0.16212	2.25160	11	X
K17A22J	17.5	0.15	K194R	241.842	254.451	229.287	3.745	0.05253	2.41869	10	X
K17BB9B	16.4	0.15	K194R	66.882	226.637	59.571	17.301	0.16067	2.58163	8	X
K17D01A	17.4	0.15	K194R	252.927	156.274	314.361	23.889	0.19897	2.27683	4	X
K17D35S	20.7	0.15	K194R	217.714	82.218	154.308	10.150	0.47522	2.17591	2	V
K17D37T	18.3	0.15	K194R	183.902	313.943	188.250	19.944	0.54585	2.69414	2	V
K17D47J	17.6	0.15	K194R	318.195	11.502	25.720	6.633	0.10309	2.38174	7	X
K17D95E	16.9	0.15	K194R	324.344	46.349	334.634	16.328	0.16975	2.54356	5	X
K17D96Q	16.9	0.15	K194R	294.290	79.550	337.785	21.918	0.04630	2.59027	4	X
K17DA3G	17.9	0.15	K194R	236.790	243.496	259.407	5.543	0.17889	2.31934	8	X
K17DA5V	17.8	0.15	K194R	268.806	256.061	202.128	3.196	0.07777	2.32732	9	X
K17DB8H	16.3	0.15	K194R	276.270	110.940	319.107	21.658	0.04303	2.56505	7	X
K17E14Y	16.5	0.15	K194R	244.999	72.375	46.018	20.529	0.02434	2.56025	7	X
K17F20N	16.8	0.15	K194R	336.026	221.309	145.823	7.977	0.14808	2.73799	7	X
K17F38J	17.7	0.15	K194R	240.856	255.192	231.537	6.588	0.06242	2.43179	6	X
K17F54S	17.4	0.15	K194R	338.569	319.135	60.158	10.929	0.12894	2.55068	4	X
K17F84D	17.0	0.15	K194R	289.955	340.874	97.262	6.638	0.21595	2.47249	6	X
K17FA5F	16.8	0.15	K194R	313.458	79.801	317.494	13.116	0.12089	2.55153	5	X
K17FG0S	17.3	0.15	K194R	33.582	81.385	249.311	4.678	0.03466	2.67587	6	X
K17H29T	16.5	0.15	K194R	135.473	6.483	233.098	14.433	0.09202	2.85836	6	X
K17H48W	19.9	0.15	K194R	125.139	176.709	108.496	5.091	0.58055	2.98757	2	V
K17M02V	20.8	0.15	K194R	164.499	167.507	172.857	7.515	0.54995	2.32713	2	V
K17M07O	21.0	0.15	K194R	181.897	83.906	231.133	5.161	0.46959	2.28724	2	V
K17O00C	20.5	0.15	K194R	290.842	1.503	278.197	14.937	0.34522	1.69930	2	V
K17O18S	20.1	0.15	K194R	208.839	178.005	104.721	4.179	0.39925	2.15845	2	V
K17O18T	19.3	0.15	K194R	167.521	44.907	299.674	21.054	0.46724	2.32835	2	V
K17P24X	21.4	0.15	K194R	338.290	198.775	175.977	10.306	0.34923	1.41589	4	V
K17P39Z	18.8	0.15	K194R	107.933	76.465	312.517	11.377	0.31551	2.58192	3	V
K17Q16N	21.6	0.15	K194R	239.530	340.463	144.791	14.496	0.13220	1.33770	2	V
K17R02A	18.8	0.15	K194R	165.817	282.661	134.582	27.075	0.16899	1.91494	2	V
K17R15R	20.7	0.15	K194R	298.709	97.726	13.506	18.526	0.42832	1.37813	3	V
K17S20T	22.6	0.15	K194R	313.901	268.414	188.688	15.420	0.17158	1.31250	2	V
K17U07R	19.6	0.15	K194R	81.433	345.750	100.780	5.489	0.65174	3.22647	2	V
K17U44H	19.1	0.15	K194R	81.115	213.163	264.141	15.026	0.57213	2.91931	2	V
K17U44X	19.7	0.15	K194R	195.749	325.771	19.167	5.456	0.40806	2.14732	2	V
K17V12R	20.6	0.15	K194R	255.020	180.755	347.276	9.217	0.26924	1.36916	4	V
K18C01P	18.0	0.15	K194R	14.725	284.913	17.708	20.749	0.10285	1.85811	7	X
K18E06A	18.1	0.15	K194R	78.986	247.022	357.257	18.955	0.04900	1.89960	6	X
K18F05C	18.7	0.15	K194R	250.229	265.787	156.259	23.363	0.12686	1.94449	4	V
K18F05R	16.2	0.15	K194R	257.209	272.045	89.132	10.896	0.05141	3.13426	7	V

K18J02W	18.0	0.15	K194R	217.057	61.079	70.952	23.465	0.10170	1.88892	4	X
K18M00Y	17.3	0.15	K194R	340.039	220.391	144.465	5.401	0.28318	2.57821	7	X
K18M01Y	17.8	0.15	K194R	318.675	285.276	106.562	8.314	0.20877	2.34406	9	X
K18M04H	17.4	0.15	K194R	340.192	123.433	239.360	29.723	0.36505	2.60074	2	V
K18M07L	16.9	0.15	K194R	67.460	222.973	60.474	12.851	0.17022	2.62448	8	X
K18P12R	16.9	0.15	K194R	318.542	19.582	32.277	5.669	0.13237	3.13443	3	V
K18R33L	15.3	0.15	K194R	63.948	241.718	67.651	12.625	0.12287	3.46097	11	X
K18V49U	18.9	0.15	K194R	51.918	150.284	240.256	12.256	0.16896	2.53633	2	V
K18V53B	17.6	0.15	K194R	17.896	39.242	28.838	7.171	0.03749	2.69698	2	V
K18V81Q	15.9	0.15	K194R	47.214	310.281	76.510	9.482	0.14805	3.36700	4	V
K18V85J	18.1	0.15	K194R	85.459	171.234	187.559	13.678	0.22195	2.32177	3	V
K18VA6H	17.2	0.15	K194R	19.864	234.077	200.859	7.597	0.26364	3.08101	2	V
K19B01R	20.6	0.15	K194R	351.804	333.872	259.658	18.098	0.35005	1.21379	5	X
K19J09C	17.8	0.15	K194R	348.256	212.826	22.333	18.494	0.20075	3.06152	2	V
K19J09J	17.0	0.15	K194R	76.821	225.820	260.415	9.407	0.16365	3.02609	4	V
K19J14P	17.2	0.15	K194R	253.664	266.018	65.695	7.429	0.04250	2.99472	4	V
K19J24J	17.5	0.15	K194R	58.414	309.478	187.257	7.029	0.24559	2.68426	6	V
K19J32Y	17.0	0.15	K194R	327.663	64.704	208.348	13.127	0.22118	2.65188	6	V
K19J36C	18.7	0.15	K194R	66.632	18.997	130.403	2.477	0.11926	2.37680	2	V
K19N00M	21.2	0.15	K194R	336.479	339.665	325.613	5.343	0.40062	2.30221	2	V
K19N03F	19.9	0.15	K194R	346.187	347.204	292.045	9.847	0.40137	2.17252	2	V
K19P03J	18.6	0.15	K194R	320.324	129.822	258.566	13.603	0.39953	2.61386	3	X
K19R03F	17.1	0.15	K194R	319.357	74.814	306.813	15.275	0.27788	2.54235	3	X
K19S01Z	19.8	0.15	K194R	308.028	118.248	251.892	4.847	0.31353	2.19095	2	V
K19T03D	18.1	0.15	K194R	248.328	168.238	264.574	19.133	0.13076	1.83139	6	X
K19T06U	20.5	0.15	K194R	307.476	296.124	103.094	1.175	0.33439	2.38914	2	V
K19T07E	17.8	0.15	K194R	338.582	128.271	235.733	30.988	0.35552	2.56587	2	V
K19T07Y	16.8	0.15	K194R	321.372	46.055	26.800	27.564	0.42573	3.13513	4	V
K19U01D	17.9	0.15	K194R	314.634	120.486	283.146	12.452	0.33806	2.72890	4	V
K19U02Z	18.6	0.15	K194R	16.453	166.985	130.314	8.469	0.20940	2.15687	4	V
K19V00P	18.2	0.15	K194R	114.949	317.242	260.662	18.919	0.03226	1.88101	3	V
K19V05G	17.2	0.15	K194R	339.115	326.742	49.253	14.663	0.26144	2.69129	4	X
K19V05Q	18.3	0.15	K194R	4.496	31.789	294.306	18.997	0.05612	1.85868	5	X
K19V05Z	14.8	0.15	K194R	256.762	173.261	47.080	18.591	0.19829	3.96616	2	B

New perturbed one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc	C
K10TC3E	18.7	0.15	K194R	218.102	13.905	346.701	5.103	0.21668	2.22506	33	V
K13V15K	17.6	0.15	K194R	338.150	338.929	84.946	8.563	0.39309	3.20689	54	V
