



kdečeho kdečím

aneb

zákrytářský rok 2007

*Hvězdárna v Rokycanech
Karel HALÍŘ
září 2006*

Zákryty hvězd tělesy sluneční soustavy



Totální zákryty hvězd Měsícem

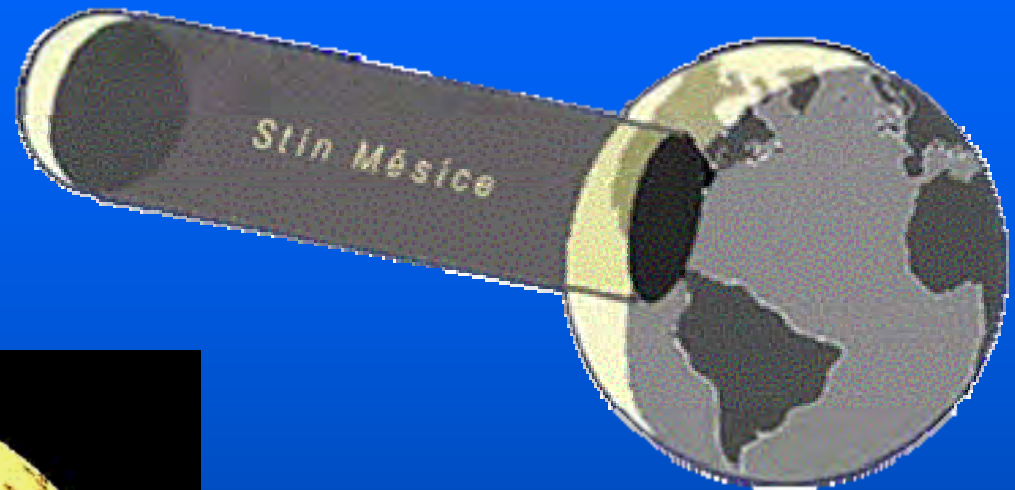
Tečné zákryty
hvězd Měsícem



Zákryty hvězd planetkami,
respektive
malými tělesy sluneční soustavy

Totální zákryty

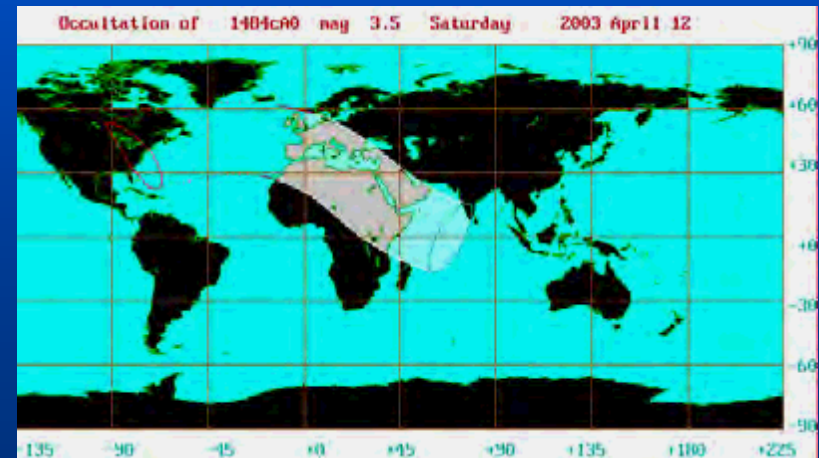
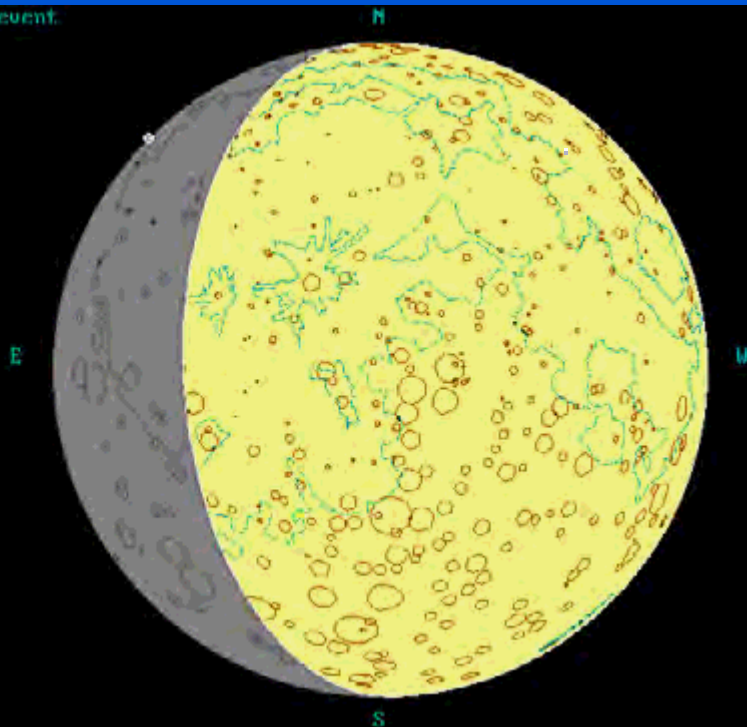
„Stín“ hvězdy vržený na
povrch Země



Enter angles for event.

