

Januari 2021

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV							
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s
Jan	1	1	49	58.9	r	80172	kG5	8.5	8.1	96-	157	60	193	61S	247	239	232	-5.2	-4.2	+1.8+0.8	.319	-142.3	8	25	19.4	22	21	12	380.7	745.3	
*** A light curve is desired as 80172 is in the Kepler2 program {ID = 212116815}																															
Jan	1	4	27	24.8	r	1273	KM0	8.7	7.9v	96-	156	44	247	60S	247	209	232	-5.5	-4.2	+1.4-0.6	.344	-138.9	8	29	56.7	22	1	47	381.4	843.7	
*** A light curve is highly desired as 1273 is in the Kepler2 program {ID = 212100422}																															
1273 = ASAS J082957+2201.8, 8.59, range 0.19, V, Type MISC, Period 45.8 days, Phase 93%																															
Jan	1	22	44	14.0	r	1376	KF	8.7	8.6v	91-	146	39	109	61N	311	349	292	-4.6	-5.2	+1.0-0.1	.401	151.9	9	16	4.4	20	4	23	379.4	835.5	
*** A light curve is highly desired as 1376 is in the Kepler2 program {ID = 251337810}																															
1376 = GN Cnc, 8.68 to 8.80, V, Type EW, Period 1.13816 days, Phase 100%																															
Jan	2	1	55	23.5	r	98518	G0	8.7	8.4	91-	144	57	171	60S	253	258	234	-5.0	-5.2	+1.8+1.0	.325	-142.2	9	21	22.5	19	26	24	377.6	752.9	
Jan	2	3	25	39.9	r	98547	G0	8.7	8.4	90-	144	55	209	58N	315	296	296	-5.2	-5.2	+1.0-1.9	.394	158.0	9	24	6.9	19	28	31	377.6	777.6	
Jan	2	4	31	30.4	r	98565	cA0	8.9		90-	144	48	231	27S	220	190	201	-5.3	-5.1	+3.3+2.6	.129	-106.8	9	26	2.7	18	54	2	377.9	818.3	
98565 is double: AB 8.87 11.83 1.23" 237.7, dT = -9sec																															
98565 is a close double. Observations are highly desired																															
Jan	2	5	2	10.1	R	98567	A3	7.5	7.4	90-	143	44	240	88S	281	247	262	-5.4	-5.1	+1.0-1.5	.449	-167.7	9	26	34.5	19	3	36	378.1	843.4	
Jan	2	22	31	17.2	r	98974	G5	8.6	8.1	84-	133	26	98	55S	252	291	230	-4.2	-5.9	+0.4+2.3	.404	-144.9	10	9	43.4	15	55	59	377.5	905.3	
Jan	2	22	59	50.7	r	98983	wK2	8.4	8.0	84-	133	31	104	87N	290	329	269	-4.3	-5.9	+0.7+0.8	.479	177.7	10	10	39.7	16	2	15	377.1	876.7	
98983 is double: AB 7.0 10.4 18.6" 302.1, dT = -38sec																															
Jan	3	2	7	54.4	r	99030	F8	8.8	8.4	83-	132	52	157	63S	260	275	239	-4.6	-5.9	+1.7+1.0	.348	-145.3	10	16	0.0	15	23	42	374.9	769.5	
Jan	3	5	31	47.3	R	1514	A1	6.2	6.2s	83-	131	44	230	56N	322	292	300	-5.0	-5.7	+0.6-2.1	.422	156.4	10	21	50.3	14	58	33	375.1	837.4	
R1514 = 42 Leonis																															
1514 = NSV 4828, 6.09 to 6.17, V																															
Jan	3	6	26	26.1	r	99096	G5	8.6	8.4	82-	130	-12	37	244	34N	344	308	322	-5.0	-5.7	+0.0-2.6	.335	133.8	10	23	47.1	14	49	21	375.6	882.6

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m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s
Jan 4	2 33 31	m	99474c	F8	8.4		74-	119	45	151	8S	209	227	186	-4.0	-6.2	+9.9	+9.9	.000	-90.0	11 9	48.2	10 9	26	372.5	790.1					
			99474 is double: AB 8.59 9.87 0.59" 302.4																												
			99474 is a close double. Observations are highly desired																												
Jan 4	4 45 56.0	R	1622	K2	8.2	7.6	74-	118	47	198	54S	255	244	232	-4.2	-6.1	+2.0	+0.1	.303	-133.5	11 12	43.0	9 51	57	372.2	794.4					
Jan 5	0 14 47.4	r	1725c	K0	7.6	7.1	65-	107	19	106	56S	258	295	235	-3.0	-6.2	+0.6	+2.1	.408	-142.6	11 56	48.3	5 20	41	372.6	929.7					
			1725 is double: AB 7.4 7.6 0.10" 105.6, dT = +0.22sec																												
			1725 is a close double. Observations are highly desired																												
Jan 5	1 35 11.7	r	119159	G5	8.4	8.0	64-	107	30	124	22N	0	31	337	-3.1	-6.2	+0.2	-3.0	.228	118.5	12 0	14.4	5 21	49	371.4	861.1					
Jan 6	1 54 52.3	r	138992	M0	8.5	7.8	53-	93	21	121	84S	287	319	264	-2.2	-5.7	+0.7	+0.9	.489	-166.9	12 50	43.6	- 0	46 5	369.8	901.3					
			138992 = NSV 19498, 8.46,																												
Jan 6	2 44 25.1	R	1848	K5	7.7	7.0	53-	93	27	132	85N	297	325	275	-2.3	-5.6	+0.9	+0.4	.481	-176.3	12 52	12.2	- 0	55 44	369.1	863.3					
Jan 6	4 4 40.6	r	139041k	G5	8.8	8.5	52-	92	34	153	9N	13	29	351	-2.4	-5.5	-0.9	-4.4	.154	109.6	12 55	32.6	- 1	7 29	368.3	820.2					
			*** A light curve is desired as 139041 is in the Kepler2 program {ID = 229019067}																												
Jan 6	4 59 4.0	r	139043k	K2	8.9	8.2	52-	92	36	170	44S	247	253	225	-2.5	-5.4	+2.4	+1.4	.248	-123.3	12 55	40.5	- 1	43 12	368.1	805.0					
			*** A light curve is desired as 139043 is in the Kepler2 program {ID = 228987237}																												
Jan 6	7 11 54.6	R	139080	K0	7.8	7.2	51-	91	-5	32 209	85S	287	270	265	-2.7	-5.3	+1.3	-1.1	.444	-165.0	12 58	59.5	- 2	4 54	368.2	820.5					
Jan 7	6 20 23.0	R	139581k	K0	7.3	6.6	40-	78	30	179	29N	352	352	332	-1.5	-4.4	+0.3	-1.8	.293	130.3	13 50	32.5	- 7	35 55	366.5	805.5					
			*** A light curve is desired as 139581 is in the Kepler2 program {ID = 212726497}																												
Jan 7	6 52 41.8	R	1985k	K0	6.9	6.3	40-	78	-8	30 188	60N	322	316	302	-1.6	-4.4	+1.0	-1.1	.426	160.3	13 50	50.8	- 7	47 3	366.5	804.6					
			*** A light curve is desired as 1985 is in the Kepler2 program {ID = 212719194}																												
Jan 8	2 30 29.5	R	2088c	F5	6.2	6.0	30-	67	3	114	55N	324	360	308	-0.2	-3.6	+0.1	+0.0	.496	152.9	14 36	59.8	-12	18 19	368.1	994.2					
			2088 is double: ** 6.2 0.013" 2.9, dT = -0.02sec																												
			2088 has been reported as non-instantaneous (OCc1466). Observations are highly desired																												
Jan 8	3 2 2	m	158686	G2	7.5	7.1	30-	67	6	121	9S	208	241	192	-0.2	-3.6	+9.9	+9.9	.000	-90.0	14 38	7.0	-12	54 38	367.7	963.2					
Jan 9	5 18 39	m	159405	F3	8.7	8.4	19-	52	11	140	12S	206	231	194	+0.9	-1.8	+9.9	+9.9	.000	-90.0	15 38	31.0	-18	26 54	366.3	890.5					
Jan 9	6 1 58.7	r	159427	K5	8.9	8.2	19-	52	15	150	8N	6	25	355	+0.8	-1.7	-1.0	-2.7	.162	109.6	15 40	34.6	-18	2 56	365.8	856.5					