K14DD7D	18.6	0.15	K194R	200.401	316.818	146.143	5.307	0.16667	2.35902	25	V
K14E46N	18.8	0.15	K194R	164.389	152.570	61.014	5.540	0.11505	2.21690	49	V
K14OP3W	18.9	0.15	K194R	10.070	1.949	326.790	9.183	0.28658	2.71510	53	V
K14QZ2N	17.6	0.15	K194R	0.282	335.351	18.207	5.323	0.12433	2.77863	43	V
K14WJ6Q	19.4	0.15	K194R	42.546	139.662	268.356	8.900	0.33177	2.53426	10	V
K14WY8S	18.1	0.15	K194R	331.561	67.388	33.708	13.169	0.23761	2.71527	60	V
K15MB0G	19.4	0.15	K194R	62.402	344.119	299.509	5.778	0.13603	2.22208	47	V
K15TB5Q	18.8	0.15	K194R	327.122	247.526	173.959	13.438	0.25340	2.43793	113	V
K15TE4K	17.9	0.15	K194R	283.599	118.960	266.747	15.111	0.33426	2.70053	176	V
K16Q48V	19.3	0.15	K194R	251.315	21.812	3.487	10.762	0.24297	2.32478	60	V
K19K04Q	17.7	0.15	K194R	317.512	133.064	229.790	26.561	0.39539	2.28821	171	X
K19L01G	20.7	0.15	K194R	243.566	103.364	248.801	17.995	0.35937	1.12622	168	X
K19N02Z	21.6	0.15	K194R	324.164	244.696	96.433	4.302	0.46578	2.26974	139	X
K19O04A	18.8	0.15	K194R	310.409	59.007	316.331	6.393	0.36265	2.23953	114	X
K19P01P	22.2	0.15	K194R	322.765	349.887	344.824	4.705	0.50321	2.18750	101	X
K19P02R	18.9	0.15	K194R	347.103	57.083	349.038	10.990	0.79768	5.77261	92	X
K19P03L	17.7	0.15	K194R	341.034	281.294	79.468	22.884	0.49486	3.08634	102	X
K19Q03W	21.5	0.15	K205V	148.305	346.085	347.093	15.192	0.28663	1.52558	85	X
K19Q04Q	18.5	0.15	K194R	323.045	176.803	186.327	27.487	0.30082	2.20963	69	V
K19Q06A	20.7	0.15	K194R	327.706	135.547	220.079	13.049	0.39790	2.58686	59	V
K19Q06R	20.1	0.15	K194R	347.093	57.116	349.002	10.972	0.79774	5.77380	71	X
K19Q07G	18.8	0.15	K194R	320.870	136.753	250.094	6.203	0.38980	2.57617	163	X
K19Q08T	19.2	0.15	K205V	49.983	317.254	72.566	20.523	0.52331	2.69855	82	X
K19R00D	19.5	0.15	K205V	50.910	254.514	118.061	8.372	0.58054	2.68314	172	X
K19R00S	22.1	0.15	K194R	317.180	173.348	194.275	7.021	0.43258	2.40081	55	V
K19R01H	25.0	0.15	K205V	111.167	203.415	185.913	2.123	0.32969	1.57324	75	X
K19R01K	21.0	0.15	K194R	328.473	57.596	299.347	6.061	0.42961	2.62367	46	V
K19R02K	22.0	0.15	K194R	328.435	350.893	348.724	6.499	0.43638	2.39011	51	V
K19R02Z	21.0	0.15	K194R	322.285	267.952	80.753	3.380	0.36844	2.21834	49	V
K19R03S	21.6	0.15	K194R	334.794	99.806	252.008	7.237	0.50704	2.93709	36	V
K19R04P	22.0	0.15	K194R	329.260	325.886	9.416	6.585	0.49476	2.28416	71	X
K19S00M	20.8	0.15	K205V	56.667	164.822	209.274	19.332	0.53980	2.55993	59	X
K19S00U	22.8	0.15	K205V	138.096	200.957	186.368	9.123	0.30261	1.39294	43	X
K19S04Q	21.3	0.15	K205V	40.613	163.982	253.255	1.118	0.55679	2.61753	67	X
K19S05T	21.1	0.15	K194R	331.082	215.490	145.557	11.824	0.50841	3.02018	34	V
K19S05V	21.5	0.15	K194R	324.805	349.526	9.880	10.678	0.52840	2.65070	52	X
K19S06H	19.9	0.15	K205V	49.590	6.652	107.374	8.179	0.47782	2.00356	52	X
K19S07J	22.5	0.15	K205V	61.583	154.098	207.332	7.959	0.53530	2.59560	51	X
K19S08F	23.3	0.15	K205V	104.622	115.624	208.998	3.865	0.48329	1.90189	27	X
K19S08V	20.6	0.15	K194R	241.170	150.415	350.502	14.874	0.64966	1.67366	51	X
K19S10O	21.4	0.15	K194R	322.123	243.328	151.732	13.661	0.56550	2.91202	54	X
K19T00O	21.6	0.15	K205V	97.169	215.745	192.709	24.318	0.27040	1.52649	41	X
K19T01P	21.1	0.15	K205V	52.492	126.242	12.067	25.218	0.26934	1.29554	46	X
K19T02O	19.1	0.15	K194R	339.898	282.714	70.662	29.565	0.36694	2.56589	30	V
K19T03K	19.2	0.15	K205V	98.108	237.298	50.368	37.247	0.67826	2.17180	46	X
K19T03W	22.3	0.15	K205V	77.934	285.643	90.081	6.052	0.43401	2.09693	43	X
K19T04Q	21.0	0.15	K194R	93.778	317.040	210.821	43.932	0.40607	1.04064	39	X
K19T05A	19.9	0.15	K205V	42.068	64.383	10.532	40.195	0.33615	2.24893	50	B
K19T07U	18.8	0.15	K205V	53.725	64.697	10.073	28.321	0.43963	2.57789	61	X
K19T08E	19.6	0.15	K205V	125.926	263.042	39.748	6.101	0.38961	2.12904	41	X
K19U00K	21.6	0.15	K194R	27.440	318.850	206.417	21.705	0.38417	0.88268	36	X
K19U00O	19.8	0.15	K194R	301.980	185.006	277.676	5.724	0.63815	2.64862	42	X
K19U02H	21.2	0.15	K194R	271.589	233.149	203.368	35.000	0.45265	1.90687	35	X
K19U02J	19.5	0.15	K205V	35.201	236.082	215.889	30.270	0.50490	2.46739	29	X

K19U03C	23.6	0.15	K194R	266.887	266.280	208.423	12.850	0.57190	1.91230	29	X
K19U04C	21.2	0.15	K205V	38.117	203.709	249.636	8.607	0.64534	2.48450	84	X
K19U04Y	20.1	0.15	K194R	307.594	181.680	226.456	26.659	0.37735	2.34996	38	X
K19U05P	22.4	0.15	K205V	72.355	154.597	201.464	9.331	0.52662	2.23343	28	X
K19U06T	22.2	0.15	K205V	73.727	43.940	85.149	2.380	0.50555	1.59345	44	X
K19U06V	22.9	0.15	K194R	319.527	62.872	282.194	0.985	0.60603	2.36167	28	X
K19U07C	23.5	0.15	K194R	159.070	82.245	31.860	19.203	0.17411	1.20040	28	X
K19U09C	23.8	0.15	K194R	241.677	201.247	225.642	5.909	0.31373	1.49788	22	X
K19U09G	24.6	0.15	K205V	50.155	241.398	177.702	1.235	0.54696	2.41187	23	X
K19U09O	19.8	0.15	K194R	237.389	148.115	7.747	5.474	0.57909	1.91299	44	X
K19U09T	18.6	0.15	K194R	285.373	25.170	69.506	25.673	0.64006	2.29536	28	X
K19U10S	20.5	0.15	K194R	286.021	304.138	43.288	26.969	0.38600	1.45417	21	X
K19U11R	21.0	0.15	K205V	204.553	218.976	72.103	12.684	0.46961	1.24921	30	X
K19U12F	24.6	0.15	K205V	47.279	348.485	72.872	5.770	0.56736	2.49499	23	X
K19U12L	25.9	0.15	K205V	95.013	312.844	43.160	1.743	0.49049	1.86505	21	X
K19U12R	24.2	0.15	K194R	247.142	342.804	39.723	10.114	0.24025	1.32434	11	X
K19U13L	21.2	0.15	K205V	291.002	216.154	61.069	21.534	0.18958	1.11811	22	X
K19U13O	23.8	0.15	K205V	73.127	345.380	23.120	1.787	0.55606	2.15586	18	X
K19U13P	23.4	0.15	K205V	304.709	49.578	220.280	15.799	0.51167	0.93389	19	X
K19U13U	19.1	0.15	K205V	77.331	190.586	69.265	58.521	0.86817	2.53423	22	X
K19U13V	20.8	0.15	K205V	113.977	231.447	68.244	7.949	0.58965	1.78287	17	X
K19U13X	21.7	0.15	K205V	147.166	155.159	188.584	12.484	0.32713	1.51907	20	X