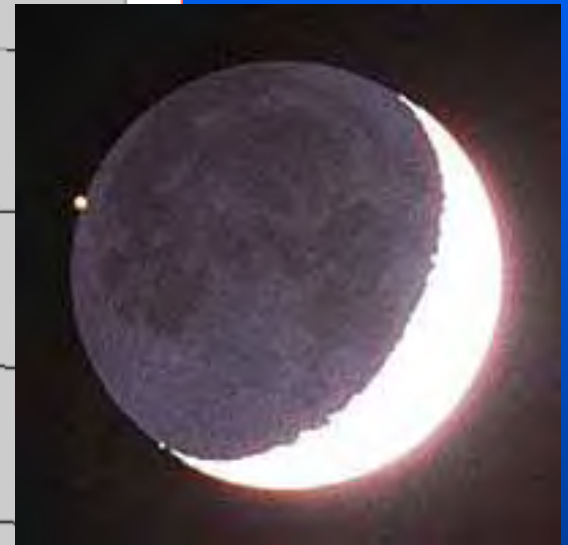
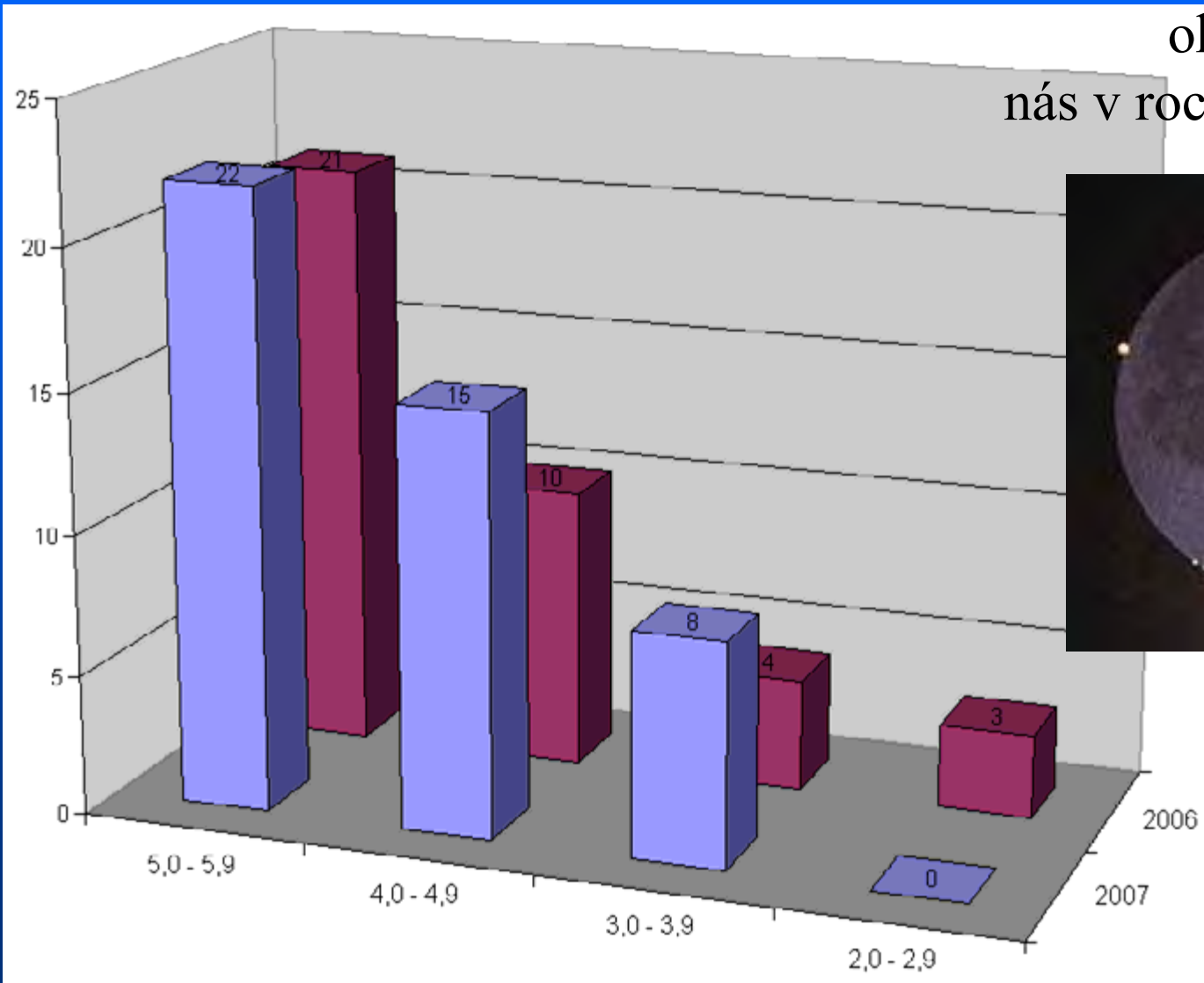
CA 42n «
MA 45

L -7.4
B -5.9
Elon +127



Totální zákryty 2007

žádný totální zákryt mimořádně jasné hvězdy v noci za temným
okrajem Měsíce
nás v roce 2007 nečeká