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m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s		
Jan	10	5	31	49.0	r	2386	PK1	8.8	8.4	11-	39	3	133	86N	281	311	275	+2.0	-0.1	+0.7	+1.1	.512	-170.7	16	37	38.3	-22	3	34	367.2	924.4		
*** A light curve is highly desired as 2386 is in the Kepler2 program {ID = 204506926}																																	
2386 is double: AB 8.9 14.6 118" 97.3, dT = +230sec																																	
Jan	15	16	53	27.4	D	3227	K0	6.3	5.8	7+	31	-8	11	221	84S	85	60	106	+4.7	+6.9	+1.0	-1.2	.423	-21.7	22	2	11.9	-17	54	13	384.3	849.6	
Jan	15	18	5	49.0	D	164841	K0	8.1	7.6	7+	32	3	236	46S	122	90	143	+4.6	+6.9	+1.3	-3.2	.258	-58.3	22	4	11.1	-17	48	45	385.5	918.6		
Jan	16	15	8	28.0	D	3349	WK5	4.1	3.2s	13+	42	5	25	186	35N	19	15	42	+4.9	+7.4	+0.6	+1.2	.302	41.1	.02	22	49	35.5	-13	35	33	387.6	752.0
R3349 = tau Aquarii																																	
3349 is double: AB 4.2 9.9 133" 297.4, dT = +65sec																																	
3349 = NSV 14329, 3.98 to 4.04, V																																	
Jan	16	16	6	3.1	R	3349	WK5	4.1	3.2s	13+	43	-1	22	201	-63N	280	267	303	+4.7	+7.4	+1.8	-1.1	.311	139.1	.02	22	49	35.5	-13	35	33	388.0	774.1
R3349 = tau Aquarii																																	
3349 is double: AB 4.2 9.9 133" 297.4, dT = -409sec																																	
3349 = NSV 14329, 3.98 to 4.04, V																																	
Jan	16	17	26	31.1	D	165354	K2	8.1	7.4	14+	43	17	220	26N	10	345	32	+4.5	+7.3	+0.0	+1.3	.278	50.4	22	52	49.2	-13	5	59	388.8	824.1		
Jan	18	19	46	3.4	D	60	K2	6.9	6.1	30+	67	20	237	66S	93	62	116	+3.1	+7.0	+1.0	-1.7	.358	-33.5	0	29	39.1	-2	50	26	397.4	828.7		
Jan	19	19	33	1.1	D	178	PF8	6.6	6.3	40+	78	31	228	34N	13	346	34	+2.1	+6.4	+0.4	+1.8	.276	46.1	1	12	30.6	2	28	18	399.1	770.7		
R178 = 35 Ceti																																	
*** A light curve is highly desired as 178 is in the Kepler2 program {ID = 220292272}																																	
178 is double: AB 6.5 9.5 1.3" 133.0, dT = -2.4sec																																	
178 is a close double. Observations are highly desired																																	
Jan	19	20	11	3.9	d	109741	kF8	8.8	8.6	40+	78	26	237	55N	34	3	56	+2.0	+6.4	+0.6	+0.5	.370	26.0	1	13	43.9	2	33	52	399.6	797.2		
*** A light curve is desired as 109741 is in the Kepler2 program {ID = 220296893}																																	
Jan	19	21	47	24.7	D	188	F0	7.6	7.4	40+	79	13	257	80S	79	41	100	+1.8	+6.3	+0.4	-1.3	.439	-14.9	1	16	36.0	2	44	6	401.1	884.5		
21	Jan	20	22	47	7.2	D	298	cF2	7.1	6.8	50+	90	15	264	89N	69	31	88	+0.5	+5.4	+0.3	-1.0	.455	-2.2	2	1	52.5	7	51	52	402.5	889.9	
298 is double: ** 8.0 8.0 0.10" 90.0, dT = +0.21sec																																	
298 has been reported as non-instantaneous (OCc1172). Observations are highly desired																																	
Jan	20	23	59	35.4	d	110316	F5	7.2	6.9	50+	91	4	278	85N	65	27	84	+0.4	+5.4	+0.0	-0.9	.494	4.1	2	4	0.1	8	5	42	403.7	970.4		
Jan	21	21	1	20.8	D	93077	K0	8.2	7.7	59+	100	39	235	60S	102	71	118	-0.5	+4.5	+1.4	-2.0	.310	-36.6	2	43	48.2	12	1	47	400.3	750.4		

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m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s		
Jan	21	22	3	39.5	D	404cA7	5.2	5.1v	59+	101	31	250	55N	37	0	53	-0.7	+4.4	+0.8	+0.5	.352	30.9	2	44	57.6	12	26	45	401.0	797.7			
R404 = 38 Arietis (UV)																																	
404 is double: ** 4.8 7.4 0.036" 9.0, dT = +0.09sec																																	
404 has been reported as non-instantaneous (OCc 975). Observations are highly desired																																	
404 = UV Ari, 5.18 to 5.22, V, Type DSCTC, Period 0.0355 days																																	
Jan	21	23	3	5.8	r	404cA7	5.2	5.1v	60+	101	22	263	-61N	281	242	297	-0.8	+4.4	+0.4	-2.1	.377	149.0	2	44	57.6	12	26	45	401.9	857.0			
R404 = 38 Arietis (UV)																																	
404 is double: ** 4.8 7.4 0.036" 9.0, dT = 0.00sec																																	
404 has been reported as non-instantaneous (OCc 975). Observations are highly desired																																	
404 = UV Ari, 5.18 to 5.22, V, Type DSCTC, Period 0.0355 days																																	
Jan	21	23	4	35.5	d	93100	G	8.6	8.3	60+	101	22	263	77S	85	46	101	-0.8	+4.4	+0.5	-1.5	.425	-14.7	2	47	0.8	12	25	36	401.9	856.7		
Jan	21	23	6	57.1	D	93098	A0	7.5	7.4	60+	101	21	263	35S	127	88	143	-0.8	+4.4	+0.3	-3.9	.241	-56.9	2	46	52.9	12	15	38	401.9	859.6		
Jan	22	17	37	25.7	D	93425	K2	7.9	7.3	67+	110	51	149	76N	60	80	74	-1.1	+3.5	+1.2	+1.6	.378	1.6	3	25	23.4	15	49	35	398.5	731.8		
Jan	22	20	24	26.8	D	93452	pF0	8.3	8.1	68+	111	51	213	85S	80	60	93	-1.7	+3.3	+1.6	-0.4	.357	-13.6	3	29	19.6	16	11	54	398.3	709.1		
*** A light curve is desired as 93452 is in the Kepler2 program {ID = 210548838}																																	
93452 is double: ** 9.3 9.3 0.060" 311.0, dT = -0.11sec																																	
93452 has been reported as non-instantaneous (OCc 937). Observations are highly desired																																	
Jan	22	22	49	43.5	d	93477	kF8	8.6	8.3	69+	112	34	254	24N	9	331	21	-2.1	+3.2	+1.0	+3.2	.182	63.8	3	32	6.2	16	43	41	399.6	798.6		
*** A light curve is desired as 93477 is in the Kepler2 program {ID = 210583818}																																	
Jan	22	22	52	34.3	D	93484	pF5	7.0	6.8	69+	112	33	254	79N	64	25	76	-2.1	+3.2	+0.9	-0.6	.408	9.0	3	32	57.5	16	35	54	399.6	800.8		
*** A light curve is desired as 93484 is in the Kepler2 program {ID = 210575096}																																	
93484 is quadruple: Aa,Ab 7.0 10.5 350.0, dT = 0.00sec : AB 7.1 16.9 467" 91.4, dT = +1014sec : AB 7.1 16.9 467" 91.4, dT = +1014sec																																	
Jan	23	17	32	13.5	D	93814	kA2	7.8	7.6	76+	121	49	130	11N	0	30	9	-2.2	+2.2	-0.7	+4.8	.161	66.1	4	12	49.0	19	32	20	396.6	763.6		
*** A light curve is desired as 93814 is in the Kepler2 program {ID = 210778232}																																	
Jan	23	17	37	55.7	d	X	5471	K5	9.0	7.7	76+	121	50	132	20N	9	38	17	-2.3	+2.2	-0.1	+3.9	.212	57.6	.02	4	13	7.3	19	33	4	396.5	759.6
Jan	23	18	7	18.2	D	622	F8	8.2	7.9	76+	121	53	141	49N	37	62	46	-2.3	+2.2	+0.8	+2.4	.336	29.3	4	14	20.9	19	34	47	396.2	740.5		
Jan	23	19	41	0.0	D	93840	cF5	7.2		76+	122	58	178	84N	73	75	82	-2.6	+2.0	+1.6	+0.7	.366	-4.5	4	17	1.2	19	40	33	395.8	703.9		
93840 is double: AB 7.38 9.06 0.37" 353.9, dT = +0.18sec																																	
93840 is a close double. Observations are highly desired																																	

