

## Occultation prediction for Nederland midden

E. Longitude 5 0 0.0, Latitude 52 0 0.0, Alt. 0m;

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									
y	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
21	Jul	2	2	45	48.3	r	129029	K4	7.9	7.2	48-	87	-5	25	126	25S	182	212	204	+5.8	+6.5	+0.0+2.6	.232	-123.4	0	55	33.2	0	1	11	395.7	810.0	
21	Jul	3	3	32	30	D	249	K3	4.5	3.7	38-	76	0	30	124	-24S	134	165	154	+4.7	+5.6	+3.2-0.6	.100	-76.2	.04	1	41	25.9	5	29	15	398.7	806.7
R249 = nu Piscium																																	
21	Jul	3	3	38	1	Gr	249	K3	4.5	3.7	38-	76	-1	32	**	GRAZE: CA-10.3S; Dist. 94km in az. 122deg. [Lat = 50.41+0.99(E.Long-5.00)]																	
21	Jul	3	3	50	8	R	249	K3	4.5	3.7	38-	76	2	32	128	3S	161	190	181	+4.7	+5.5	-1.8+4.6	.098	-103.8	.04	1	41	25.9	5	29	15	398.6	793.4
R249 = nu Piscium																																	
21	Jul	4	1	35	3.4	R	344	G5	8.4	7.7	29-	66	-11	11	88	79S	239	277	256	+3.7	+4.6	+0.0+1.9	.492	-175.2	2	20	52.8	10	0	24	402.8	964.6	
21	Jul	4	2	57	52.7	d	354cB7		5.5	5.5v	29-	65	-4	24	104	-68N	47	85	65	+3.6	+4.5	+0.3+2.1	.439	13.6	2	24	49.1	10	36	38	401.5	879.2	
R354 = xi Arietis																																	
354 is double: ** 6.3 6.3 0.050" 46.0, dT = +0.11sec																																	
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																																	
21	Jul	4	3	14	59.1	r	352cK0		7.1	6.5	29-	65	-2	26	108	41S	201	237	218	+3.6	+4.5	+0.1+2.4	.340	-140.3	2	24	10.4	10	16	21	401.3	860.5	
352 is double: AB 7.2 10.0 0.8" 351.5, dT = +2sec																																	
352 is a close double. Observations are highly desired																																	
21	Jul	4	4	4	40.6	r	354cB7		5.5	5.5v	29-	65	4	34	119	87N	253	286	270	+3.4	+4.4	+0.9+1.8	.408	166.4	2	24	49.1	10	36	38	400.7	814.8	
R354 = xi Arietis																																	
354 is double: ** 6.3 6.3 0.050" 46.0, dT = +0.11sec																																	
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																																	
21	Jul	5	1	5	56.0	r	93269	G0	8.9	8.6	21-	55	4	72	42S	204	241	218	+2.4	+3.4	-0.5+2.0	.390	-136.9	3	5	25.3	14	16	34	404.7	1048.5		
21	Jul	5	1	14	29.6	r	93265	K0	8.9	8.3	21-	55	6	73	59N	283	321	297	+2.4	+3.4	-0.1+1.4	.425	143.4	3	5	7.7	14	35	14	404.5	1039.3		
21	Jul	5	2	0	18.6	r	93279	F5	8.8	8.6	21-	54	-10	12	82	53N	290	329	304	+2.3	+3.3	+0.2+1.4	.360	135.5	3	6	39.1	14	46	33	403.8	989.4	
21	Jul	6	1	23	5.7	r	575pA0		8.0		14-	44	4	64	33N	313	349	323	+1.0	+2.0	-0.1+0.8	.250	116.9	3	52	23.1	18	35	52	404.8	1082.9		
*** A light curve is desired as 575 is in the Kepler2 program {ID = 210716159}																																	
575 is double: AB 8.03 12.03 0.52" 181.6, dT = +1.4sec																																	
575 is a close double. Observations are highly desired																																	
21	Jul	6	2	46	22.1	r	93670	F5	7.8	7.5	14-	43	-6	16	80	78S	245	285	255	+0.9	+1.9	-0.1+1.8	.506	-177.0	3	55	5.6	18	35	26	403.5	991.7	
21	Jul	8	9	46	57.7	r	882SG8		5.0	4.4	3-	18	53	62	162	88S	271	283	270	-2.4	-1.6	+1.6+0.3	.360	169.3	5	49	1.0	24	34	3	396.3	703.3	
R882 = 132 Tauri																																	
882 is triple: Aa,Ab 5.0 126.0, dT = 0.00sec : AB 5.0 9.1 3.8" 230.0, dT = -8sec																																	
882 is a close double. Observations are highly desired																																	
21	Jul	13	16	54	37.5	d	1544	M2	5.4	4.5v	14+	43	25	44	226	66N	83	56	61	-5.7	-6.0	+1.5-0.9	.354	36.7	.01	10	32	11.7	14	8	15	380.9	816.6
R1544 = 46 Leonis																																	
1544 = ES Leo, 5.46 to 5.56, Hp, Type SRB:																																	
21	Jul	14	21	26	35.6	D	1669pF5		6.7	6.5	23+	58	-11	8	272	43S	157	119	134	-5.7	-5.6	-0.1-2.1	.422	-40.9	11	29	40.0	7	35	58	380.3	1031.4	
*** 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 = -24sec																																	
21	Jul	18	20	8	11.1	d	158861	K2	7.8	7.0	66+	109	-3	21	201	77S	121	107	105	-2.7	-1.8	+1.2-1.0	.454	-3.9	14	51	49.6	-15	13	54	365.9	807.9	
21	Jul	18	20	38	48.2	d	2122	F2	7.7	7.5	66+	109	-7	18	209	63S	135	117	119	-2.8	-1.8	+1.1-1.3	.436	-18.9	14	52	31.8	-15	23	16	366.1	817.8	
21	Jul	19	20	30	39.8	d	183829	kK0	7.9	7.3	77+	122	-6	17	193	45S	147	139	136	-1.5	-0.2	+1.0-1.0	.371	-35.2	15	49	21.4	-20	17	6	364.1	800.7	
*** A light curve is desired as 183829 is in the Kepler2 program {ID = 249617858}																																	