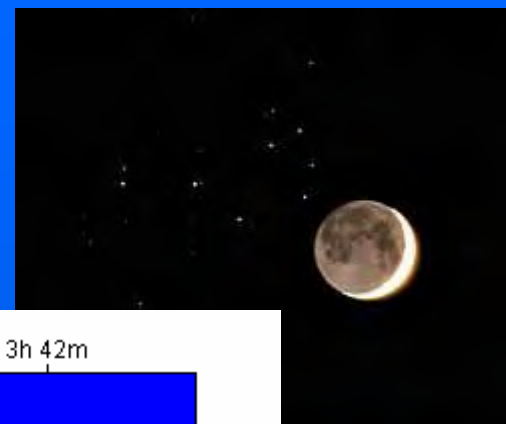


Totální zákryty 2007

měs	den	čas h m s	P	hvězda číslo	mag	% ill	elon	Sun h	Moon h Az	CA o	PA o	VA o	WA o
01	26	22 10 58	D	440	4,7	60+	102		30 268	86N	70	26	86
02	20	19 12 43	D	105	4,4	13+	42		11 268	76N	51	11	73
02	23	22 59 13	D	539	4,3	45+	84		14 291	88S	79	37	91
02	23	23 13 53	D	541	3,9	45+	85		12 294	63S	104	64	117
04	03	1 16 10	R	1853	4,8	100-	175		25 214	56S	302	280	281
05	20	21 9 29	D	1170	3,6	21+	54		16 289	76N	84	42	75
06	07	4 1 12	R	3237	4,3	65-	107	8	26 179	23S	183	183	202
07	10	0 38 15	R	440	4,7	24-	59		14 74	33N	313	355	329
08	07	0 35 13	R	537	3,7	37-	75		26 83	21S	190	234	203
08	07	1 9 13	R	539	4,3	36-	74		32 89	85N	264	309	277
08	07	1 19 37	R	541	3,9	36-	74		33 91	65S	233	278	246
08	09	2 34 15	R	890	4,6	16-	47	-10	28 80	62S	245	291	247
08	24	18 39 9	D	2784	3,3	84+	133	-6	11 163	89N	78	90	84
08	26	21 1 40	D	3078	4,9	97+	159		20 169	78N	53	61	69
08	28	23 2 10	R	3353	3,7	100-	173		32 173	74S	234	239	255
09	29	19 48 34	R	440	4,7	87-	137		20 80	69N	270	313	286
10	22	18 57 36	D	3353	3,7	84+	132		31 165	71S	87	96	108
10	28	0 11 58	R	539	4,3	95-	154		64 175	78S	236	240	249
10	28	0 13 42	R	541	3,9	95-	154		64 175	44S	202	205	215
10	29	22 1 0	R	890	4,6	80-	127		36 89	71N	286	332	287
11	23	16 38 1	D	54005	5,6	99+	167		24 84	35N	36	80	52
11	23	16 38 2	D	440	4,7	99+	167		24 84	35N	36	80	52
12	21	21 47 17	D	539	4,3	93+	149		62 211	65S	111	89	124
12	30	4 1 19	R	1685	4,3	61-	103		39 179	57S	261	261	239

Totální zákryty 2007

Zákryt Plejád Měsícem 27. 1. 2007



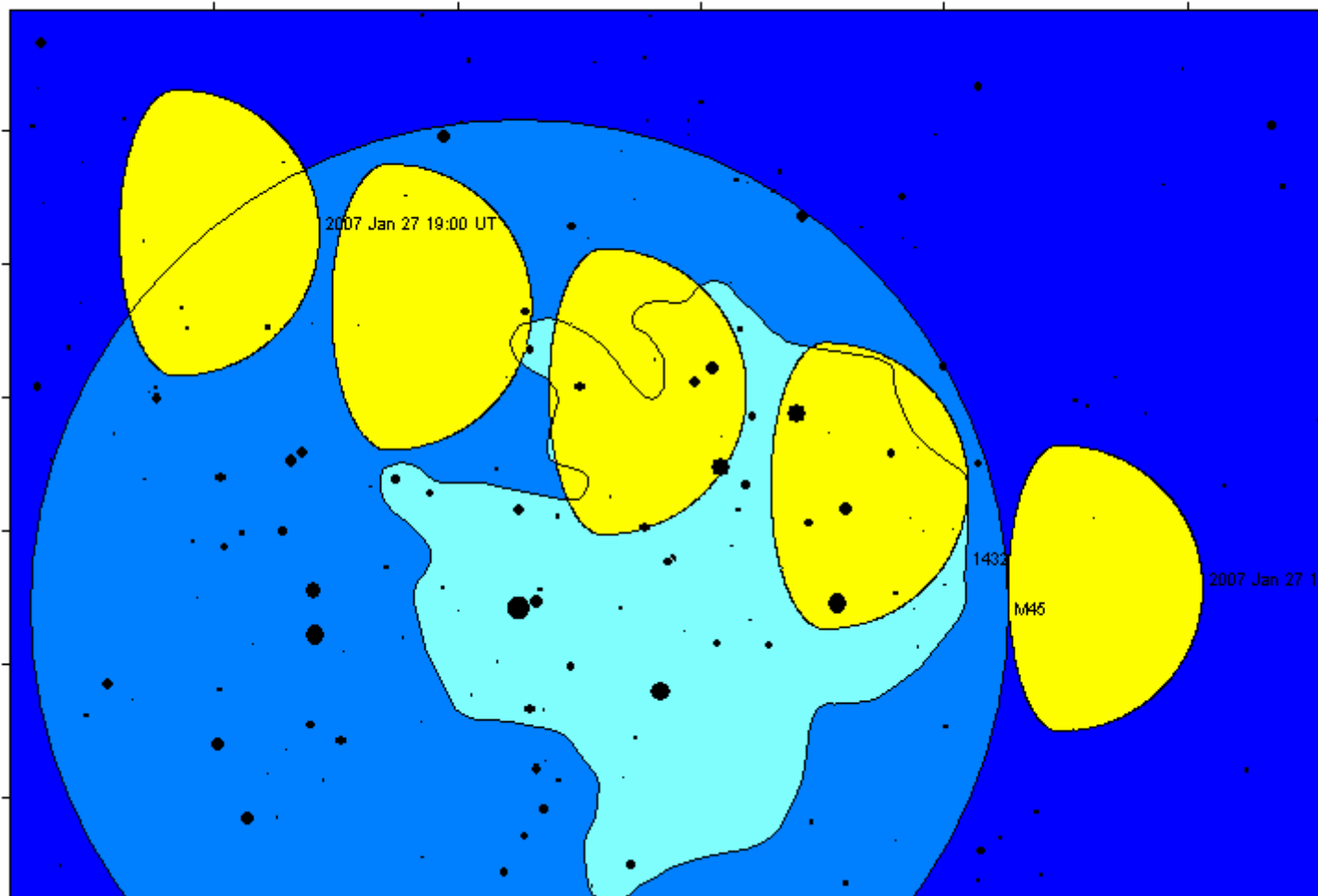
3h 50m

3h 48m

3h 46m

3h 44m

3h 42m



+25°

0.0'