K19U14A	18.9	0.15	K194R	316.203	284.682	223.913	72.051	0.66038	3.76902	21	X
K19U14C	23.2	0.15	K194R	278.887	73.599	52.867	1.940	0.67352	2.10180	29	X
K19U14N	20.7	0.15	K194R	239.923	52.162	48.272	32.537	0.31845	1.75119	17	X
K19U14P	19.2	0.15	K194R	265.905	203.876	331.881	10.582	0.61616	1.96378	21	X
K19V00S	24.2	0.15	K205V	144.137	55.543	264.693	1.829	0.47511	1.49091	16	X
K19V00V	25.3	0.15	K205V	313.817	27.686	253.937	0.319	0.29630	0.93906	16	X
K19V00Z	26.7	0.15	K205V	177.133	327.006	30.979	4.382	0.22101	1.23741	15	X
K19V01E	19.0	0.15	K194R	281.694	165.875	354.520	15.720	0.66426	2.63001	17	X
K19V01O	22.3	0.15	K194R	141.899	283.906	237.981	12.559	0.33755	1.21918	23	X
K19V02D	21.4	0.15	K205V	91.832	257.087	38.826	33.513	0.73608	1.97390	13	X
K19V02T	24.2	0.15	K194R	83.461	293.085	228.859	9.280	0.21464	1.03456	21	X
K19V02V	24.9	0.15	K194R	226.937	210.971	216.173	9.346	0.21068	1.37363	40	X
K19V03A	24.4	0.15	K194R	290.326	317.692	38.833	15.783	0.38417	1.64887	15	X
K19V03H	24.0	0.15	K205V	80.408	290.329	44.281	4.526	0.61714	2.16964	16	X
K19V03Y	22.5	0.15	K194R	348.467	175.285	53.357	17.110	0.06953	1.03420	15	X
K19V04B	25.8	0.15	K205V	219.014	293.248	54.334	6.362	0.10233	1.11948	13	X
K19V04C	25.6	0.15	K205V	55.263	148.930	229.659	7.663	0.58886	2.55563	13	X
K19V04L	19.6	0.15	K194R	265.319	287.665	260.496	10.254	0.83869	2.02964	15	X
K19V04O	24.7	0.15	K205V	52.922	219.548	179.910	0.154	0.53954	2.51016	13	X
K19V04Z	23.5	0.15	K205V	104.925	301.762	221.510	22.174	0.40431	1.09518	23	X
K19V05H	23.6	0.15	K205V	94.637	102.581	65.524	4.670	0.36325	1.10542	10	X
K19V05J	25.1	0.15	K205V	161.860	129.658	217.969	7.402	0.33445	1.32623	11	X
K19V05P	19.9	0.15	K205V	39.279	25.459	67.062	39.515	0.54124	2.39192	6	X
K19V05S	22.8	0.15	K205V	122.286	137.825	73.552	10.882	0.43114	0.84326	9	X
K19V05U	24.5	0.15	K205V	96.524	268.151	47.803	6.503	0.70606	1.84461	3	X
K19V05W	23.7	0.15	K205V	41.374	310.780	97.923	7.313	0.57466	2.82374	30	X
K19V05X	23.5	0.15	K194R	294.614	165.004	197.675	7.757	0.42515	1.73381	72	B
K19W00A	19.7	0.15	K194R	254.486	26.472	56.190	24.677	0.11079	1.80450	43	B
K19W00C	26.4	0.15	K194R	308.412	1.673	54.001	3.887	0.59314	2.48858	1	B
K19W00D	26.2	0.15	K205V	58.714	151.990	243.323	1.488	0.57981	2.32290	1	X
K19W00E	26.8	0.15	K205V	70.744	215.226	240.077	0.437	0.46190	1.72822	1	X
K19W00F	27.0	0.15	K205V	67.434	55.831	56.432	5.100	0.50275	1.71150	1	B
K19W00F	27.0	0.15	K205V	67.434	55.831	56.432	5.100	0.50275	1.71150	1	B
K19W00G	24.1	0.15	K205V	97.577	127.201	243.235	18.236	0.44575	1.76514	1	B

New one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc	C
K19V05Y	18.9	0.15	K19AO	358.546	132.646	302.374	23.234	0.35346	2.09746	13	B
K19W00B	18.8	0.15	K19AO	355.264	359.262	55.088	38.132	0.25819	2.56461	24	B

New observations:

K05W00D	KC2019	11	18.14174	02	10	39.90	-22	51	09.7	17.9	RoEW048691
K05W00D	KC2019	11	18.14876	02	10	45.91	-22	52	26.6	18.0	RoEW048691
K05W00D	KC2019	11	18.15568	02	10	51.85	-22	53	41.9	18.1	RoEW048691
K06J00U	C2019	11	18.31825	04	30	08.63	+17	04	11.0		VEW048V06
K06J00U	C2019	11	18.32300	04	30	08.22	+17	04	08.8	21.9	GVEW048V06
K06J00U	C2019	11	18.32775	04	30	07.85	+17	04	07.8	22.1	GVEW048V06
K06J00U	C2019	11	18.33251	04	30	07.39	+17	04	06.2	22.6	GVEW048V06
K11G54Z	C2019	11	18.41383	03	57	54.46	+08	58	35.9	21.9	GVEW048V06
K11G54Z	C2019	11	18.41779	03	57	53.99	+08	58	31.5	22.1	GVEW048V06
K11G54Z	C2019	11	18.42175	03	57	53.56	+08	58	26.6	22.1	GVEW048V06
K11G54Z	C2019	11	18.42572	03	57	53.10	+08	58	22.1	22.4	GVEW048V06
K13A27U	C2019	11	17.52043	11	16	38.13	+19	08	59.9	21.5	GVEW048I52
K13A27U	C2019	11	17.52521	11	16	38.74	+19	08	45.3	21.1	GVEW048I52
K13A27U	C2019	11	17.52987	11	16	39.37	+19	08	31.1	20.1	GVEW048I52
K13C89K	C2019	11	18.03359	00	17	09.08	-48	48	56.8	19.0	RqEW048X74
K13C89K	C2019	11	18.04321	00	17	10.73	-48	49	00.8	19.4	RqEW048X74
K13C89K	C2019	11	18.05307	00	17	12.50	-48	49	06.5	19.5	RqEW048X74
K14F47P	KC2019	11	18.43830	04	27	25.25	+33	46	14.5		oEW048291
K14F47P	KC2019	11	18.44264	04	27	24.22	+33	46	14.9	20.6	RoEW048291
K14F47P	KC2019	11	18.44696	04	27	23.22	+33	46	15.5	20.8	RoEW048291
K15C13Z	KC2019	11	17.49640	11	13	31.91	-01	42	40.8	22.3	RoEW048291
K15C13Z	KC2019	11	17.51764	11	13	37.07	-01	43	00.1		oEW048291
K15C62N	KC2019	11	17.08162900	34	46.45	+14	26	57.1		22.5	VuEW048H21
K15C62N	KC2019	11	17.08869100	34	46.19	+14	26	54.7		22.4	VuEW048H21
K15C62N	KC2019	11	17.09733600	34	45.89	+14	26	51.4		22.4	VuEW048H21
K15KF7H	KC2019	11	17.50342	09	03	14.33	-03	55	18.3	20.1	RoEW048691
K15KF7H	KC2019	11	17.51702	09	03	20.59	-03	55	05.3	19.9	RoEW048691
K15TN7O	C2019	11	18.29532	04	08	51.26	+29	53	06.8	21.6	GVEW048I52
K15TN7O	C2019	11	18.29890	04	08	50.85	+29	53	03.8	21.9	GVEW048I52
K15TN7O	C2019	11	18.30140	04	08	50.59	+29	53	02.0	21.2	GVEW048I52

K15TN7O	C2019	11	18.30390	04	08	50.31	+29	52	59.7	21.1	GVEW048I52
K15W13H	C2019	11	17.48014805	00	48.25	+47	30	59.4	18.31	oVEW048T05	
K15W13H	C2019	11	17.50662605	00	37.00	+47	29	50.0	18.23	oVEW048T05	
K15W13H	C2019	11	17.51434005	00	33.70	+47	29	29.5	17.95	oVEW048T05	
K15W13H	C2019	11	17.52064405	00	31.00	+47	29	12.9	18.16	oVEW048T05	
K16B39A	KC2019	11	17.01499921	03	29.67	+73	21	03.6	22.3	VuEW048H21	
K16B39A	KC2019	11	17.03153021	03	25.94	+73	20	54.7	22.3	VuEW048H21	
K16P66X	KC2019	11	17.05805222	40	13.69	+05	47	57.5	22.4	VuEW048H21	
K16P66X	KC2019	11	17.06999622	40	14.31	+05	48	03.0	22.0	VuEW048H21	
K16P66X	KC2019	11	17.08024722	40	14.86	+05	48	07.4	22.1	VuEW048H21	
K16T54R	C2019	11	18.28276	03	26	33.11	-03	18	14.5	22.1	GVEW048I52
K16T54R	C2019	11	18.28443	03	26	32.76	-03	18	15.9	21.8	GVEW048I52
K16T54R	C2019	11	18.28609	03	26	32.33	-03	18	16.7	21.5	GVEW048I52