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m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s
Jan	23	20	8	20.4	D	93844	K0	7.6	6.9	76+	122	57	190	55S	114	107	122	-2.7	+2.0	+2.0	-1.5	.264	-43.8	4	17	38.2	19	33	39	395.7	701.3	
Jan	23	21	5	18.0	d	93856	G9	8.6	8.2	v	77+	122	55	213	70N	59	38	67	-2.9	+1.9	+1.4	+0.6	.359	13.6	4	18	58.0	19	54	24	395.8	708.4
93856 = V0893 Tau, 8.63, range 0.02, 9V, Type BY																																
Jan	23	21	13	0.1	d	93862	F5	8.5	8.2	77+	122	54	216	64S	105	83	113	-2.9	+1.9	+1.7	-1.5	.312	-32.5	4	19	16.7	19	43	28	395.8	710.7	
Jan	23	21	26	45.4	D	93863	A0	7.9	7.8	77+	122	53	221	69N	58	33	67	-3.0	+1.9	+1.4	+0.4	.360	15.0	4	19	30.2	19	56	52	395.9	715.5	
Jan	24	18	56	37.1	d	76966	cF5	8.5	8.2	84+	133	55	139	59N	53	79	57	-3.4	+0.7	+1.1	+2.0	.367	19.5	5	7	10.0	22	23	37	392.9	741.0	
76966 is double: AB 8.6 8.7 0.20" 335.1, dT = +0.11sec																																
76966 is a close double. Observations are highly desired																																
Jan	24	19	6	2.8	D	76962	kB9	7.1	7.1	84+	133	56	143	13N	8	32	11	-3.5	+0.6	+0.0	+5.3	.161	65.3	5	6	40.9	22	30	39	392.8	735.3	
*** A light curve is desired as 76962 is in the Kepler2 program {ID = 247541278}																																
Jan	24	21	33	25.9	D	77024	B8	8.1	8.0	85+	134	58	207	54S	121	104	124	-3.9	+0.5	+1.7	-2.2	.275	-42.4	5	11	20.1	22	21	46	392.3	709.3	
Jan	24	23	17	52.9	d	77045	G5	8.4	7.8	85+	134	48	242	82N	77	41	80	-4.2	+0.4	+1.2	-0.8	.397	6.3	5	14	19.0	22	39	36	392.7	760.4	
Jan	25	1	9	53.7	d	77083	DF5	8.7	8.4	85+	135	32	267	57N	53	11	55	-4.4	+0.4	+0.8	-0.4	.378	33.7	5	17	32.4	22	49	45	393.8	867.2	
77083 is double: AB 9.16 11.07 2.40" 190.6, dT = -5sec																																
77083 is a close double. Observations are highly desired																																
Jan	25	17	29	42.0	D	77792	M0	7.9	7.0s	90+	144	-11	38	100	57S	123	165	122	-4.0	-0.7	+1.2	+0.5	.317	-45.7	5	58	38.2	23	39	58	390.5	858.8
77792 = NSV 2745, 7.76 to 7.88, V																																
Jan	25	19	18	6.1	d	77852	A0	8.2	8.2V	91+	144	53	128	28S	153	185	151	-4.2	-0.8	+3.1	-4.9	.114	-73.6	6	1	31.5	23	44	19	389.1	761.6	
77852 = HD 40696, 8.24, , Type ACV, Period 0.9828 days, Phase 90%																																
Jan	25	19	27	11	m	77851	A0	7.4	7.3v	91+	145	54	131	12S	169	200	168	-4.2	-0.8	+9.9	+9.9	.000	-90.0	6	1	29.2	23	42	14	389.0	755.6	
77851 = HD 40678, 7.37 to 7.39, V, Type ACV, Period 22.029 days, Phase 88%																																
Distance of 77851 to Terminator = 9.2"; to 3km sunlit peak = 0.7"																																
Jan	25	21	35	25.5	d	920	B9	8.7	8.6v	91+	145	62	185	15N	17	13	15	-4.6	-1.0	+1.3	+5.7	.144	67.6	6	5	9.3	24	20	4	388.2	713.2	
920 = HD 41282, 8.70 to 8.72, CV, Type ACV, Period 9.33 days, Phase 72%																																
Distance of 920 to Terminator = 14.7"; to 3km sunlit peak = 3.8"																																
Jan	25	23	29	2.2	d	X	8417	wK5	8.6	7.9	91+	146	54	231	59N	61	29	59	-4.9	-1.1	+1.5	+0.2	.351	28.0	6	9	0.9	24	15	56	388.3	749.7
X 8417 is double: AB 8.7 12.7 10.5" 135.3, dT = +8sec																																
Jan	25	23	39	47.8	d	78031	B2	8.2	8.2	91+	146	53	235	30N	32	358	30	-4.9	-1.1	+1.8	+2.2	.216	57.5	6	8	56.5	24	21	36	388.4	756.8	

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV										
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s			
Jan	25	23	42	28.4	d	X	8438	d	B8	8.8	8.8	91+	146	52	236	65N	67	33	65	-4.9	-1.1	+1.4	-0.2	.371	22.8	6	9	27.4	24	14	37	388.4	758.4	
X 8438 is double: AB 12.8 13.7 9.4" 297.1, dT = -16sec																																		
X 8438 is a close double. Observations are highly desired																																		
Jan	25	23	48	20.6	d	X	8450	A	A2	8.7	8.7	V	91+	146	52	237	88N	90	55	87	-5.0	-1.1	+1.2	-1.1	.405	0.4	6	9	43.4	24	8	43	388.4	762.5
X 8450 = HD 42066, 8.67, , Type ACV, Period 2.1025 days, Phase 62%																																		
Jan	25	23	53	20.3	D		78051	A	A2	7.6	7.5	91+	146	51	239	72N	74	38	71	-5.0	-1.1	+1.3	-0.5	.390	16.3	6	9	49.5	24	12	55	388.5	766.1	
Jan	26	2	11	21.2	D		78121	WF	F0	7.5	7.3	v	92+	147	31	270	63S	120	77	117	-5.2	-1.1	+0.2	-2.2	.426	-26.6	6	14	8.9	23	59	11	389.7	900.8
78121 is double: AB 7.6 7.9 114" 178.0, dT = +141sec																																		
78121 = PV Gem, 7.58 to 7.64, Hp, Type DSCTC, Period 0.188065 days, Phase 10%																																		
Jan	26	2	14	2.2	d		78122	W		7.9	7.5	92+	147	31	271	55S	128	85	125	-5.2	-1.1	+0.0	-2.5	.393	-34.8	6	14	9.2	23	57	17	389.7	904.0	
78122 is double: BA 7.9 7.6 114" 358.0, dT = -187sec																																		
Jan	26	3	10	47.7	D		954	c	G8	6.1	5.6	92+	147	22	281	66S	117	75	114	-5.3	-1.1	-0.1	-2.0	.471	-23.4	6	16	19.0	23	58	12	390.4	971.8	
R954 = 8 Geminorum																																		
954 is double: ** 6.9 6.9 0.10" 90.0, dT = +0.19sec																																		
954 has been reported as non-instantaneous (OCc 288). Observations are highly desired																																		
Jan	26	17	29	25.5	D		1052	K	F8	6.8	6.5	95+	155	-11	31	89	79S	110	152	103	-4.4	-2.1	+0.6	+1.1	.441	-25.7	6	54	42.8	24	14	44	387.0	919.1
*** A light curve is highly desired as 1052 is in the Kepler2 program {ID = 202061312}																																		
Jan	26	18	29	39.6	d		78894	w	K0	8.7	8.2	96+	156	40	101	80S	109	151	102	-4.5	-2.2	+0.9	+0.9	.416	-24.2	6	56	47.6	24	17	51	386.0	853.2	
78894 is double: AB 8.8 13.1 13.3" 291.3, dT = -32sec																																		
Jan	26	18	30	58.8	d		78887	K	0	8.8	8.1	96+	156	40	102	42S	147	188	140	-4.5	-2.2	+1.7	-1.2	.214	-61.9	6	56	23.0	24	9	58	386.0	851.5	
Jan	26	18	57	8.8	d		1058	K	0	6.8	6.3	96+	156	44	107	10N	20	60	13	-4.6	-2.2	-0.2	+5.0	.184	65.3	6	56	59.8	24	38	34	385.6	825.7	
Distance of 1058 to Terminator = 3.0"; to 3km sunlit peak = 0.0"																																		
Jan	26	20	39	21.2	D		78967	A	A2	8.1	8.0	96+	157	57	136	72N	82	110	75	-4.8	-2.4	+1.3	+1.1	.400	6.0	7	0	52.9	24	28	51	384.4	750.5	
Jan	26	21	20	7.7	d		78989	A	0	8.5	8.5	96+	157	60	153	76S	114	132	106	-4.9	-2.4	+1.6	-0.5	.360	-24.0	7	1	58.8	24	20	47	384.0	733.9	
Jan	26	21	45	4.4	d	X	10317	K	0	8.9	8.4	96+	157	62	164	68N	78	89	70	-5.0	-2.4	+1.5	+0.8	.381	13.1	7	2	46.3	24	30	18	383.9	728.1	
Jan	26	21	54	8.6	D		1070	G	5	5.2	4.7	v	96+	157	62	168	36S	154	162	147	-5.0	-2.4	+1.6	-4.3	.177	-63.0	7	2	24.8	24	12	56	383.9	726.7
R1070 = omega Geminorum																																		
1070 = ome Gem, 5.18 to 5.20, V, Type L:																																		
Jan	26	22	15	45.6	d		79013	K	2	8.8	8.3	96+	157	63	178	44N	54	56	47	-5.1	-2.4	+1.6	+1.7	.308	37.7	7	3	27.7	24	35	47	383.7	725.7	