+24°

45.0'

+24°

30.0'

+24°

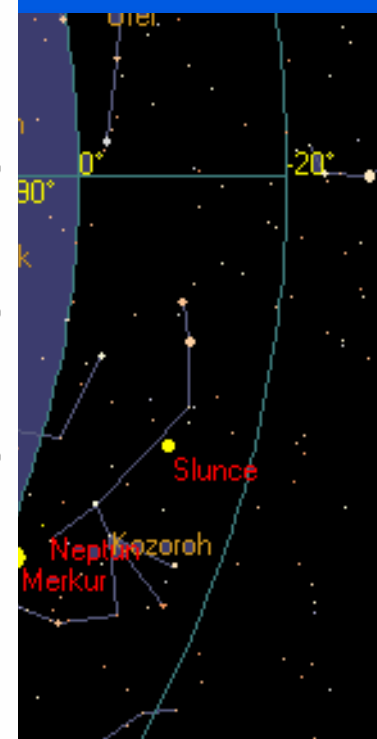
15.0'

+24°

0.0'

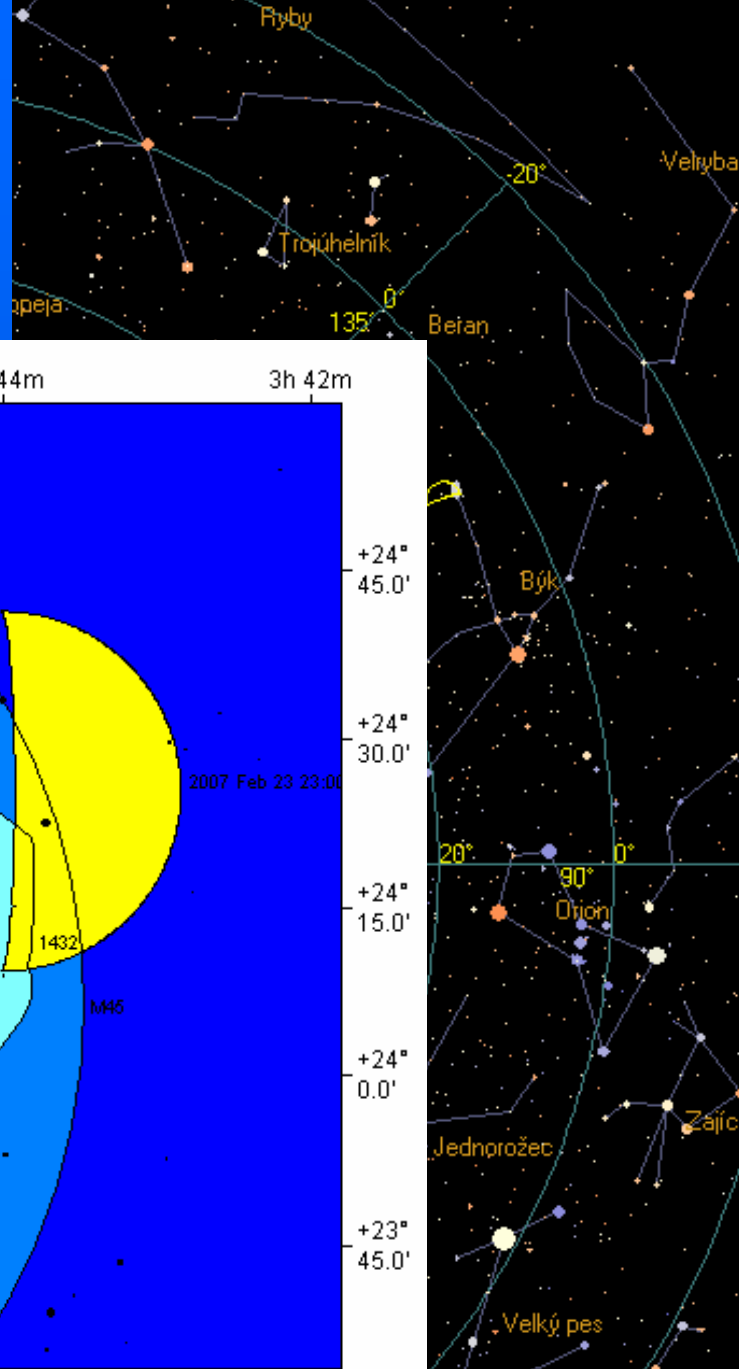
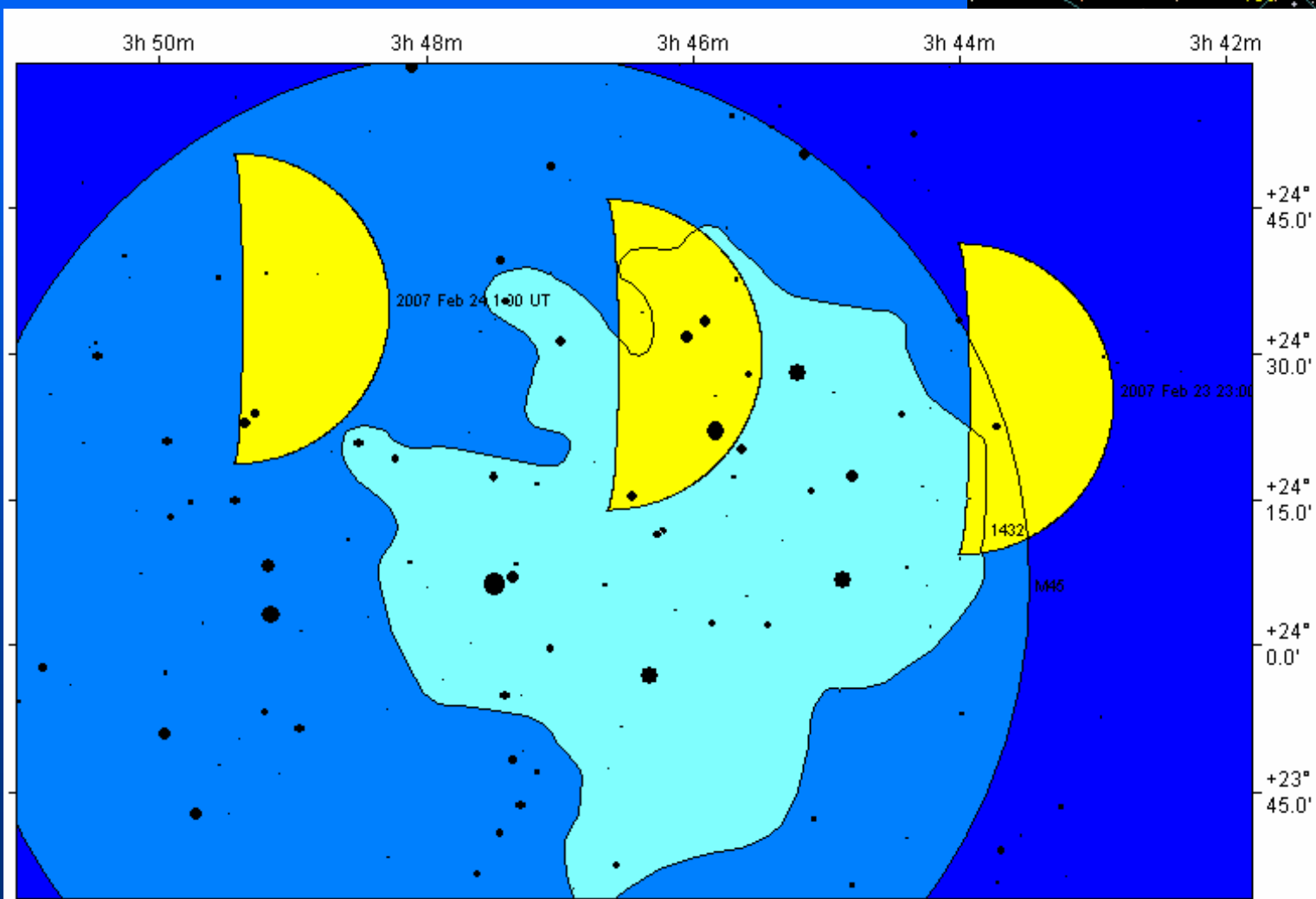
+23°