## Occultation prediction for Nederland midden

E. Longitude 5 0 0.0, Latitude 52 0 0.0, Alt. 0m;

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									
y	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
21	Jul	19	22	34	48.1	D	2267cB3	5.0	5.0v	77+	123		9	220	28N	40	15	30	-1.7	+0.0	+1.0-0.3	.190	66.7		15	53	20.1	-20	10	1	364.9	851.8	
R2267 = lambda Librae																																	
2267 is double: ** 5.3 7.3 350.0, dT = 0.00sec																																	
2267 = lam Lib, 5.03, range 0.02, V, Type ACV, Period 3.3136 days, Phase 23%																																	
21	Jul	26	0	53	47.7	r	3242 G1	7.8	7.6	95-	154		20	170	65S	237	243	258	+5.6	+7.4	+1.3+0.7	.422	-172.5		22	8	15.3	-17	50	10	375.5	775.9	
21	Jul	27	0	8	59.0	R	3374 K3	6.1	5.4	90-	142		19	146	55S	220	240	242	+6.2	+7.6	+1.0+1.6	.396	-157.0		22	59	35.7	-13	4	15	380.7	794.2	
21	Jul	30	0	11	54.2	R	10980S K0	7.5	6.9	65-	107		18	109	87S	246	282	267	+5.2	+5.9	+0.5+1.9	.456	174.1		1	19	24.3	3	17	23	395.7	880.2	
21	Jul	30	1	45	44.0	r	198wG5	8.6	8.3	64-	106		31	130	42S	201	230	222	+5.0	+5.7	+0.4+2.3	.337	-143.8		1	22	18.7	3	30	47	394.7	800.4	
198 is double: AB 7.1 14.4 45" 324.0, dT = +72sec																																	
21	Jul	31	2	29	0.9	R	110353 F5	7.8	7.6	54-	95	-11	36	127	65S	226	256	244	+4.0	+4.6	+0.7+2.0	.403	-167.8		2	7	37.5	8	50	47	397.6	795.8	
21	Jul	31	2	45	1.4	R	315cA0	7.3	7.3	54-	95	-10	37	131	43S	203	231	222	+3.9	+4.6	+0.4+2.4	.336	-145.7		2	8	19.5	8	51	0	397.5	784.1	
315 is double: ** 8.3 8.8 0.30" 221.0, dT = -0.9sec																																	
315 has been reported as non-instantaneous (OC1177). Observations are highly desired																																	
21	Aug	1	1	7	3.6	r	93135 K0	8.3	7.6	45-	84		22	96	61N	282	321	297	+3.0	+3.5	+0.6+1.6	.364	141.0		2	50	26.6	13	26	56	401.0	911.2	
21	Aug	1	1	44	45.2	r	93145 K0	8.9	8.3	45-	84		28	104	82N	260	299	276	+2.9	+3.5	+0.6+1.8	.425	161.1		2	51	29.1	13	29	36	400.5	871.8	
21	Aug	2	1	56	42.5	r	X 4678DA5	8.9	8.8	35-	73		26	95	89S	256	296	267	+1.6	+2.1	+0.3+1.8	.457	169.4		3	38	25.8	17	35	57	401.6	905.2	
X 4678 is double: AB 9.3 10.2 2.0" 268.0, dT = -4sec																																	
X 4678 is a close double. Observations are highly desired																																	
21	Aug	2	23	29	34	m	646pM0	6.1	5.1S	28-	63		1	57	8N	343	16	350	+0.3	+1.0	+9.9+9.9	.000	90.0		4	22	22.7	20	49	17	404.0	1118.1	