K16T92S	KC2019	11	17.13498402	25	54.40	+37	55	58.0	22.2	VuEW048H21	
K16T92S	KC2019	11	17.14167202	25	53.79	+37	55	49.0	22.2	VuEW048H21	
K16T92S	KC2019	11	17.15126602	25	52.95	+37	55	36.2	22.2	VuEW048H21	
K16W01J	KC2019	11	18.24751	00	47	42.77	-00	04	57.8	22.6	RoEW048291
K16W01J	KC2019	11	18.26730	00	47	40.48	-00	05	06.1	22.7	RoEW048291
K16W09T	KC2019	11	17.03115123	24	01.43	+34	41	47.4	22.2	VuEW048H21	
K16W09T	KC2019	11	17.04062523	24	01.97	+34	41	29.3	22.2	VuEW048H21	
K16W09T	KC2019	11	17.04878723	24	02.50	+34	41	11.8	22.3	VuEW048H21	
K17U01L	%C2017	10	25.29965	03	43	49.82	-00	39	02.5	21.9	rUEW048W84
K17U01L	%C2017	10	25.30066	03	43	49.71	-00	39	03.6	21.7	rUEW048W84
K19B01R	KC2019	11	16.99678623	40	23.31	+27	42	08.9	22.5	VuEW048H21	
K19B01R	KC2019	11	17.00405623	40	23.58	+27	41	56.7	22.4	VuEW048H21	
K19B01R	KC2019	11	17.01268223	40	23.90	+27	41	42.1	22.2	VuEW048H21	
K19L01G	KC2019	11	17.45906	10	26	53.74	-00	37	51.3		oEW048291
K19L01G	KC2019	11	17.47493	10	26	53.96	-00	38	30.2		oEW048291
K19N02Z	KC2019	11	17.18352601	40	55.36	+00	14	57.1	22.3	VuEW048H21	
K19N02Z	KC2019	11	17.19368501	40	55.55	+00	15	06.2	22.1	VuEW048H21	
K19N02Z	KC2019	11	17.20526101	40	55.74	+00	15	16.6	22.2	VuEW048H21	
K19P01P	KC2019	11	17.06278901	34	38.18	+23	44	17.9	22.5	VuEW048H21	
K19P01P	KC2019	11	17.07238501	34	38.48	+23	44	15.3	22.1	VuEW048H21	
K19P01P	KC2019	11	17.07877901	34	38.63	+23	44	14.4	22.5	VuEW048H21	
K19P02R	C2019	10	31.55483507	24	36.850	+54	50	12.53	18.90	GVEW048T12	
K19P02R	C2019	10	31.55521007	24	36.979	+54	50	12.57	18.93	GVEW048T12	
K19P02R	C2019	10	31.55600607	24	37.238	+54	50	12.60	18.85	GVEW048T12	
K19Q03W	C2019	11	18.35599	00	11	08.77	+50	29	08.1	22.1	GVEW048V06
K19Q03W	C2019	11	18.35837	00	11	08.96	+50	29	05.9	22.4	GVEW048V06
K19Q03W	C2019	11	18.36075	00	11	09.08	+50	29	04.2	23.1	GVEW048V06
K19Q03W	C2019	11	18.36312	00	11	09.24	+50	29	01.6	21.4	GVEW048V06
K19Q06R	C2019	10	31.64307107	22	46.597	+55	05	25.80	20.22	GVEW048T12	
K19Q06R	C2019	10	31.64347107	22	46.736	+55	05	25.79	20.18	GVEW048T12	
K19Q06R	C2019	10	31.64431907	22	47.007	+55	05	25.85	20.19	GVEW048T12	
K19Q08T	C2019	11	18.22064	03	55	56.44	-03	54	27.0	19.2	VoEW048691
K19Q08T	C2019	11	18.22737	03	55	55.92	-03	54	02.6	19.3	VoEW048691
K19Q08T	C2019	11	18.23409	03	55	55.40	-03	53	37.7	19.2	VoEW048691
K19R00D	C2019	11	18.16704	01	09	29.33	-26	44	44.3	18.6	GVEW048I52
K19R00D	C2019	11	18.18100	01	09	32.35	-26	43	59.9	19.0	GVEW048I52
K19R00D	C2019	11	18.18426	01	09	33.01	-26	43	49.7	18.8	GVEW048I52
K19R00D	C2019	11	18.19153	01	09	34.59	-26	43	25.7	19.3	GVEW048I52
K19R01H	KC2019	11	18.42313	05	29	31.05	+07	01	02.3	21.2	RoEW048691
K19R01H	KC2019	11	18.44109	05	29	31.71	+07	01	07.1	21.0	RoEW048691
K19R04P	KC2019	11	17.17862602	37	22.25	+28	05	16.8	22.3	VuEW048H21	
K19R04P	KC2019	11	17.18143702	37	22.06	+28	05	16.4	22.2	VuEW048H21	
K19R04P	KC2019	11	17.18880402	37	21.64	+28	05	15.1	22.2	VuEW048H21	
K19S00M	C2019	11	15.19680	02	31	09.01	-13	19	58.2	19.8	VuEW048807
K19S00M	C2019	11	15.19961	02	31	09.33	-13	20	03.2	19.8	VuEW048807
K19S00M	C2019	11	15.20287	02	31	09.69	-13	20	09.0	19.7	VuEW048807
K19S00U	KC2019	10	31.64861508	39	57.595	-13	24	04.87	22.21	GVEW048T12	
K19S04Q	C2019	11	11.06725	22	51	41.60	-04	44	08.0	21.6	GVEW048807
K19S04Q	C2019	11	11.07178	22	51	42.10	-04	44	05.5	21.6	GVEW048807
K19S04Q	C2019	11	11.07611	22	51	42.58	-04	44	03.6	21.6	GVEW048807
K19S05V	KC2019	11	17.02909400	07	25.63	+17	34	51.2	22.1	VuEW048H21	
K19S05V	KC2019	11	17.03645800	07	26.45	+17	35	00.8	22.3	VuEW048H21	
K19S05V	KC2019	11	17.04430700	07	27.36	+17	35	11.0	22.0	VuEW048H21	
K19S06H	KC2019	11	08.36395805	25	19.73	-02	47	36.1	19.3	VuEW048H21	
K19S06H	KC2019	11	08.36561205	25	19.95	-02	47	36.7	19.4	VuEW048H21	
K19S06H	KC2019	11	08.36704805	25	20.13	-02	47	37.7	19.4	VuEW048H21	
K19S06H	KC2019	11	08.36848505	25	20.34	-02	47	38.7	19.2	VuEW048H21	
K19S06H	KC2019	11	08.36992405	25	20.51	-02	47	39.3	19.3	VuEW048H21	
K19S06H	KC2019	11	08.37136105	25	20.69	-02	47	40.1	19.3	VuEW048H21	
K19S06H	KC2019	11	08.37279705	25	20.88	-02	47	41.2	19.4	VuEW048H21	
K19S06H	C2019	11	17.29120	05	48	02.78	-04	09	53.7	19.0	VuEW048807
K19S06H	C2019	11	17.29345	05	48	03.12	-04	09	54.9	19.1	VuEW048807
K19S06H	C2019	11	17.29568	05	48	03.47	-04	09	56.1	19.2	VuEW048807
K19S07J	C2019	11	18.38021	03	53	30.80	+07	20	50.6	22.0	GVEW048V06
K19S07J	C2019	11	18.38496	03	53	30.64	+07	20	47.7	21.3	GVEW048V06
K19S07J	C2019	11	18.38971	03	53	30.43	+07	20	44.7	20.7	GVEW048V06
K19S08F	KC2019	10	02.88906122	59	48.77	+13	19	22.9	18.9	GVEW048C95	
K19S08F	KC2019	10	02.89528122	59	52.95	+13	19	09.4	19.1	GVEW048C95	
K19S08V	KC2019	11	18.07469	21	17	20.47	+26	47	56.5	20.9	RoEW048691
K19S08V	KC2019	11	18.09520	21	17	13.71	+26	47	32.9		oEW048691
K19S100	C2019	11	17.22236	02	20	08.32	-33	37	38.2	21.7	VuEW048807
K19S100	C2019	11	17.23257	02	20	09.34	-33	37	27.0	21.7	VuEW048807
K19S100	C2019	11	17.24254	02	20	10.32	-33	37	16.7	21.7	VuEW048807
K19T000	C2019	11	11.08595	23	00	04.00	-35	45	26.3	21.8	GVEW048807
K19T000	C2019	11	11.09052	23	00	05.03	-35	45	36.1	21.7	GVEW048807
K19T000	C2019	11	11.09487	23	00	05.97	-35	45	45.3	22.0	GVEW048807
K19T01P	KC2019	11	16.99183422	28	11.65	+06	24	54.7	22.6	VuEW048H21	
K19T01P	KC2019	11	16.99812622	28	11.49	+06	25	02.9	22.4	VuEW048H21	
K19T01P	KC2019	11	17.00421422	28	11.36	+06	25	11.2	22.8	VuEW048H21	
K19T01P	KC2019	11	18.17734	22	27	50.32	+06	51	02.7	21.6	RoEW048291

K19U10S	C2019	11	17.34545	08	45	36.07	+59	28	31.0	20.6	GVEW048G96
K19U10S	C2019	11	17.35134	08	45	36.13	+59	28	55.0	20.4	GVEW048G96
K19U10S	C2019	11	17.35724	08	45	36.30	+59	29	18.9	20.2	GVEW048G96
K19U11R	C2019	11	17.22833	03	14	14.72	-01	05	19.6	19.6	VuEW048807