45.0'



Totální zákryty 2007

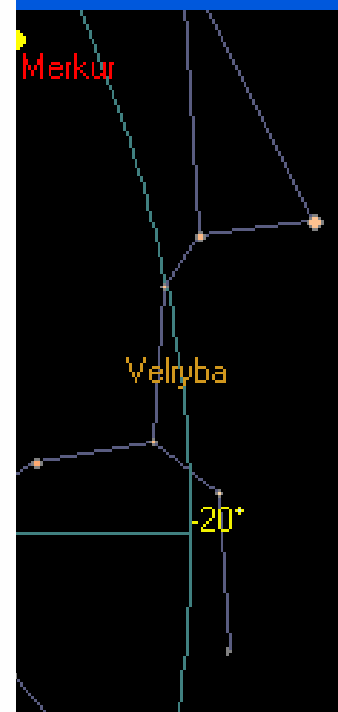
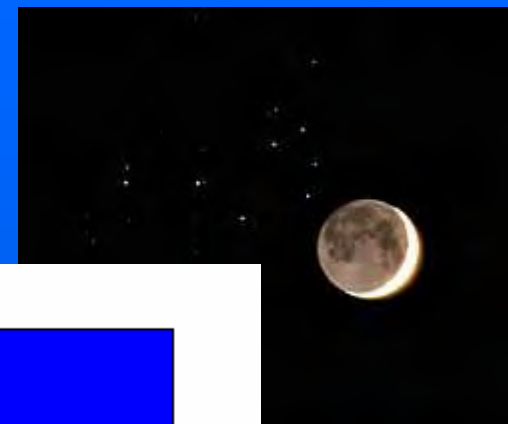
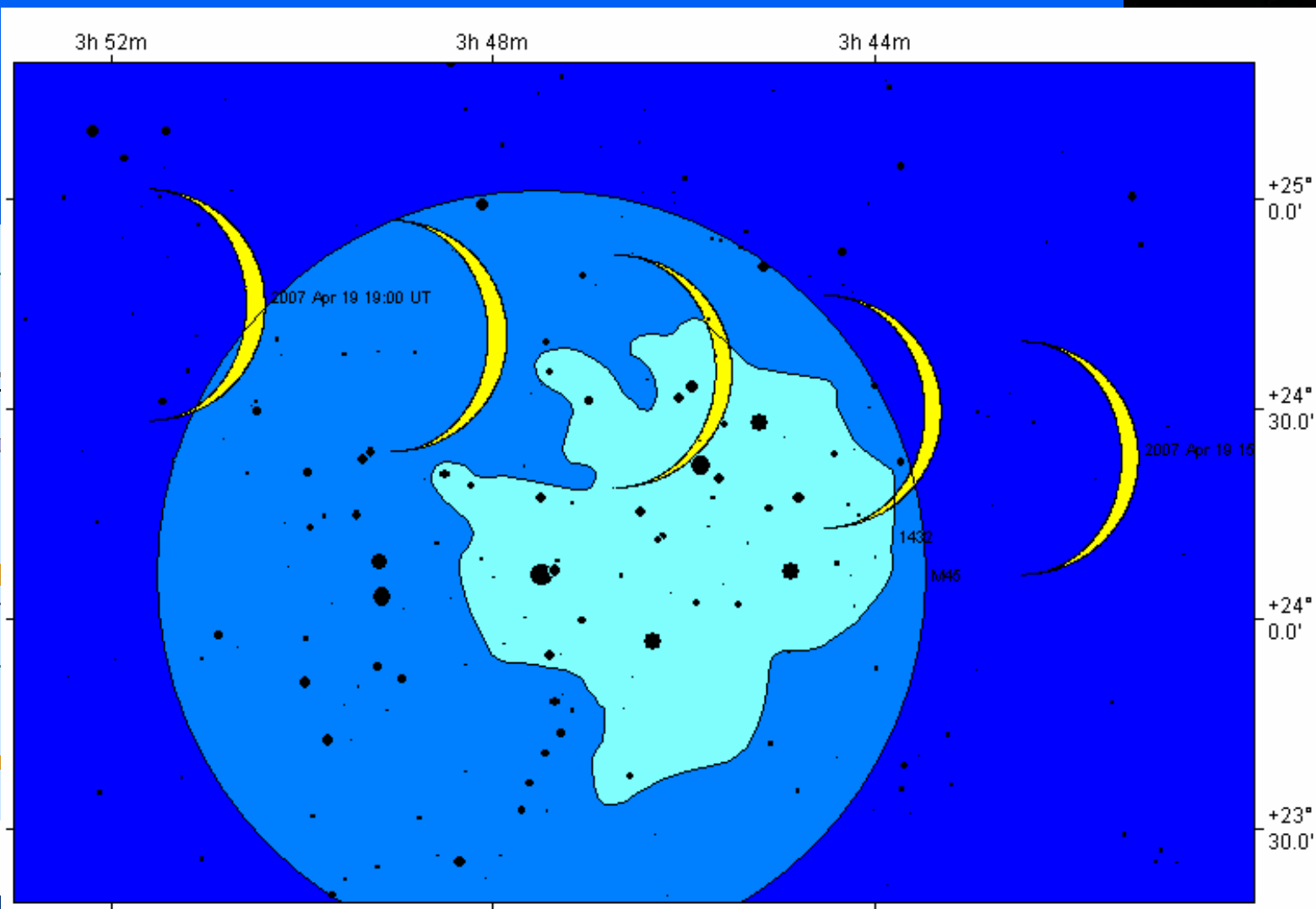
Zákryt Plejád Měsícem 23. 2. 2007