*** A light curve is desired as 646 is in the Kepler2 program {ID = 210862863}																																	
646 is double: AB 6.21 8.60 1.93" 166.1																																	
646 is a close double. Observations are highly desired																																	
646 = NSV 15956, 5.89, , Type VAR:																																	
21	Aug	3	2	2	13.5	R	76611pG5	8.6	8.2	27-	62		23	84	85N	265	307	273	+0.2	+0.7	+0.2+1.7	.469	163.9		4	27	7.4	20	59	27	401.6	950.2	
*** A light curve is desired as 76611 is in the Kepler2 program {ID = 210874177}																																	
76611 is double: AB 8.7 15.7 20.1" 217.4, dT = -29sec																																	
21	Aug	3	2	23	53.2	r	76624kK0	8.8	8.4	26-	62		26	88	23S	194	235	201	+0.2	+0.7	-0.6+2.9	.270	-124.6		4	28	37.7	20	49	54	401.3	926.0	
*** A light curve is desired as 76624 is in the Kepler2 program {ID = 210863564}																																	
21	Aug	3	3	15	30.2	r	76632 A0	8.6	8.5	26-	62	-7	33	98	28S	199	240	206	+0.1	+0.6	-0.3+2.9	.291	-130.6		4	30	7.2	20	58	59	400.5	868.7	
21 Aug 4 11 36 17 Gr 839 B2 5.4 5.4s 16- 48 57 44 ** GRAZE: CA -0.9S; Dist.192km in az. 200deg. [Lat = 50.16-0.22(E.Long-5.00)]																																	
21	Aug	4	11	49	34.3	r	839 B2	5.4	5.4s	16-	48	55	42	255	24S	203	162	204	-2.5	-1.4	+1.8+2.6	.173	-115.0		5	35	27.1	24	2	23	397.4	791.3	
R839 = 121 Tauri																																	
839 = NSV 16369, 5.38, range 0.06, V																																	
21	Aug	5	1	8	43.1	R	78038SG0	7.4	6.8	12-	40		4	55	12S	195	228	192	-2.2	-1.9	-1.2+2.4	.230	-113.4		6	9	15.9	24	25	40	399.8	1121.7	
78038 is triple: AB 7.6 9.1 31" 189.0, dT = -134sec : AD 7.6 12.6 44" 251.0, dT = -106sec																																	
21	Aug	5	1	10	54.3	R	X 83542	8.5	7.9	12-	40		5	55	44S	227	260	224	-2.2	-1.9	-0.7+1.6	.474	-145.3		6	8	50.8	24	30	2	399.8	1118.8	
21	Aug	5	1	26	53.7	R	78040 A0	8.6	8.6	12-	40		7	58	60S	243	278	240	-2.2	-1.9	-0.6+1.5	.539	-161.4		6	9	20.1	24	34	49	399.5	1101.8	
21	Aug	5	1	27	54.8	R	X 8430 B8	8.8	8.8	12-	40		7	58	69S	252	287	249	-2.2	-1.9	-0.5+1.4	.561	-170.7		6	9	18.4	24	37	8	399.5	1100.6	
21	Aug	5	1	59	50	Gr	78081cG5	7.8	7.5	12-	40		11	**	GRAZE: CA 12.6N; Dist.181km in az. 134deg. [Lat = 49.67+0.63(E.Long-5.00)]																		