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV							
m	d	h	m	s	No	D	v	r	V	ill	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s	
Jan	26	22	18	24.2	d	79020	F8	8.8	8.5	96+	157	63	180	86S	105	105	97	-5.1	-2.4	+1.6	-0.6	.381	-12.2	7	3	42.8	24	22	47	383.7	725.8
Jan	26	22	31	22.8	r	1070	G5	5.2	4.7v	96+	157	62	187	-19S	210	205	202	-5.1	-2.4	+1.8	+4.2	.177	-117.0	7	2	24.8	24	12	56	383.7	726.4
R1070 = omega Geminorum																															
1070 = ome Gem, 5.18 to 5.20, V, Type L:																															
Jan	26	22	42	52.1	d	79028dA0		8.5	8.5	96+	157	62	191	48S	143	135	135	-5.1	-2.4	+1.4	-2.9	.256	-49.1	7	4	0.2	24	13	52	383.7	728.1
79028 is double: AB 8.5 14.8 5.1" 177.1, dT = +16sec																															
79028 is a close double. Observations are highly desired																															
Jan	27	0	33	21.6	D	1080wM1		6.7	5.9s	96+	158	53	235	51S	140	106	132	-5.4	-2.5	+0.7	-2.9	.309	-42.3	7	7	16.9	24	10	6	383.9	778.0
1080 is double: AB 6.9 12.8 39" 8.8, dT = -83sec																															
1080 = NSV 17340, 6.78 to 6.86, Hp, Type SRB																															
Jan	27	0	40	3.8	d	79087	K0	8.8	8.3	96+	158	52	237	63N	74	40	66	-5.4	-2.5	+1.4	-0.5	.385	23.6	7	7	50.6	24	25	53	383.9	782.8
Jan	27	2	8	57.5	d	79133	F5	7.9	7.7	97+	159	40	259	64S	127	86	119	-5.6	-2.5	+0.4	-2.3	.410	-27.7	7	10	29.6	24	6	29	384.6	863.9
Jan	27	3	0	0.4	D	1092	F5	5.9	5.6	97+	159	32	269	86S	105	63	97	-5.6	-2.5	+0.3	-1.8	.490	-5.6	7	12	26.4	24	7	43	385.2	920.3
R1092 = 48 Geminorum																															
Jan	27	19	32	14.2	D	1195	B8	6.8	6.9	99+	168	40	103	37N	61	102	48	-4.7	-3.6	+0.6	+2.4	.390	31.6	7	56	6.5	23	37	26	381.5	847.9
Distance of 1195 to Terminator = 7.3"; to 3km sunlit peak = 0.4"																															
Jan	27	21	44	55.6	D	1200	K0	6.9	6.4	99+	169	57	142	49S	157	181	144	-5.0	-3.7	+1.5	-3.2	.209	-59.4	7	59	42.6	23	10	58	379.9	755.0
Distance of 1200 to Terminator = 9.9"; to 3km sunlit peak = 2.0"																															
Jan	28	3	35	19.1	d	79997	K0	8.0	7.3	99+	171	34	264	89N	119	77	105	-5.7	-3.7	+0.3	-2.0	.487	-12.9	8	10	54.7	22	43	43	380.6	922.8
Jan	29	21	42	33.5	r	98813SF8		8.4	8.1	98-	165	39	114	69N	295	331	274	-4.1	-5.6	+1.0	+0.5	.462	172.7	9	51	39.1	17	28	33	373.6	843.6
98813 is quadruple: AB 8.4 12.9 55" 302.6, dT = -119sec : AC 8.4 14.2 93" 296.8, dT = -200sec : AD 8.4 13.5 104" 299.8, dT = -225sec																															
Jan	30	5	43	23.8	R	1479	F2	6.4	6.2	97-	162	25	263	59S	248	208	227	-4.8	-5.4	+0.7	-1.2	.368	-133.1	10	5	40.9	15	45	27	373.8	977.7
Jan	30	21	52	16.8	R	1569kA2		6.9	6.8V	94-	152	29	108	81N	293	330	270	-3.3	-6.1	+0.7	+0.7	.495	178.9	10	46	19.3	12	44	52	371.6	892.6
*** A light curve is desired as 1569 is in the Kepler2 program {ID = 248882918}																															
1569 = HD 93273, 6.903, , Type VAR																															
Jan	31	0	24	43.4	r	99317kK0		8.1	7.6	94-	151	47	149	79N	295	315	273	-3.5	-6.0	+1.3	-0.2	.446	-178.1	10	50	45.6	12	16	3	369.8	799.7
*** A light curve is desired as 99317 is in the Kepler2 program {ID = 248864364}																															

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day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV								
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s
Feb 1	0 33		33.6 D	1702	M0	4.0	3.3v	87-	138	38	138	-89N	107	131	84	-2.5	-6.0	+1.2+0.4	.454	12.9	.01	11 45 51.6	6 31 46	368.4	831.4							
R1702 = nu Virginis																																
1702 = nu. Vir, 4.1 to 4.16, Hp, Type SRB																																
Feb 1	1 42		24.4 R	1702	M0	4.0	3.3v	87-	138	43	160	64N	315	327	291	-2.6	-6.0	+1.0-0.8	.441	167.0	.01	11 45 51.6	6 31 46	367.9	806.6							
R1702 = nu Virginis																																
1702 = nu. Vir, 4.1 to 4.16, Hp, Type SRB																																
Feb 1	2 55		33.5 r	119056	kF5	8.9	8.7v	87-	137	44	185	36S	235	232	212	-2.7	-5.9	+3.1+2.2	.171	-112.3		11 47 37.1	5 53 24	367.7	804.6							
*** A light curve is desired as 119056 is in the Kepler2 program {ID = 201828507}																																
119056 = EPIC 201828507, 9.06, range 0.00, 2Kp, Type VAR																																
Feb 1	6 39		30 gr	1719	K5	7.8	7.0	86-	135	-6	23	247	10S	209	175	186	-3.0	-5.6	+9.9+9.9	.000	-90.0	11 54 4.7	4 52 45	369.4	929.4							
Distance of 1719 to Terminator = 13.2"; to 3km sunlit peak = 2.0"																																
Feb 1	6 39		54 Gr	1719	K5	7.8	7.0	86-	135	-6	23	**	GRAZE: CA 10.1S; Dist. 15km in az. 233deg. [Lat = 51.78-0.81(E.Long-5.00)]																			
Feb 1	23 11		1.5 r	119462	KG5	8.1	7.7	79-	125	17	111	72S	272	307	249	-1.3	-5.7	+0.6+1.5	.472	-154.0		12 33 8.4	1 2 38	369.2	941.4							
*** A light curve is highly desired as 119462 is in the Kepler2 program {ID = 229110376}																																
Feb 2	2 24		43.4 r	119510	PF5	8.5	8.2	78-	124	37	160	67S	267	280	245	-1.5	-5.5	+1.7+0.7	.372	-144.2		12 38 32.2	0 13 2	367.1	816.8							
*** A light curve is highly desired as 119510 is in the Kepler2 program {ID = 229078032}																																
119510 is double: ** 8.6 11.1 0.38" 295.0, dT = -0.9sec																																
119510 has been reported as non-instantaneous (OCc1846). Observations are highly desired																																
Feb 2	4 51		9.6 R	138923	F5	8.0	7.7	77-	123	35	204	86S	286	271	264	-1.7	-5.3	+1.3-1.0	.441	-163.1		12 42 17.7	- 0 18 29	367.1	820.9							
Feb 3	3 20		48.0 R	139388	kK2	7.9	7.2	67-	110	31	163	67S	267	278	247	-0.5	-4.6	+1.7+0.6	.373	-144.3		13 31 52.2	- 6 0 53	367.0	818.0							
*** A light curve is desired as 139388 is in the Kepler2 program {ID = 212783705}																																
Feb 3	5 3		49.4 r	139430	kB5	8.0	8.1v	67-	110	31	192	14N	6	359	346	-0.6	-4.5	-0.3-2.7	.198	115.9		13 35 43.3	- 6 9 22	366.9	806.8							
*** A light curve is desired as 139430 is in the Kepler2 program {ID = 212778886}																																
139430 = GP Vir, 8.03 to 8.1, V, Type GCAS																																
Feb 4	2 16		39 M	2060	G7	6.2	5.7	57-	98	17	136	12S	210	236	193	+0.7	-3.6	+9.9+9.9	.000	-90.0		14 23 25.6	-11 42 51	368.3	885.7							
R2060 = 2 Librae																																