K19U11R	C2019	11	17.22993	03	14	14.37	-01	05	15.6	19.4	VuEW048807
K19U11R	C2019	11	17.23163	03	14	14.01	-01	05	11.5	19.6	VuEW048807
K19U11R	C2019	11	18.14812	03	11	09.38	-00	29	20.1	19.3	GVEW048I52
K19U11R	C2019	11	18.15022	03	11	08.93	-00	29	15.3	19.4	GVEW048I52
K19U12F	C2019	11	17.23798	03	37	52.02	-01	48	31.7	20.3	VuEW048807
K19U12F	C2019	11	17.24236	03	37	53.49	-01	48	10.6	20.6	VuEW048807
K19U12F	C2019	11	17.24671	03	37	54.95	-01	47	49.9	20.9	VuEW048807
K19U12L	C2019	11	18.20248	03	02	52.63	+20	07	53.9	22.1	GVEW048V06
K19U12L	C2019	11	18.20803	03	02	53.20	+20	07	59.3	21.9	GVEW048V06
K19U12L	C2019	11	18.21357	03	02	53.84	+20	08	04.8	22.1	GVEW048V06
K19U12L	C2019	11	18.21912	03	02	54.48	+20	08	10.9	22.3	GVEW048V06
K19U12R	KC2019	11	08.15135601	02	40	40.56	+36	31	43.4	18.3	VuEW048H21
K19U12R	KC2019	11	08.15310101	02	40	40.76	+36	32	12.2	17.3	VuEW048H21
K19U12R	KC2019	11	08.15484601	02	40	40.96	+36	32	41.3	18.0	VuEW048H21
K19U12R	KC2019	11	08.15685201	02	41	41.21	+36	33	14.7	18.3	VuEW048H21
K19U13K	KC2019	11	18.34387	02	40	22.48	+31	27	22.1		oEW048691
K19U13K	KC2019	11	18.34989	02	40	23.33	+31	27	03.6	19.8	RoEW048691
K19U13K	KC2019	11	18.35592	02	40	24.22	+31	26	45.5	20.2	RoEW048691
K19U13L	KC2019	11	17.47682	05	10	45.27	+21	17	34.1		oEW048691
K19U13L	KC2019	11	17.48508	05	10	43.33	+21	18	01.1		oEW048691
K19U13L	KC2019	11	17.49333	05	10	41.40	+21	18	27.6		oEW048691
K19U13L	KC2019	11	18.30915	05	07	36.94	+22	02	45.0	19.4	RoEW048691
K19U13L	KC2019	11	18.32320	05	07	33.54	+22	03	30.9	19.6	RoEW048691
K19U13L	KC2019	11	18.33723	05	07	30.14	+22	04	16.7	19.3	RoEW048691
K19U13O	KC2019	11	08.31589003	49	58	58.72	+36	06	01.9	18.2	VuEW048H21
K19U13O	KC2019	11	08.31732803	49	59	59.42	+36	05	58.4	18.2	VuEW048H21
K19U13O	KC2019	11	08.31876503	50	00	00.13	+36	05	54.8	18.2	VuEW048H21
K19U13O	KC2019	11	08.32020303	50	00	00.85	+36	05	51.4	18.2	VuEW048H21
K19U13O	KC2019	11	08.32164103	50	01	01.55	+36	05	47.9	18.2	VuEW048H21
K19U13O	C2019	11	18.31954	04	29	41.56	+32	25	13.3	20.0	GVEW048I52
K19U13O	C2019	11	18.32365	04	29	41.76	+32	25	10.0	19.9	GVEW048I52
K19U13O	C2019	11	18.32729	04	29	41.94	+32	25	07.5	19.5	GVEW048I52
K19U13O	C2019	11	18.33293	04	29	42.24	+32	25	02.5	20.2	GVEW048I52
K19U13O	KC2019	11	18.42672	04	29	47.37	+32	23	43.8	19.7	RoEW048291
K19U13O	KC2019	11	18.43049	04	29	47.59	+32	23	40.3	19.9	RoEW048291
K19U13O	KC2019	11	18.43425	04	29	47.81	+32	23	36.9	19.9	RoEW048291
K19U13P	C2019	11	15.21248	02	32	59.62	-05	09	26.2	20.4	VuEW048807
K19U13P	C2019	11	15.21645	02	32	58.66	-05	09	34.1	20.8	VuEW048807
K19U13P	C2019	11	15.22028	02	32	57.73	-05	09	41.9	20.6	VuEW048807
K19U13U	C2019	11	18.25384	04	08	09.51	-18	28	40.8	21.8	GVEW048V06
K19U13U	C2019	11	18.25780	04	08	08.79	-18	28	37.8	21.4	GVEW048V06
K19U13U	C2019	11	18.26176	04	08	08.05	-18	28	34.2	23.1	GVEW048V06
K19U13U	C2019	11	18.26572	04	08	07.35	-18	28	30.3	22.0	GVEW048V06
K19U13V	C2019	11	11.13001	00	28	37.51	-13	18	38.4	20.2	VuEW048807
K19U13V	C2019	11	11.13475	00	28	38.16	-13	18	21.1	20.2	VuEW048807
K19U13V	C2019	11	11.13925	00	28	38.75	-13	18	04.8	19.8	VuEW048807
K19U13V	C2019	11	15.13861	00	37	32.33	-09	39	49.3	20.6	VuEW048807
K19U13V	C2019	11	15.14315	00	37	32.87	-09	39	35.2	20.9	VuEW048807
K19U13V	C2019	11	15.14790	00	37	33.43	-09	39	21.0	20.8	VuEW048807
K19U13X	KC2019	11	18.29835	05	46	20.86	-13	12	38.3		oEW048691
K19U13X	C2019	11	18.30723	05	46	20.11	-13	12	44.6		VEW048I52
K19U13X	C2019	11	18.31056	05	46	19.59	-13	12	48.5	22.9	GVEW048I52
K19U13X	KC2019	11	18.31244	05	46	19.44	-13	12	49.0	21.0	RoEW048691
K19U13X	C2019	11	18.31390	05	46	19.27	-13	12	51.0	22.4	GVEW048I52
K19U13X	C2019	11	18.31723	05	46	18.90	-13	12	53.7	21.6	GVEW048I52
K19U13X	KC2019	11	18.32648	05	46	18.01	-13	13	00.5	21.4	RoEW048691
K19U14A	C2019	11	17.29330	03	57	45.84	-26	36	49.1	21.2	VuEW048807
K19U14A	C2019	11	17.30146	03	57	44.74	-26	37	15.0	21.6	VuEW048807
K19U14A	C2019	11	17.30964	03	57	43.66	-26	37	40.8	21.5	VuEW048807
K19U14C	C2019	11	11.11294	23	40	59.05	-05	04	25.5	21.2	VuEW048807
K19U14C	C2019	11	11.11788	23	40	55.96	-05	04	41.9	21.1	VuEW048807
K19U14C	C2019	11	11.12259	23	40	52.97	-05	04	57.8	21.5	VuEW048807
K19U14C	KC2019	11	18.12576	22	08	32.01	-12	45	15.8	21.1	RoEW048291
K19U14C	KC2019	11	18.13087	22	08	26.77	-12	45	37.5	21.1	RoEW048291
K19U14C	KC2019	11	18.13597	22	08	21.60	-12	45	58.9	21.2	RoEW048291
K19U14N	C2019	11	11.17028	01	15	36.94	-14	45	02.0	21.1	VuEW048807
K19U14N	C2019	11	11.17655	01	15	35.73	-14	44	43.9	21.1	VuEW048807
K19U14N	C2019	11	11.18275	01	15	34.56	-14	44	25.4	21.1	VuEW048807
K19U14P	C2019	11	17.49391	10	46	42.31	+22	55	28.6		VEW048I52
K19U14P	C2019	11	17.49600	10	46	42.89	+22	55	21.7	20.2	GVEW048I52
K19V00S	KC2019	11	18.30789	01	54	17.26	+18	08	26.0	21.8	RoEW048291
K19V00S	KC2019	11	18.31906	01	54	18.57	+18	08	18.4		oEW048291
K19V00S	KC2019	11	18.33027	01	54	19.86	+18	08	09.8	21.7	RoEW048291
K19V00V	C2019	11	18.14917	02	11	07.88	+14	42	09.4	20.1	GVEW048I52
K19V00V	C2019	11	18.15126	02	11	07.56	+14	42	06.3	21.1	GVEW048I52
K19V00V	C2019	11	18.15559	02	11	06.84	+14	42	02.0	20.2	GVEW048I52
K19V00V	C2019	11	18.15684	02	11	06.64	+14	42	00.4	21.2	GVEW048I52
K19V00V	KC2019	11	18.17094	02	11	04.44	+14	41	45.8	21.1	RoEW048691
K19V00V	KC2019	11	18.17822	02	11	03.25	+14	41	37.6	20.7	RoEW048691
K19V00V	C2019	11	18.29314	02	10	44.42	+14	39	24.7	20.7	GVEW048V00
K19V00V	C2019	11	18.29402	02	10	44.29	+14	39	23.7	20.4	GVEW048V00
K19V00V	C2019	11	18.29576	02	10	44.00	+14	39	21.6	20.3	GVEW048V00
K19V00Z	KC2019	11	18.35149	02	27	42.15	+44	07	55.7		oEW048291
K19V00Z	KC2019	11	18.36737	02	27	44.40	+44	07	48.3		oEW048291
K19V00Z	KC2019	11	18.38325	02	27	46.73	+44	07	39.8		oEW048291