Occultation prediction for Nederland midden

E. Longitude 5 0 0.0, Latitude 52 0 0.0, Alt. 0m;

y	m	d	h	m	s	P	Star No	Sp D	Mag v	Mag r	V	% ill	Elon Alt	Sun Alt	Moon Alt	Az	CA °	PA °	VA °	AA °	Libration L	B	A m/o	B m/o	RV "/s	Cct °	durn sec	R.A. (J2000) h m s	Dec ° m s	Mdist Mm	SV m/s				
21	Aug	5	2	3	3	M	78081cG5		7.8	7.5		12-	40	12	64	12N	351	28	348	-2.2	-2.0	+9.9	+9.9	.000	90.0		6	11	34.7	25	0	35	398.91062.9		
78081 is double: ** 8.6 8.6 0.040" 170.0																																			
78081 has been reported as non-instantaneous (OCc1053). Observations are highly desired																																			
21	Aug	5	2	9	50.4	R	78069DB9		8.6	8.7		12-	40	12	65	64N	299	338	297	-2.2	-2.0	+0.0	+1.0	.424	141.1		6	11	4.9	24	52	56	398.81054.2		
78069 is double: AB 8.6 9.8 5.9" 358.1, dT = -7sec																																			
78069 is a close double. Observations are highly desired																																			
21	Aug	5	2	32	14.4	R	78091 K0		8.8	8.1		12-	40	15	70	68S	251	291	248	-2.2	-2.0	-0.3	+1.7	.525	-170.8		6	11	52.6	24	42	45	398.41028.0		
21	Aug	5	2	47	52.7	R	78100 K0		8.9	8.3		11-	40	-11	18	72	68N	296	336	293	-2.2	-2.1	+0.2	+1.1	.425	144.3		6	12	31.1	24	55	35	398.21009.7	
21	Aug	5	3	12	38.8	r	78118cK0		8.5	7.8		11-	39	-8	21	77	40S	224	265	221	-2.2	-2.1	-0.4	+2.2	.410	-143.9		6	13	40.6	24	40	30	397.8	980.2
78118 is double: ** 9.0 9.0 0.10" 0.0																																			
78118 has been reported as non-instantaneous (OCc 818). Observations are highly desired																																			
21	Aug	6	2	34	52.2	R	79054dK8		6.9	6.1		6-	28	9	61	74S	265	301	257	-3.1	-3.3	-0.4	+1.3	.564	-178.7		7	6	11.6	24	51	37	396.01083.6		
79054 is double: AB 7.1 11.7 7.2" 78.1, dT = +13sec																																			
79054 is a close double. Observations are highly desired																																			
21	Aug	6	3	31	50.4	r	79098WK5		8.7	7.9		6-	28	-6	17	71	84N	287	327	279	-3.1	-3.4	+0.1	+1.2	.495	158.9		7	8	31.6	24	59	27	395.01017.0	
79098 is double: AB 8.9 9.4 24.3" 105.1, dT = +49sec																																			
21	Aug	6	6	24	47.3	r	1099wM1		5.8	5.0s		5-	27	19	42	103	49S	242	283	233	-3.3	-3.7	+0.6	+2.3	.387	-154.0		7	14	42.0	24	53	6	392.2	819.2
R1099 = 52 Geminorum																																			
1099 is double: AB 6.0 12.7 31" 281.6, dT = -62sec																																			
1099 = NSV 3469, 5.79, range 0.08, V																																			
21	Aug	6	10	18	17.4	d	1117cG8		5.0	4.6		5-	25	51	63	187	-57N	71	66	62	-3.9	-3.9	+1.7	+0.7	.339	25.7		7	23	28.5	25	3	2	390.2	711.3
R1117 = 57 Geminorum																																			
1117 is double: ** 5.9 5.9 0.10" 90.0, dT = +0.28sec																																			
1117 has been reported as non-instantaneous (OCc1358). Observations are highly desired																																			
21	Aug	6	11	29	44.6	R	1117cG8		5.0	4.6		5-	25	54	59	220	69N	305	280	296	-4.1	-3.9	+1.2	-2.1	.350	154.1		7	23	28.5	25	3	2	390.3	735.7
R1117 = 57 Geminorum																																			
1117 is double: ** 5.9 5.9 0.10" 90.0, dT = +0.23sec																																			
1117 has been reported as non-instantaneous (OCc1358). Observations are highly desired																																			
21	Aug	13	20	35	44.9	d	139538 K0		8.9	8.3		30+	66	6	249	71N	91	55	71	-2.9	-3.2	+0.5	-1.6	.477	24.3		13	46	21.8	-8	26	18	371.9	944.9	