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV							
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s
Feb	4	3	17	51.0	R	X128771D	7.9	7.7	56-	97	22	151	80S	278	296	261	+0.6	-3.5	+1.3+0.7	.436	-157.3	14	24	40.8	-11	40	11	367.7	842.1		
X128771 is double: BA 7.9 6.9 1.1" 89.5, dT = +2.6sec																															
X128771 is a close double. Observations are highly desired																															
Feb	4	3	17	53.7	R	2064DF4	6.3		56-	97	22	151	80S	278	296	261	+0.6	-3.5	+1.3+0.7	.436	-157.4	14	24	40.9	-11	40	11	367.7	842.1		
2064 is double: AB 6.87 7.94 1.13" 269.5, dT = -2.6sec																															
2064 is a close double. Observations are highly desired																															
Feb	6	5	22	27.4	r	184326PA7	8.6	8.4	33-	70	14	158	54S	243	258	236	+2.3	-0.3	+1.9+1.4	.302	-131.6	16	20	28.1	-21	30	32	370.0	816.9		
*** A light curve is highly desired as 184326 is in the Kepler2 program {ID = 204638251}																															
184326 is quadruple: AB 7.5 9.9 0.20" 75.0, dT = +0.6sec : AC 7.5 17.2 4.4" 222.0, dT = -14sec : AD 7.5 17.2 10.8" 38.0, dT = +32sec																															
184326 is a close double. Observations are highly desired																															
Feb	6	6	20	12.4	r	184344kA2	8.7	8.5	33-	70	-8	16	171	57S	246	252	238	+2.2	-0.2	+1.9+0.8	.314	-135.6	16	22	10.0	-21	39	17	369.8	789.3	
*** A light curve is desired as 184344 is in the Kepler2 program {ID = 204603511}																															
Feb	7	4	23	47.5	R	2491dG3	6.6	6.3	23-	58	2	134	81N	283	312	280	+3.1	+1.2	+0.7+1.1	.496	-175.9	17	18	7.1	-24	4	23	372.6	898.0		
2491 is double: AB 5.1 12.9 11.8" 289.9, dT = -24sec																															
Feb	7	5	41	37.5	r	185287kB9	8.8	8.7	23-	57	9	150	85N	277	297	275	+3.0	+1.3	+1.1+0.9	.455	-171.7	17	20	42.6	-24	16	17	371.9	829.2		
*** A light curve is desired as 185287 is in the Kepler2 program {ID = 235080804}																															
Feb	14	12	22	28.8	D	3536cM3	4.4	3.5v	8+	33	25	28	151	72N	57	75	81	+3.7	+7.3	+1.2+1.4	.398	0.9	.02	0	1	57.6	-6	0	51	393.2	758.8
R3536 = 30 Piscium (YY)																															
3536 is double: ** 5.2 5.2 0.050" 140.0, dT = +0.02sec																															
3536 has been reported as non-instantaneous (OCc1092). Observations are highly desired																															
3536 = YY Psc, 4.31 to 4.41, V, Type SR																															
Feb	14	13	40	0.7	r	3536cM3	4.4	3.5v	8+	33	21	32	173	-72S	237	241	260	+3.5	+7.2	+1.3+0.9	.389	179.3	.02	0	1	57.6	-6	0	51	393.0	741.8
R3536 = 30 Piscium (YY)																															
3536 is double: ** 5.2 5.2 0.050" 140.0, dT = +0.02sec																															
3536 has been reported as non-instantaneous (OCc1092). Observations are highly desired																															
3536 = YY Psc, 4.31 to 4.41, V, Type SR																															

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV								
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s
Feb 14	14	52	9.4	D	5cK1	4.6	4.1v	8+	33	15	32	193	54S	111	103	135	+3.3	+7.1	+2.5	-1.5	.223	-55.5	0	5	20.1	-	5	42	27	393.2	749.4	
R5 = 33 Piscium																																
5 is double: AB 5.0 7.5 0.003" 61.8, dT = +0.01sec																																
5 = BC Psc, 4.61, range 0.08, V, Type RS, Period 72.93 days																																
Feb 14	15	35	52.2	r	5cK1	4.6	4.1v	8+	34	10	30	206	-16S	181	165	204	+3.2	+7.1	-0.1	+2.3	.227	-124.5	0	5	20.1	-	5	42	27	393.5	765.2	
R5 = 33 Piscium																																
5 is double: AB 5.0 7.5 0.003" 61.8, dT = +0.01sec																																
5 = BC Psc, 4.61, range 0.08, V, Type RS, Period 72.93 days																																
Feb 15	19	55	40	m	109548	F0	8.4	8.2	16+	46	9	259	9S	153	116	175	+1.9	+6.3	+9.9	+9.9	.000	-90.0	0	56	59.6	0	27	10	399.5	914.6		
Feb 16	20	15	34.1	D	110062	G5	8.0	7.6	23+	58	17	258	43N	25	347	45	+0.8	+5.6	+0.4	+0.8	.342	40.3	1	41	23.8	6	2	46	401.1	872.6		
Feb 17	10	51	4.0	d	327cG8	4.4	3.9s	29+	65	25	14	94	85N	67	106	86	+1.0	+5.4	+0.2	+1.9	.477	-4.4	2	13	0.0	8	50	48	402.3	933.9		
R327 = xi 1 Ceti																																
327 is double: AB 4.3 0.002" 123.1, dT = 0.00sec																																
327 = NSV 749, 4.35 to 4.38, V, Type E:																																
Feb 17	11	55	14.1	r	327cG8	4.4	3.9s	29+	66	26	24	107	-74S	237	273	255	+0.9	+5.3	+0.4	+2.0	.443	-175.6	2	13	0.0	8	50	48	401.3	865.2		
R327 = xi 1 Ceti																																
327 is double: AB 4.3 0.002" 123.1, dT = 0.00sec																																
327 = NSV 749, 4.35 to 4.38, V, Type E:																																
Feb 17	18	52	10.5	D	352cK0	7.1	6.5	31+	68	37	233	51S	112	82	129	-0.2	+4.7	+1.5	-2.7	.257	-48.5	2	24	10.4	10	16	21	400.3	753.4			
352 is double: AB 7.2 10.0 0.8" 354.1, dT = -1.4sec																																
352 is a close double. Observations are highly desired																																
Feb 17	19	25	3.1	D	354cB7	5.5	5.5v	31+	68	34	241	70N	52	19	70	-0.3	+4.6	+0.9	-0.1	.390	12.2	2	24	49.1	10	36	38	400.7	775.4			
R354 = xi Arietis																																
354 is double: ** 6.3 6.3 0.050" 46.0, dT = +0.13sec																																
354 has been reported as non-instantaneous (OCc 984). Observations are highly desired																																
354 = HIP 11249, 5.48, range 0.00, 7V, Type VAR, Period 1.73515 days																																
Feb 17	19	51	55.9	D	92942	B9	7.6	7.6	32+	68	30	247	66S	97	61	114	-0.4	+4.6	+0.9	-1.9	.350	-31.2	2	25	41.4	10	30	22	401.1	796.9		
Feb 17	20	11	43.3	D	92948	G0	7.3	7.1	32+	68	27	252	83S	79	43	97	-0.4	+4.6	+0.8	-1.3	.407	-13.1	2	26	11.1	10	38	16	401.3	814.1		