K19V01E	C2019	11	18.09941	02	00	05.26	+39	52	50.6	21.5	GVEW048I52
K19V01E	C2019	11	18.10146	02	00	04.98	+39	52	50.4	22.2	GVEW048I52
K19V01E	C2019	11	18.10370	02	00	04.69	+39	52	49.9	22.2	GVEW048I52
K19V01O	C2019	11	17.27405	03	21	33.00	+23	14	44.1	20.0	RoEW048F65

K19V01O	.C2019	11	17.27447	03	21	32.94	+23	14	42.9		
K19V01O	.C2019	11	17.27529	03	21	32.83	+23	14	40.1		
K19V02D	C2019	11	11.06109	23	48	49.10	+08	11	00.8		
K19V02D	C2019	11	11.06442	23	48	49.75	+08	11	29.2		
K19V02D	C2019	11	11.06764	23	48	50.36	+08	11	56.5		
K19V02T	C2019	11	15.18385	02	02	29.74	+08	43	57.5		
K19V02T	C2019	11	15.18703	02	02	28.92	+08	43	31.9		
K19V02T	C2019	11	15.19038	02	02	28.06	+08	43	05.1		
K19V02T	C2019	11	18.14518	01	51	29.33	+01	44	10.7		
K19V02T	C2019	11	18.15324	01	51	27.23	+01	42	59.6		
K19V02T	C2019	11	18.16127	01	51	25.14	+01	41	48.1		
K19V02V	C2019	11	17.26237	03	58	30.94	-09	47	21.7		
K19V02V	C2019	11	17.26880	03	58	31.67	-09	47	50.9		
K19V02V	C2019	11	17.27523	03	58	32.40	-09	48	20.4		
K19V03A	KC2019	11	17.12001601	59	15.76	+37	56	16.5			
K19V03A	KC2019	11	17.13784501	59	14.77	+37	57	05.6			
K19V03A	KC2019	11	17.14893901	59	14.17	+37	57	36.2			
K19V03H	C2019	11	18.30742	03	46	45.42	+24	46	10.8		
K19V03H	C2019	11	18.30980	03	46	45.09	+24	46	11.4		
K19V03H	C2019	11	18.31217	03	46	44.77	+24	46	11.8		
K19V03H	C2019	11	18.31455	03	46	44.48	+24	46	12.5		
K19V03Y	KC2019	11	18.10188	00	50	33.78	-03	45	22.7		
K19V03Y	KC2019	11	18.10772	00	50	32.46	-03	44	48.6		
K19V03Y	KC2019	11	18.11357	00	50	31.18	-03	44	15.2		
K19V04B	KC2019	11	18.27195	03	14	59.57	+19	12	41.3		
K19V04B	KC2019	11	18.28789	03	14	56.30	+19	13	52.2		
K19V04C	C2019	11	18.29425	04	00	21.87	+13	57	54.0		
K19V04C	C2019	11	18.29900	04	00	22.67	+13	57	42.2		
K19V04C	C2019	11	18.30375	04	00	23.42	+13	57	31.4		
K19V04L	C2019	11	17.27318	03	09	17.96	+32	22	30.8		
K19V04L	C2019	11	17.27947	03	09	16.03	+32	22	26.9		
K19V04L	C2019	11	17.28576	03	09	14.27	+32	22	23.1		
K19V04L	C2019	11	17.29224	03	09	12.44	+32	22	18.5		
K19V04O	C2019	11	18.33731	04	34	52.46	+21	12	32.2		
K19V04O	C2019	11	18.34206	04	34	52.99	+21	12	33.6		
K19V04O	C2019	11	18.34681	04	34	53.54	+21	12	34.7		
K19V04O	C2019	11	18.35156	04	34	54.06	+21	12	36.0		
K19V04Z	C2019	11	17.17135	02	30	26.11	-28	52	36.7		
K19V04Z	C2019	11	17.17575	02	30	24.57	-28	53	40.8		
K19V04Z	C2019	11	17.18023	02	30	23.00	-28	54	45.7		
K19V05H	C2019	11	18.37218	03	48	36.22	+12	46	35.2		
K19V05H	C2019	11	18.38390	03	48	33.14	+12	46	37.1		
K19V05H	C2019	11	18.39441	03	48	30.34	+12	46	38.4		
K19V05J	C2019	11	11.15108	04	44	36.43	-22	58	09.4		
K19V05J	C2019	11	11.15454	04	44	34.99	-22	57	39.1		
K19V05J	C2019	11	11.15786	04	44	33.61	-22	57	10.0		
K19V05J	C2019	11	17.25874	04	27	08.91	-14	40	36.7		
K19V05J	C2019	11	17.26323	04	27	08.29	-14	40	24.2		
K19V05J	C2019	11	17.26774	04	27	07.66	-14	40	12.1		
K19V05J	KC2019	11	18.21556	04	25	54.41	-14	01	53.4		
K19V05J	KC2019	11	18.22228	04	25	53.59	-14	01	37.8		
K19V05J	KC2019	11	18.22901	04	25	52.89	-14	01	22.7		
K19V05P	C2019	11	17.22144	03	13	17.86	-36	50	48.1		
K19V05P	C2019	11	17.22306	03	13	17.40	-36	50	43.1		
K19V05P	C2019	11	17.22477	03	13	16.90	-36	50	38.0		
K19V05S	C2019	11	17.27584	04	43	01.53	-02	18	48.1		
K19V05S	C2019	11	17.27924	04	43	00.29	-02	18	49.6		
K19V05S	C2019	11	17.28246	04	42	59.11	-02	18	51.5		
K19V05U	C2019	11	17.22578	01	55	19.17	+31	44	31.3		
K19V05U	C2019	11	17.23276	01	55	26.99	+31	43	43.2		
K19V05U	C2019	11	17.24030	01	55	35.42	+31	42	50.8		
K19V05U	C2019	11	17.24774	01	55	43.55	+31	42	01.3		
K19V05U	KC2019	11	17.31995	01	57	02.52	+31	33	19.2		
K19V05U	KC2019	11	17.32744201	57	06.36	+31	32	05.9			
K19V05U	KC2019	11	17.32959801	57	08.73	+31	31	51.0			
K19V05U	KC2019	11	17.33175401	57	11.07	+31	31	36.1			
K19V05U	KC2019	11	17.33426901	57	13.82	+31	31	18.7			
K19V05U	C2019	11	17.33793	01	57	20.53	+31	31	46.2		
K19V05U	C2019	11	17.34097	01	57	23.72	+31	31	25.4		
K19V05U	C2019	11	17.34400	01	57	26.94	+31	31	04.7		
K19V05U	C2019	11	17.34700	01	57	30.08	+31	30	44.7		
K19V05U	C2019	11	17.35832701	57	52.53	+31	30	41.8			
K19V05U	C2019	11	17.36155501	57	55.82	+31	30	20.2			
K19V05U	C2019	11	17.36478101	57	59.06	+31	30	00.4			
K19V05U	C2019	11	17.36757901	58	01.80	+31	29	43.0			
K19V05U	C2019	11	17.36850901	58	02.84	+31	29	36.2			
K19V05U	KC2019	11	17.37209	01	57	57.58	+31	27	28.0		
K19V05U	C2019	11	17.37505301	58	09.28	+31	28	55.0			
K19V05U	C2019	11	17.38522201	58	19.37	+31	27	49.2			
K19V05U	KC2019	11	17.44824	01	59	15.06	+31	19	26.9		
K19V05U	KC2019	11	17.45150	01	59	18.38	+31	19	05.1		
K19V05U	KC2019	11	17.45476	01	59	21.73	+31	18	43.9		
K19V05U	KC2019	11	17.86007202	05	50.74	+30	42	29.1			
K19V05U	KC2019	11	17.86418502	05	53.75	+30	42	09.5			
K19V05U	KC2019	11	17.99051	02	07	38.87	+30	32	02.8		
K19V05U	KC2019	11	17.99757	02	07	43.89	+30	31	33.4		
K19V05U	KC2019	11	18.00486	02	07	48.96	+30	31	03.0		
K19V05U	KC2019	11	18.01377	02	07	55.20	+30	30	25.9		
K19V05U	C2019	11	18.09839	02	08	56.22	+30	24	18.5		
K19V05U	C2019	11	18.10044	02	08	57.55	+30	24	09.8		
K19V05U	C2019	11	18.10249	02	08	58.84	+30	24	01.9		
K19V05U	C2019	11	18.10267	02	08	59.02	+30	24	01.4		
K19V05U	C2019	11	18.41397	02	12	02.70	+30	02	42.6		

20.1	RoEW048F65										
20.4	RoEW048F65										
19.5	VuEW048807										
19.3	VuEW048807										
19.6	VuEW048807										
19.9	VuEW048807										
19.9	VuEW048807										
19.9	VuEW048807										
20.1	VoEW048691										
20.4	VoEW048691										
20.1	VoEW048691										
21.2	VuEW048807										
21.2	VuEW048807										
21.2	VuEW048807										
22.4	VuEW048H21										
22.1	VuEW048H21										
22.2	VuEW048H21										
21.9	GVEW048V06										
21.3	GVEW048V06										