23. 2. 2007 24:00 UT

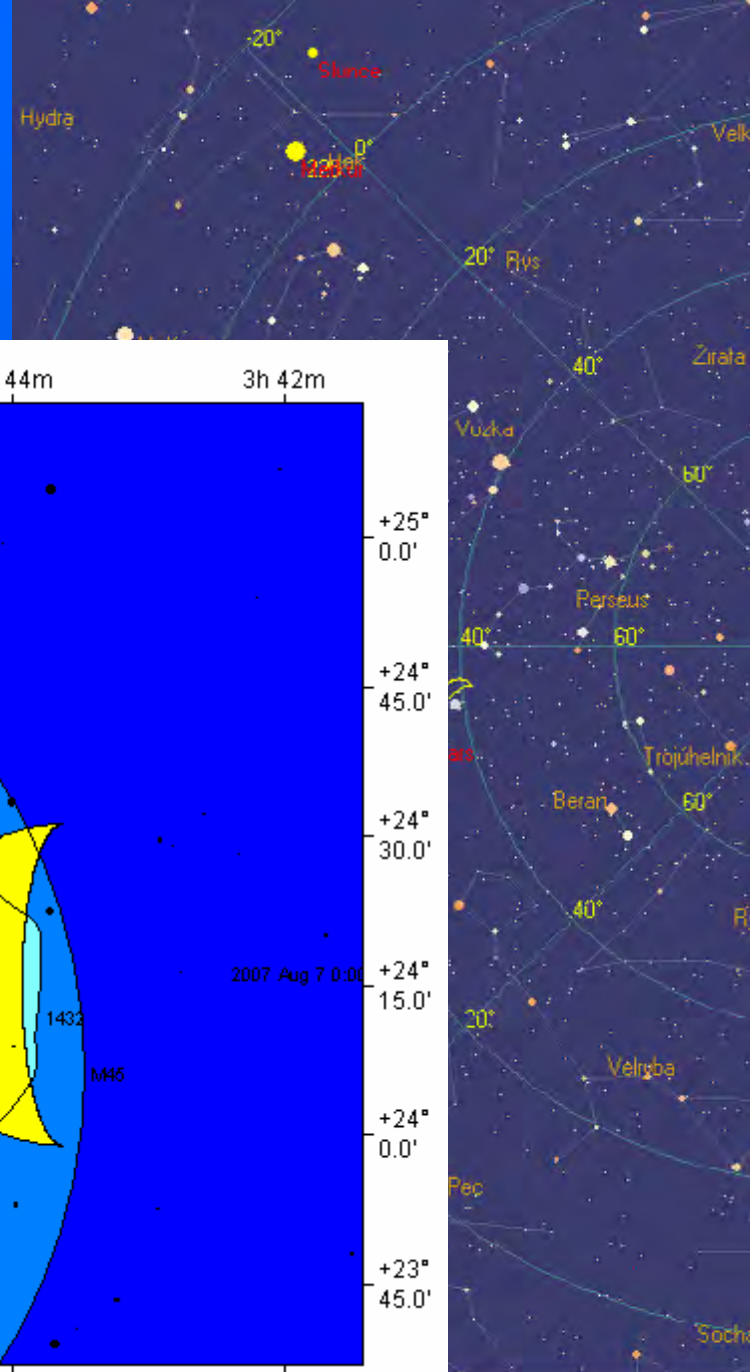
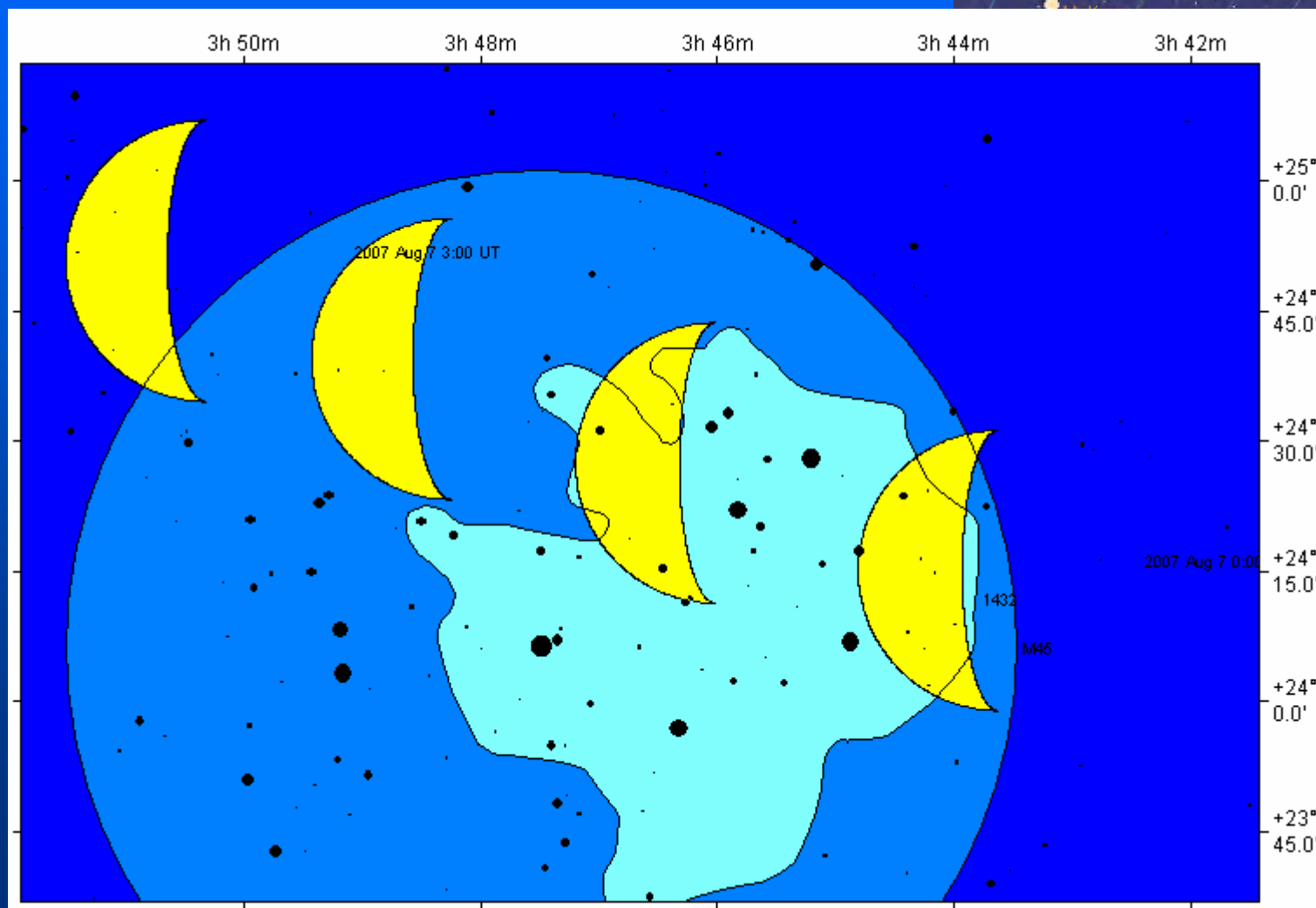
Totální zákryty 2007