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV								
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s	
Feb 17	20 34	58.2	r	354c	B7	5.5	5.5v	32+	69	24	257	-83N	260	222	277	-0.5	+4.6	+0.6	-1.3	.420	167.8	2 24	49.1	10 36	38	401.7	838.2					
	R354 = xi Arietis																															
	354 is double: ** 6.3 6.3 0.050" 46.0, dT = +0.1sec																															
	354 has been reported as non-instantaneous (OCc 984). Observations are highly desired																															
	354 = HIP 11249, 5.48, range 0.00, 7V, Type VAR, Period 1.73515 days																															
Feb 17	20 35	25.6	D	360SF	0	6.7	6.5v	32+	69	24	257	51S	112	74	129	-0.5	+4.6	+0.6	-2.8	.306	-44.5	2 26	45.6	10 33	55	401.7	836.9					
	R360 = VW Arietis																															
	360 is triple: AC 6.7 11.8 62" 155.0, dT = +147sec : AB 6.7 8.3 74" 31.0, dT = +38sec																															
	360 = VW Ari, 6.64 to 6.76, V, Type DSCT, Period 0.1606 days																															
Feb 17	20 36	17.0	D	92953SF	0	8.3	8.1	32+	69	24	257	55S	108	70	126	-0.5	+4.6	+0.6	-2.6	.326	-40.8	2 26	48.3	10 34	58	401.7	837.7					
	92953 is quadruple: ** 9.3 9.3 0.10" 87.0, dT = +0.29sec : Ba,Bb 9.3 9.3 0.10" 350.0, dT = -0.14sec : BA 8.3 6.7 74" 211.0, dT = -50sec																															
	92953 has been reported as non-instantaneous (OCc 981). Observations are highly desired																															
Feb 17	21 30	45.6	d	92964c	K0	8.6	7.9	32+	69	16	268	59N	41	2	59	-0.6	+4.6	+0.4	-0.1	.405	27.9	2 28	2.2	10 59	39	402.6	894.2					
	92964 is double: ** 9.5 9.5 0.10" 27.0, dT = +0.24sec																															
	92964 has been reported as non-instantaneous (OCc 982). Observations are highly desired																															
Feb 17	22 40	46.2	d	369G	5	8.6	8.1	32+	69	5	281	88S	75	37	92	-0.7	+4.5	+0.0	-1.1	.496	-3.5	2 30	28.8	11 3	44	403.7	973.3					
Feb 18	19 45	51.3	d	X 64814		8.9	8.4V	41+	79	40	238	55S	110	77	125	-1.6	+3.5	+1.3	-2.5	.286	-42.3	3 11	3.0	14 48	0	400.3	750.5					
	X 64814 = U Ari, 7.2 to 15.8, V, Type M, Period 371.1 days, Phase 11%																															
Feb 18	23 18	56.5	d	93371K	0	8.5	7.9	42+	81	9	283	86S	80	41	93	-2.0	+3.4	+0.0	-1.3	.491	-4.6	3 17	11.6	15 24	24	403.2	964.1					
Feb 19	17 32	29.7	D	93661K	5	8.2	7.2	49+	89	-5	57	178	9N	358	359	8	-2.5	+2.3	-0.2	+6.1	.131	68.8	.01	3 54	20.7	398.0	698.9					
Feb 19	17 36	50.8	D	93670F	5	7.8	7.5	49+	89	-6	57	180	47N	35	35	45	-2.5	+2.3	+1.1	+2.1	.308	31.6	3 55	5.6	18 35	26	398.0	698.2				
Feb 19	19 11	50.3	D	585kF	5	8.5	8.2	50+	90	52	218	28N	16	352	26	-2.8	+2.2	+1.0	+3.2	.213	54.4	3 57	1.4	18 50	20	398.2	706.5					
	*** A light curve is desired as 585 is in the Kepler2 program {ID = 210732246}																															
Feb 20	0 16	46.8	d	605kF	2	7.5	7.3	52+	92	11	288	89S	80	42	90	-3.4	+2.1	-0.1	-1.3	.505	-0.3	4 6	37.4	19 9	10	401.7	984.6					
	*** A light curve is desired as 605 is in the Kepler2 program {ID = 210752799}																															
Feb 20	13 30	59.0	d	700cB	8	5.9	5.9E	58+	99	24	27	91	37S	135	176	141	-3.0	+1.4	+1.4	+0.3	.200	-64.9	4 38	15.8	20 41	5	398.6	912.7				
	R700 = HU Tauri (129 H1.)																															
	700 is double: ** 6.0 7.5 350.0, dT = 0.00sec																															
	700 = HU Tau, 5.85 to 6.68, V, Type EA/SD:, Period 2.05630398 days, Phase 8%																															

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV								
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s	
Feb	20	17	22	36.5	d	76733c	A2	8.3	8.2	59+	100	-4	58	153	32N	24	41	30	-3.6	+1.0	+0.7	+3.3	.255	46.7	4	44	22.8	21	39	27	395.7	714.3
Feb	20	18	28	26.7	D	76747k	A5	8.6	8.5	59+	101	60	182	71S	102	101	108	-3.8	+0.9	+1.8	-0.6	.317	-29.0	4	46	38.4	21	30	7	395.4	696.1	
*** A light curve is desired as 76747 is in the Kepler2 program {ID = 247413024}																																
Feb	20	20	44	32.2	D	76776	A0	7.8	7.8	60+	101	50	235	47N	40	7	46	-4.2	+0.8	+1.4	+1.1	.298	38.5	4	49	45.9	21	56	59	395.8	731.0	
Feb	20	23	38	26.3	d	76837	K0	8.5	7.9	61+	103	25	274	65S	109	67	114	-4.6	+0.7	+0.1	-2.1	.423	-24.4	4	55	15.7	21	50	50	397.6	894.7	
Feb	20	23	40	1.2	d	76830	A3	8.0	7.8	61+	103	25	274	36N	29	348	34	-4.6	+0.7	+1.0	+0.6	.267	55.0	4	54	49.4	22	8	47	397.6	897.0	
Feb	21	22	34	54.6	D	77526c	A0	8.0		70+	113	43	252	72S	106	67	106	-5.5	-0.7	+0.8	-1.9	.396	-18.0	5	45	58.6	23	44	51	392.3	792.1	
77526 is double: AB 8.02 11.58 0.40" 139.9, dT = +0.8sec																																
77526 is a close double. Observations are highly desired																																
Feb	21	23	21	35.8	d	77558	K2	8.4	7.6	70+	114	37	262	78N	77	35	76	-5.6	-0.7	+0.8	-1.1	.429	13.1	5	47	27.1	23	53	3	392.8	838.7	
Feb	21	23	57	22.8	d	77586	B9	8.3	8.3	70+	114	31	269	80S	99	57	99	-5.6	-0.7	+0.4	-1.8	.455	-8.9	5	48	38.6	23	47	8	393.2	878.4	
Feb	22	1	14	46.9	d	77636	A0	8.5	8.4	V	71+	114	20	284	66N	65	24	64	-5.7	-0.7	+0.3	-1.0	.456	26.1	5	51	17.1	23	55	35	394.1	971.2
77636 = HD 39078, 8.52, , Type ACV, Period 0.9913 days, Phase 58%																																
Feb	22	18	58	8.5	D	78522	K5	8.4	7.6	78+	124	60	149	80N	84	105	79	-5.5	-1.9	+1.5	+0.8	.386	1.6	6	35	2.8	24	38	5	387.3	724.6	
Feb	22	20	24	40.7	D	1015c	A3	6.5		78+	124	63	189	85S	99	93	94	-5.8	-2.0	+1.6	-0.5	.374	-9.9	6	37	27.3	24	35	27	386.9	712.3	
1015 is double: AB 6.55 10.38 0.50" 252.0, dT = -1.2sec																																
1015 is a close double. Observations are highly desired																																
Feb	22	20	36	9.2	d	78550	F5	9.0	8.8	78+	124	62	195	29S	156	146	151	-5.8	-2.0	+1.4	-5.3	.157	-65.6	6	37	7.7	24	23	55	386.9	713.8	
Feb	22	21	6	35.0	D	1019S	A5	6.8	6.6	78+	124	60	208	50S	135	116	130	-5.9	-2.0	+1.3	-2.7	.279	-43.4	6	38	18.9	24	27	2	386.9	721.4	
1019 is quadruple: AB 6.8 11.9 10.0" 195.0, dT = +18sec : AC 6.8 10.8 51" 352.0, dT = -144sec : AD 6.8 9.7 385" 162.1, dT = +1224sec																																
Feb	22	21	21	27.6	d	78582	A0	8.8	8.7	78+	124	59	214	74S	111	89	106	-5.9	-2.0	+1.4	-1.5	.366	-19.2	6	38	59.0	24	32	10	386.9	726.8	
Feb	22	21	37	50.4	D	1023S	F8	6.4	6.2	78+	125	58	221	89S	95	69	90	-6.0	-2.0	+1.4	-1.0	.391	-2.8	6	39	31.5	24	36	1	386.9	734.3	
1023 is triple: ** 7.3 7.3 0.050" 350.0, dT = -0.03sec : AB 6.5 13.6 31" 246.2, dT = -69sec																																
1023 has been reported as non-instantaneous (OCc1324). Observations are highly desired																																
Feb	22	22	35	33.7	d	78634	A0	8.5	8.4	79+	125	51	239	73N	78	42	72	-6.1	-2.1	+1.3	-0.7	.393	16.9	6	41	11.6	24	39	22	387.1	770.9	
Feb	23	0	8	1.7	d	78686	A2	8.8	8.7	79+	125	38	262	82N	87	45	82	-6.3	-2.0	+0.7	-1.4	.450	9.4	6	44	8.0	24	32	54	387.9	857.4	
Feb	23	0	54	15.7	D	78706	WK2	7.0	6.1	s	79+	126	31	271	40N	46	3	40	-6.4	-2.0	+1.0	-0.2	.302	51.3	6	45	23.5	24	40	21	388.3	909.7
78706 is double: AB 7.1 10.9 15.2" 261.0, dT = -41sec																																
78706 = NSV 17172, 7.02 to 7.08, Hp																																