22.0	GVEW048V06										
22.3	GVEW048V06										
21.3	RoEW048691										
21.3	RoEW048691										
21.0	RoEW048691										
20.7	RoEW048691										
21.4	RoEW048691										
22.5	GVEW048V06										
22.1	GVEW048V06										
22.3	GVEW048V06										
19.3	GVEW048703										
19.1	GVEW048703										
19.5	GVEW048703										
20.0	GVEW048703										
21.8	GVEW048V06										
21.7	GVEW048V06										
	VEW048V06										
22.0	GVEW048V06										
20.9	VuEW048807										
20.9	VuEW048807										
20.9	VuEW048807										
19.8	VoEW048691										
20.0	VoEW048691										
19.8	VoEW048691										
19.8	VuEW048807										
19.6	VuEW048807		</								

K19V05U	C2019	11	18.41416	02	12	02.80	+30	02	42.1	19.2	GVEW048I52
K19V05U	C2019	11	18.41435	02	12	02.92	+30	02	40.7	19.0	GVEW048I52
K19V05U	C2019	11	18.41456	02	12	03.06	+30	02	39.9	18.6	GVEW048I52
K19V05W	C2019	11	15.22204	03	08	15.79	-11	56	48.8	21.8	GVEW048807
K19V05W	C2019	11	15.22916	03	08	16.43	-11	56	33.4	21.6	GVEW048807
K19V05W	C2019	11	15.23608	03	08	17.03	-11	56	18.5	21.8	GVEW048807
K19W00D	C2019	11	18.43786	06	08	59.15	+37	07	26.1	18.4	GVEW048G96
K19W00D	C2019	11	18.44261	06	09	06.56	+37	05	28.2	18.4	GVEW048G96
K19W00D	C2019	11	18.45211	06	09	21.12	+37	01	35.2	18.3	GVEW048G96
K19W00E	C2019	11	17.46306003	06	28.784	+19	59	37.22	18.59	GVEW048F51	
K19W00E	C2019	11	17.47661503	06	48.559	+20	01	06.41	18.57	GVEW048F51	
K19W00E	C2019	11	17.49392903	07	14.122	+20	02	59.37	18.55	GVEW048F51	
K19W00E	C2019	11	17.50761303	07	34.614	+20	04	28.09	18.48	GVEW048F51	
K19W00E	KC2019	11	18.21705	03	31	50.17	+21	35	05.6	17.4	RqEW048H36
K19W00E	KC2019	11	18.22055	03	31	58.06	+21	35	36.9	17.4	RqEW048H36
K19W00E	KC2019	11	18.22409	03	32	05.98	+21	36	08.6	17.4	RqEW048H36
01866	C2019	11	17.55202209	17	03.60	+46	03	27.1	13.72	oVEW048T05	
01866	C2019	11	17.55569409	17	03.86	+46	03	40.9	13.72	oVEW048T05	
01866	C2019	11	17.56253109	17	04.35	+46	04	06.5	13.70	oVEW048T05	
01866	C2019	11	17.57442909	17	05.22	+46	04	50.8	13.61	oVEW048T05	
03102	C2019	11	17.34758	04	09	59.31	+03	04	54.6	17.5	GVEW048703
03102	C2019	11	17.35348	04	09	58.76	+03	04	54.2		VEW048703
03102	C2019	11	17.35940	04	09	58.19	+03	04	52.8		VEW048703
03102	C2019	11	17.36530	04	09	57.68	+03	04	49.5	17.2	GVEW048703
03200	C2019	11	17.12730	00	26	19.51	+35	24	42.5	17.1	GVEW048703
03200	C2019	11	17.13361	00	26	19.06	+35	24	31.8	17.1	GVEW048703
03552	C2019	11	17.33718	07	09	25.44	+58	24	24.4	19.7	GVEW048G96
03552	C2019	11	17.34308	07	09	25.20	+58	24	26.6	19.6	GVEW048G96
03552	C2019	11	17.34897	07	09	24.93	+58	24	28.4	19.8	GVEW048G96
03552	C2019	11	17.35487	07	09	24.67	+58	24	30.6		VEW048G96
05189	C2019	11	17.32102	03	25	40.54	+08	39	18.6	18.2	GVEW048703
05189	C2019	11	17.32695	03	25	39.78	+08	39	18.2	18.1	GVEW048703
05189	C2019	11	17.33289	03	25	39.02	+08	39	17.2	18.0	GVEW048703
05189	C2019	11	17.33882	03	25	38.23	+08	39	16.6	18.2	GVEW048703
06455	C2019	11	17.38567802	32	54.91	+48	01	10.1	17.26	oVEW048T05	
06455	C2019	11	17.38899902	32	54.40	+48	01	09.8	17.11	oVEW048T05	
06455	C2019	11	17.39520602	32	53.48	+48	01	09.0	17.31	oVEW048T05	
06455	C2019	11	17.40956602	32	51.37	+48	01	07.4	17.18	oVEW048T05	
18172	C2019	11	14.17977000	05	33.59	+76	48	22.2	16.11	gUEW048I41	
18172	C2019	11	14.18069000	05	33.30	+76	48	23.6	16.14	gUEW048I41	
18172	C2019	11	14.18162000	05	33.02	+76	48	25.1	16.10	gUEW048I41	
18172	C2019	11	14.18263000	05	32.69	+76	48	26.6	16.16	gUEW048I41	
18172	C2019	11	14.18355000	05	32.40	+76	48	28.1	16.10	gUEW048I41	
18172	C2019	11	14.24113000	05	14.12	+76	49	55.4	15.54	rUEW048I41	
18172	C2019	11	14.24522000	05	12.84	+76	50	01.5	15.54	rUEW048I41	
20826	C2019	11	17.48478	12	08	02.01	+27	56	45.6	16.2	GVEW048703
20826	C2019	11	17.49025	12	08	03.16	+27	56	32.6	16.2	GVEW048703
20826	C2019	11	17.49574	12	08	04.27	+27	56	19.3		VEW048703
20826	C2019	11	17.50122	12	08	05.46	+27	56	07.0	16.2	GVEW048703
36236	C2019	11	17.36912	04	07	19.82	+27	36	52.0	17.2	GVEW048703
36236	C2019	11	17.37488	04	07	18.67	+27	36	36.5	17.0	GVEW048703
36236	C2019	11	17.38063	04	07	17.47	+27	36	21.1	17.2	GVEW048703
36236	C2019	11	17.38637	04	07	16.32	+27	36	05.9	16.9	GVEW048703
36236	C2019	11	17.41672204	07	10.74	+27	34	46.8	16.94	oVEW048T05	
36236	C2019	11	17.41955804	07	10.16	+27	34	39.1	16.97	oVEW048T05	
36236	C2019	11	17.42869904	07	08.31	+27	34	14.7	17.02	oVEW048T05	
88959	C2019	11	17.15389	00	53	01.72	+13	36	35.6	18.0	GVEW048703
88959	C2019	11	17.15933	00	52	59.91	+13	36	45.7	18.1	GVEW048703
88959	C2019	11	17.16477	00	52	58.02	+13	36	54.9	18.2	GVEW048703
88959	C2019	11	17.17022	00	52	56.14	+13	37	05.3	18.1	GVEW048703
99248	C2019	11	17.39310	05	39	13.37	+54	46	47.3		VEW048703
99248	C2019	11	17.39920	05	39	11.78	+54	46	32.3	15.6	GVEW048703
99248	C2019	11	17.40529	05	39	10.16	+54	46	16.7	15.6	GVEW048703
99248	C2019	11	17.41139	05	39	08.52	+54	46	00.9	15.6	GVEW048703
99248	C2019	11	17.51664605	38	43.03	+54	41	39.0	15.42	oVEW048T05	
99248	C2019	11	17.51959105	38	42.24	+54	41	31.6	15.40	oVEW048T05	
99248	C2019	11	17.52568605	38	40.63	+54	41	15.9	15.42	oVEW048T05	
99248	C2019	11	17.53557805	38	38.01	+54	40	50.6	15.39	oVEW048T05	
D7084	C2019	11	17.28440322	19	08.57	+51	05	59.9	17.94	cVEW048T05	
D7084	C2019	11	17.28766422	19	09.68	+51	05	52.0	17.93	cVEW048T05	
D7084	C2019	11	17.29371522	19	11.58	+51	05	38.0	18.18	cVEW048T05	
D7084	C2019	11	17.30294822	19	14.59	+51	05	16.3	18.11	cVEW048T05	
E1593	C2019	11	17.15823	01	39	31.16	+17	00	00.0	18.8	VoEW048691
E1593	C2019	11	17.17111	01	39	31.04	+16	59	55.0	18.7	VoEW048691
E1593	C2019	11	17.18263	01	39	30.93	+16	59	50.6	18.8	VoEW048691
F3814	C2019	11	17.25065	03	24	55.95	+23	34	20.7	17.1	GVEW048703