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV								
m	d	h	m	s	No	D	v	r	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s		
Feb	23	17	51	58.9	d	79430	G5	8.7	8.2	85+	135	-7	46	110	31N	42	82	33	-5.7	-3.2	+0.5	+3.2	.295	47.2	7	29	23.1	24	25	29	383.4	809.1
Feb	23	19	12	4.1	D	79470	K0	7.6	7.1	86+	136	56	134	42S	149	178	139	-5.9	-3.3	+1.7	-2.5	.223	-56.7	7	31	39.2	23	59	59	382.5	753.0	
Feb	23	19	35	54.4	D	79477	K2	7.8	7.2	86+	136	58	143	25S	167	191	156	-5.9	-3.3	+1.9	-6.7	.117	-73.1	7	32	2.1	23	57	4	382.2	742.1	
Feb	23	20	19	22.7	d	79505	M1	8.8	7.9	86+	136	61	161	79S	113	126	103	-6.0	-3.3	+1.5	-0.6	.376	-17.4	7	34	4.9	24	5	32	381.9	730.6	
Feb	23	20	50	35.0	D	79523wM5		7.7	6.8s	86+	136	62	175	57N	69	72	59	-6.1	-3.3	+1.6	+1.0	.348	27.7	7	34	59.3	24	15	56	381.7	728.4	
79523 is double: AB 7.8 11.1 92" 180.0, dT = -94sec																																
79523 = NSV 17512, 7.69 to 7.78, Hp																																
Feb	23	21	9	3.5	D	79524	F5	8.0	7.7	86+	136	62	184	42S	150	147	139	-6.2	-3.3	+1.2	-3.2	.242	-52.2	7	35	1.5	23	55	54	381.7	729.7	
Feb	23	22	13	48.8	d	79549	K0	8.4	7.7	86+	137	59	213	51S	141	119	130	-6.3	-3.3	+1.0	-2.7	.307	-40.7	7	37	2.2	23	53	20	381.6	748.9	
Feb	23	22	47	8.0	d	79561	G5	8.3	7.8	86+	137	56	225	47S	145	116	134	-6.4	-3.3	+0.8	-3.0	.299	-43.7	7	37	56.9	23	50	10	381.7	767.1	
Feb	23	23	10	36.4	d	79574	K0	8.8	8.2	87+	137	53	233	46S	147	114	136	-6.5	-3.3	+0.6	-3.1	.300	-44.9	7	38	37.4	23	47	57	381.7	783.0	
Feb	23	23	37	10	D	1157	A2	6.2	6.2	87+	137	50	241	8N	20	344	9	-6.5	-3.3	+9.9	+9.9	.059	82.2	7	39	12.0	24	13	21	381.9	804.0	
Distance of 1157 to Terminator = 7.4"; to 3km sunlit peak = 0.0"																																
Feb	24	0	54	0.6	d	79620	A3	8.1	8.0	87+	138	39	260	27N	39	358	28	-6.6	-3.3	+1.8	+0.7	.208	64.0	7	42	0.3	24	3	2	382.4	877.5	
Feb	24	1	25	29.6	d	79644	A0	8.6	8.6	87+	138	34	266	71N	83	41	72	-6.7	-3.3	+0.6	-1.4	.462	20.0	7	43	29.4	23	49	15	382.8	911.7	
Feb	24	2	40	59.4	d	79679	B9	7.7	7.7	87+	138	23	280	81S	111	70	100	-6.7	-3.3	+0.0	-1.8	.532	-8.4	7	46	10.3	23	32	55	383.6	1000.2	
Feb	24	3	5	20.3	d	79688	K0	7.5	7.0	88+	139	19	284	62N	75	34	63	-6.7	-3.3	+0.2	-1.2	.487	28.3	7	47	9.0	23	39	49	383.9	1029.4	
Feb	24	23	17	21.3	d	1285pG0		8.4	8.1	93+	149	57	215	42N	62	40	46	-6.3	-4.4	+1.9	+0.6	.297	46.0	8	36	40.0	22	10	23	376.2	779.6	
*** A light curve is desired as 1285 is in the Kepler2 program {ID = 212107694}																																
1285 is double: AB 8.4 11.9 4.7" 83.6, dT = +15sec																																
1285 is a close double. Observations are highly desired																																
Feb	24	23	36	17.0	d	80293	K0	8.6	7.9	93+	149	55	222	76N	96	70	80	-6.3	-4.4	+1.3	-1.0	.423	12.7	8	37	21.2	21	58	48	376.2	790.6	
Feb	25	2	40	58.9	D	1308SA1		4.7	4.7	94+	151	29	268	82N	103	62	87	-6.6	-4.4	+0.3	-1.7	.523	5.9	8	43	17.1	21	28	7	377.6	962.2	
R1308 = Asellus Borealis = Gamma Cancri																																
1308 is triple: AC 4.7 14.1 91" 258.0, dT = -158sec : AB 4.7 10.2 117" 67.0, dT = +180sec																																
Feb	25	3	38	54.4	r	1308SA1		4.7	4.7	94+	151	20	279	-87N	294	253	278	-6.6	-4.3	-0.1	-1.7	.559	174.0	8	43	17.1	21	28	7	378.3	1030.9	
R1308 = Asellus Borealis = Gamma Cancri																																
1308 is triple: AC 4.7 14.1 91" 258.0, dT = -132sec : AB 4.7 10.2 117" 67.0, dT = +142sec																																
Feb	25	19	27	25.4	D	98567	A3	7.5	7.4	97+	160	40	112	61S	148	185	129	-5.3	-5.3	+1.0	-1.0	.341	-43.1	9	26	34.5	19	3	36	373.1	845.6	

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV							
m	d	h	m	s	No	D	v	r	V	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s
Feb	25	20	35	1.1	d	1400c	F5	8.3	97+	161	48	129	28N	58	88	39	-5.4	-5.3	+1.4	+2.8	.287	49.7	9	29	0.7	19	17	19	372.2	800.2	
1400 is double: AB 8.42 9.96 1.05" 224.8, dT = -4sec																															
1400 is a close double. Observations are highly desired																															
Distance of 1400 to Terminator = 12.2"; to 3km sunlit peak = 3.1"																															
Feb	25	20	56	53.5	d	98603	M2	8.9	8.1v	97+	161	51	136	59N	89	116	70	-5.4	-5.3	+1.4	+0.9	.415	18.8	9	29	50.1	19	5	58	372.0	790.3
98603 = EG Leo, 8.78 to 8.97, Hp, Type LB, Period 24.252901 days, Phase 36%																															
Feb	25	23	10	50.0	D	98640	K0	8.0	7.5	97+	162	57	189	63N	94	88	75	-5.7	-5.3	+1.5	-0.3	.410	19.0	9	33	38.6	18	44	12	371.1	780.5
Feb	25	23	55	54.3	d	98646	K2	8.2	7.3v	98+	162	54	207	66S	145	128	125	-5.8	-5.3	+0.8	-2.2	.381	-30.5	9	34	26.7	18	24	22	371.1	797.2
98646 = ASAS J093427+1824.4, 8.15, range 0.1, V, Type MISC, Period 26.57 days, Phase 5%																															
Feb	26	18	56	0.7	d	1514	A1	6.2	6.2s	100+	172	24	96	47N	101	141	80	-4.4	-5.9	+0.5	+1.2	.521	6.7	10	21	50.3	14	58	33	370.1	942.7
R1514 = 42 Leonis																															
1514 = NSV 4828, 6.09 to 6.17, V																															
Distance of 1514 to Terminator = 4.7"; to 3km sunlit peak = 0.0"																															
Feb	27	22	47	7.0	r	1647	A2	6.7	6.5	99-	170	42	144	24N	332	354	309	-3.3	-6.0	+0.8	-1.3	.394	147.1	11	21	50.2	9	10	6	364.4	829.4
Distance of 1647 to Terminator = 2.2"; to 3km sunlit peak = 0.0"																															
Feb	28	3	52	6.0	R	1669p	F5	6.7	6.5	99-	168	31	240	71S	254	221	231	-3.7	-5.6	+1.2	-1.1	.357	-133.8	11	29	40.0	7	35	58	364.8	913.9
*** A light curve is desired as 1669 is in the Kepler2 program {ID = 201913061}																															
1669 is double: AB 6.8 13.1 17.9" 282.8, dT = -44sec																															
Distance of 1669 to Terminator = 17.0"; to 3km sunlit peak = 6.6"																															
Feb	28	21	24	42.1	r	119272	F5	7.6	7.3	96-	158	22	114	73N	300	334	277	-1.8	-5.8	+0.6	+0.5	.528	178.0	12	12	29.9	3	24	15	364.2	933.7
Maart																															
Mar	1	4	49	49.2	r	1781	M*	7.6	6.8s	95-	155	24	238	80S	275	243	252	-2.2	-5.2	+0.9	-1.5	.469	-154.6	12	24	40.7	1	23	2	363.4	915.1
1781 = NSV 19382, 7.65 to 7.72, Hp																															
Mar	1	23	41	5.4	r	1889	F2	8.4	8.3e	90-	144	26	137	75N	302	327	281	-0.3	-4.9	+0.8	+0.2	.501	179.6	13	9	42.7	-3	23	22	362.6	880.6
1889 = ASAS J130943-0323.4, 7.983, range 0.03, 5Ic, Type ECJESD, Period 1.43103 days, Phase 9%																															
Mar	2	0	40	30.8	r	139205	K0	8.6	8.0	90-	143	31	153	47S	245	261	223	-0.4	-4.8	+2.2	+2.1	.254	-121.8	13	11	17.4	-3	54	56	362.2	848.3
Mar	2	1	35	28.5	r	139220	K2	8.4	7.9	90-	143	34	169	76N	301	308	280	-0.4	-4.7	+1.2	-0.4	.473	-178.0	13	12	48.8	-3	53	41	361.9	830.1
Mar	3	0	4	13.5	r	139704	K0	7.3	6.7	82-	130	18	134	62S	260	287	241	+1.2	-3.8	+1.2	+1.7	.388	-139.1	14	3	57.7	-9	44	42	363.8	905.7

day	Time	P	Star	Sp	Mag	Mag	%	Elon	Sun	Moon	CA	PA	VA	AA	Libration	A	B	RV	Cct	durn	R.A. (J2000)	Dec	Mdist	SV								
m	d	h	m	s	No	D	v	r	ill	Alt	Alt	Az	o	o	o	L	B	m/o	m/o	"/s	o	sec	h	m	s	o	m	s	Mm	m/s		
Mar	3	2	6	12.0	r	158366	kG5	8.0	7.5	81-	129	27	164	50S	247	257	229	+1.0	-3.6	+2.2	+1.4	.275	-125.6	14	7	29.0	-10	19	25	363.0	832.3	
*** A light curve is desired as 158366 is in the Kepler2 program {ID = 212611748}																																
Mar	3	3	2	10.0	R	2028c	G8	6.5	5.9	81-	129	28	179	83N	294	295	276	+0.9	-3.5	+1.3	-0.4	.461	-173.1	14	9	0.6	-10	20	4	362.9	817.9	
R2028 = 96 Virginis																																
2028 is double: AB 6.5 0.30" 31.0, dT = +0.07sec																																
2028 is a close double. Observations are highly desired																																
Mar	3	4	10	21.7	r	158411	M*	8.0	7.2v	81-	128	26	197	47N	331	320	312	+0.8	-3.4	+0.8	-1.3	.400	149.4	14	11	19.2	-10	28	44	363.1	818.9	
158411 = DN Vir, 9.1 to 9.6, pg, Type SRB																																
Mar	4	2	16	52.5	r	2151	B8	8.2	8.3	71-	115	19	154	16N	359	15	344	+2.3	-2.2	-0.3	-1.8	.236	119.6	15	4	8.9	-15	27	41	365.2	843.4	
Mar	4	2	25	32.3	r	159001	cF5	8.1		71-	115	20	157	24N	351	6	336	+2.3	-2.2	+0.1	-1.3	.290	127.8	15	4	14.2	-15	29	52	365.1	838.3	
159001 is double: AB 8.67 9.17 0.025" 332.5, dT = -0.08sec																																
159001 is a close double. Observations are highly desired																																
Mar	4	3	29	8.5	d	2159	K5	5.2	4.4	71-	115	22	172	-36S	159	164	144	+2.2	-2.1	+0.6	-0.9	.345	-41.0	.01	15	6	37.6	-16	15	25	365.0	810.6
R2159 = nu Librae																																
Mar	4	4	23	1.7	R	2159	K5	5.2	4.4	71-	115	22	186	61S	256	252	242	+2.1	-2.0	+1.8	+0.0	.342	-139.1	.01	15	6	37.6	-16	15	25	365.1	801.0
R2159 = nu Librae																																
Mar	5	4	37	30.3	D	2307	B1	3.9	4.0	60-	101	17	176	-70N	80	83	71	+3.2	-0.4	+1.7	+0.3	.378	31.4	16	6	48.4	-20	40	9	367.8	789.8	
R2307 = Kow Kin = omega 1 Scorpii																																
Mar	5	4	40	35.8	r	184105	cK3	7.4	6.9	60-	101	18	177	15N	356	358	347	+3.2	-0.4	+0.1	-1.6	.191	115.6	16	5	40.5	-20	27	0	367.8	789.1	
184105 is double: AB 7.4 0.002" 82.0, dT = 0.00sec																																
Mar	5	4	42	50.7	r	184093	A2	8.1	8.0	60-	101	17	177	40S	230	232	221	+3.2	-0.4	+2.4	+1.1	.212	-118.7	16	4	55.5	-20	54	0	367.9	788.6	
Mar	5	4	59	54.6	D	2310	G6	4.3	3.9	60-	101	17	181	-81S	110	110	101	+3.1	-0.4	+1.4	-0.3	.440	0.9	16	7	24.3	-20	52	8	367.9	785.2	
R2310 = Kow Kin = omega 2 Scorpii																																
Mar	5	5	41	9.1	R	2307	B1	3.9	4.0	59-	101	-6	17	49N	321	314	312	+3.1	-0.3	+1.1	-0.9	.375	148.5	16	6	48.4	-20	40	9	368.0	784.3	
R2307 = Kow Kin = omega 1 Scorpii																																
Mar	5	6	13	41.5	R	2310	G6	4.3	3.9	59-	100	-1	15	81N	289	277	280	+3.0	-0.3	+1.3	-0.8	.442	179.0	16	7	24.3	-20	52	8	368.2	789.7	
R2310 = Kow Kin = omega 2 Scorpii																																
Mar	7	4	14	23.4	r	186206	G0	8.5	8.2	37-	75	6	146	83N	276	298	278	+4.7	+2.7	+1.1	+1.0	.453	-175.1	18	3	57.1	-25	40	11	374.9	826.7	
Mar	7	4	36	44.2	R	186235	F2	7.2	6.9	37-	75	8	151	61N	297	317	300	+4.7	+2.8	+1.0	+0.6	.425	162.8	18	4	48.5	-25	36	21	374.7	809.6	