F3814	C2019	11	17.25605	03	24	55.35	+23	34	16.4	17.2	GVEW048703
G2723	C2019	11	17.19766	01	11	45.16	+47	25	04.9	16.1	GVEW048703
G2723	C2019	11	17.20054	01	11	43.23	+47	25	09.0	16.0	GVEW048703
G2723	C2019	11	17.20426	01	11	40.59	+47	25	14.4	16.3	GVEW048703
G2723	C2019	11	17.20733	01	11	38.52	+47	25	19.3	15.9	GVEW048703
G2723	C2019	11	17.21103	01	11	35.93	+47	25	25.3	16.3	GVEW048703
G2723	C2019	11	17.21383	01	11	34.06	+47	25	29.4	16.0	GVEW048703
G2723	C2019	11	17.21737	01	11	31.59	+47	25	35.0		VEW048703
G2723	C2019	11	17.21996	01	11	29.80	+47	25	38.4	16.1	GVEW048703
G2723	C2019	11	17.33277801	10	14.34	+47	28	37.4	15.71	oVEW048T05	
G2723	C2019	11	17.33836001	10	10.44	+47	28	45.9	15.65	oVEW048T05	
G2723	C2019	11	17.34114201	10	08.49	+47	28	50.0	15.59	oVEW048T05	
G2723	C2019	11	17.35274701	10	00.37	+47	29	07.2	15.51	oVEW048T05	
M5900	KC2019	11	17.07453400	37	47.36	+13	34	13.1	22.1	VuEW048H21	
M5900	KC2019	11	17.08477000	37	46.82	+13	34	08.9	22.1	VuEW048H21	
M6514	KC2019	11	17.05138700	03	45.21	+02	38	22.6	22.5	VuEW048H21	
M6514	KC2019	11	17.05747200	03	45.04	+02	38	21.8	22.3	VuEW048H21	

M6514	KC2019	11	17.06558500	03	44.84	+02	38	20.6	22.2	VuEW048H21	
N8063	C2019	11	17.43145	11	06	09.14	+49	55	53.4	19.4	GVEW048G96
N8063	C2019	11	17.43612	11	06	09.39	+49	55	57.0	19.5	GVEW048G96
N8063	C2019	11	17.44078	11	06	09.63	+49	56	00.7	19.3	GVEW048G96
N8063	C2019	11	17.44544	11	06	09.87	+49	56	04.3	19.2	GVEW048G96
V0402	KC2019	11	16.99381023	04	27.88	+14	19	12.7	22.1	VuEW048H21	
V0402	KC2019	11	17.00295623	04	27.74	+14	19	14.0	22.2	VuEW048H21	
V0402	KC2019	11	17.00904923	04	27.67	+14	19	14.8	22.1	VuEW048H21	
V1044	C2019	11	17.44095	11	57	42.01	+52	38	31.3	17.8	GVEW048703
V1044	C2019	11	17.44645	11	57	39.72	+52	38	35.9	17.9	GVEW048703
V1044	C2019	11	17.45196	11	57	37.54	+52	38	41.2	18.1	GVEW048703
V1044	C2019	11	17.45746	11	57	35.24	+52	38	47.3	18.0	GVEW048703
V1044	C2019	11	17.47752	11	57	27.23	+52	39	06.9	18.0	GVEW048G96
V1044	C2019	11	17.48224	11	57	25.32	+52	39	11.6	18.0	GVEW048G96
V1044	C2019	11	17.48697	11	57	23.42	+52	39	16.2	18.1	GVEW048G96
V1044	C2019	11	17.49168	11	57	21.49	+52	39	21.0	18.0	GVEW048G96
V3538	KC2019	11	17.09947301	45	56.09	+28	49	18.2	22.3	VuEW048H21	
V3538	KC2019	11	17.10625601	45	55.62	+28	49	13.9	22.2	VuEW048H21	
V3538	KC2019	11	17.11546601	45	54.95	+28	49	08.3	22.4	VuEW048H21	
W6742	C2019	11	17.17017	22	56	33.58	+48	57	06.9	19.8	GVEW048G96
W6742	C2019	11	17.18398	22	56	34.24	+48	57	00.1	19.6	GVEW048G96
W6742	C2019	11	17.18977	22	56	34.52	+48	56	57.5	19.6	GVEW048G96
W6742	C2019	11	17.19554	22	56	34.81	+48	56	54.4	19.6	GVEW048G96
W6777	C2019	11	17.08084	23	29	04.20	+14	34	06.7	18.8	GVEW048703
W6777	C2019	11	17.08623	23	29	05.10	+14	33	59.6	18.8	GVEW048703
W6777	C2019	11	17.09162	23	29	06.04	+14	33	51.6	18.7	GVEW048703
W6777	C2019	11	17.09701	23	29	06.94	+14	33	43.6	18.8	GVEW048703
X8347	C2019	11	17.44369804	14	21.54	+40	02	37.3	18.74	oVEW048T05	
X8347	C2019	11	17.44755604	14	21.30	+40	02	33.2	18.89	oVEW048T05	
X8347	C2019	11	17.45375504	14	20.88	+40	02	26.3	18.68	oVEW048T05	
X8347	C2019	11	17.46505404	14	20.05	+40	02	13.9	18.81	oVEW048T05	
Y4074	C2019	11	17.38999	06	50	13.79	+64	10	58.4	18.1	GVEW048703
Y4074	C2019	11	17.39609	06	50	13.14	+64	11	41.0	18.2	GVEW048703
Y4074	C2019	11	17.40218	06	50	12.56	+64	12	22.9	18.2	GVEW048703
Y4074	C2019	11	17.40828	06	50	12.02	+64	13	05.3	18.1	GVEW048703
b6883	KC2019	11	17.01984422	30	50.44	+10	43	28.8	22.3	VuEW048H21	
b6883	KC2019	11	17.02924322	30	51.03	+10	43	20.8	22.5	VuEW048H21	
b6883	KC2019	11	17.03544722	30	51.42	+10	43	15.5	22.3	VuEW048H21	
f5711	C2019	11	17.55247908	34	41.73	+40	21	53.6	17.99	oVEW048T05	
f5711	C2019	11	17.55615108	34	41.11	+40	21	22.3	17.80	oVEW048T05	
f5711	C2019	11	17.56298908	34	39.89	+40	20	26.3	17.53	oVEW048T05	
f5711	C2019	11	17.57626008	34	37.48	+40	18	34.3	17.58	oVEW048T05	
i2243	C2019	11	17.22535	01	46	58.56	+37	05	02.2	18.9	GVEW048703
i2243	C2019	11	17.23233	01	46	58.19	+37	05	04.3	18.7	GVEW048703
i2243	C2019	11	17.23987	01	46	57.85	+37	05	05.6	18.8	GVEW048703
i2243	C2019	11	17.35504201	46	53.34	+37	05	38.9	18.29	oVEW048T05	
i2243	C2019	11	17.35786901	46	53.21	+37	05	39.6	18.28	oVEW048T05	
i2243	C2019	11	17.36432101	46	52.89	+37	05	41.2	18.40	oVEW048T05	
i2243	C2019	11	17.37692601	46	52.29	+37	05	44.2	18.99	oVEW048T05	
j0293	C2019	11	17.48564	11	51	58.92	+28	27	09.5	20.3	GVEW048703
j0293	C2019	11	17.49112	11	51	58.41	+28	26	46.1	19.2	GVEW048703
j0293	C2019	11	17.50208	11	51	57.22	+28	25	57.8	19.5	GVEW048703
m1394	KC2019	11	16.86437402	17	38.88	-02	55	35.2	13.4	GVEW048G33	
m1394	KC2019	11	16.86574902	17	37.62	-02	56	01.8	13.7	GVEW048G33	
m1394	KC2019	11	16.86634002	17	37.09	-02	56	13.6	13.1	GVEW048G33	
m1394	n2019	11	16.87172802	17	34.02	-02	57	30.2	13.7	RqEW048619	
m1394	KC2019	11	16.87210802	17	31.93	-02	58	05.6	13.8	GVEW048G33	
m1394	KC2019	11	16.87271802	17	31.39	-02	58	17.7	13.9	GVEW048G33	
m1394	KC2019	11	16.87367502	17	30.54	-02	58	36.5	13.3	GVEW048G33	
m1394	n2019	11	16.88384002	17	22.96	-03	01	26.1	13.3	RqEW048619	
m1394	n2019	11	16.89547602	17	12.31	-03	05	13.2	13.5	RqEW048619	
m1394	n2019	11	16.90689102	17	01.83	-03	08	56.5	13.6	RqEW048619	
o9353	KC2019	11	17.10631823	25	50.21	+22	05	05.4	22.1	VuEW048H21	
o9353	KC2019	11	17.11772823	25	50.07	+22	04	56.1	22.0	VuEW048H21	
o9353	KC2019	11	17.12729223	25	49.97	+22	04	48.9	22.1	VuEW048H21	
q3971	C2019	11	17.17660	23	49	30.53	+49	10	40.4	20.2	GVEW048G96
q3971	C2019	11	17.18776	23	49	33.20	+49	10	10.7	20.2	GVEW048G96
q3971	C2019	11	17.19354	23	49	34.58	+49	09	55.5	20.1	GVEW048G96
q3971	C2019	11	17.19933	23	49	35.97	+49	09	40.0	20.0	GVEW048G96

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