Zákryt Plejád Měsícem 19. 4. 2007



Totální zákryty 2007

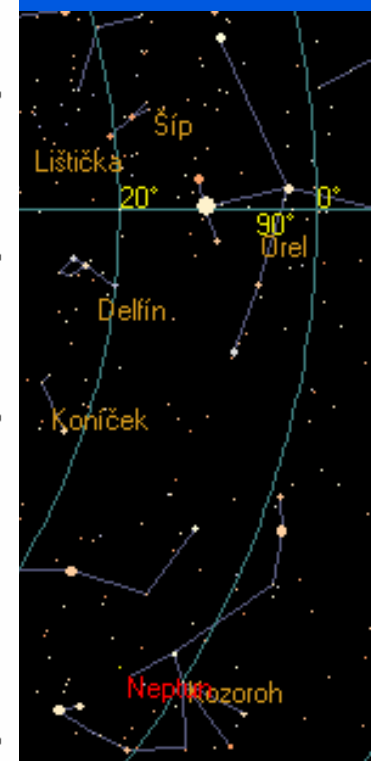
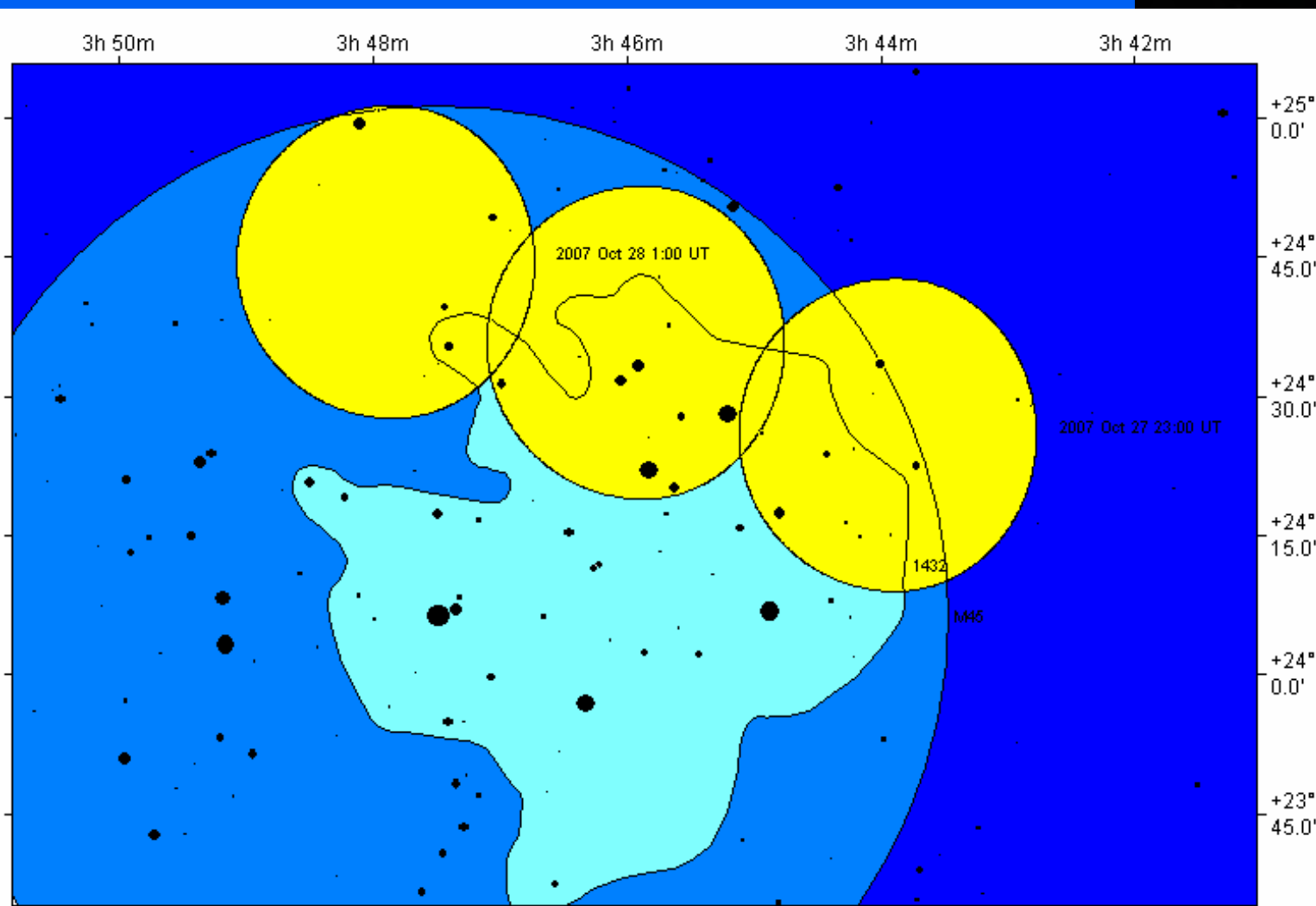
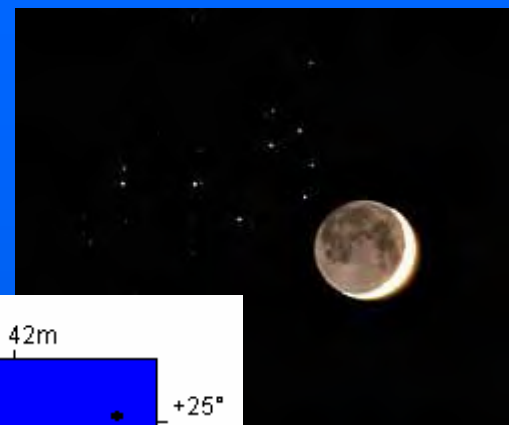
Zákryt Plejád Měsícem 7. 8. 2007



7. 8. 2007 2:00 UT

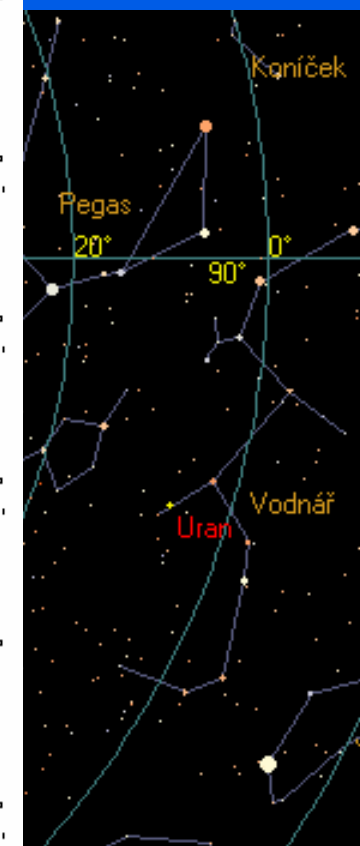
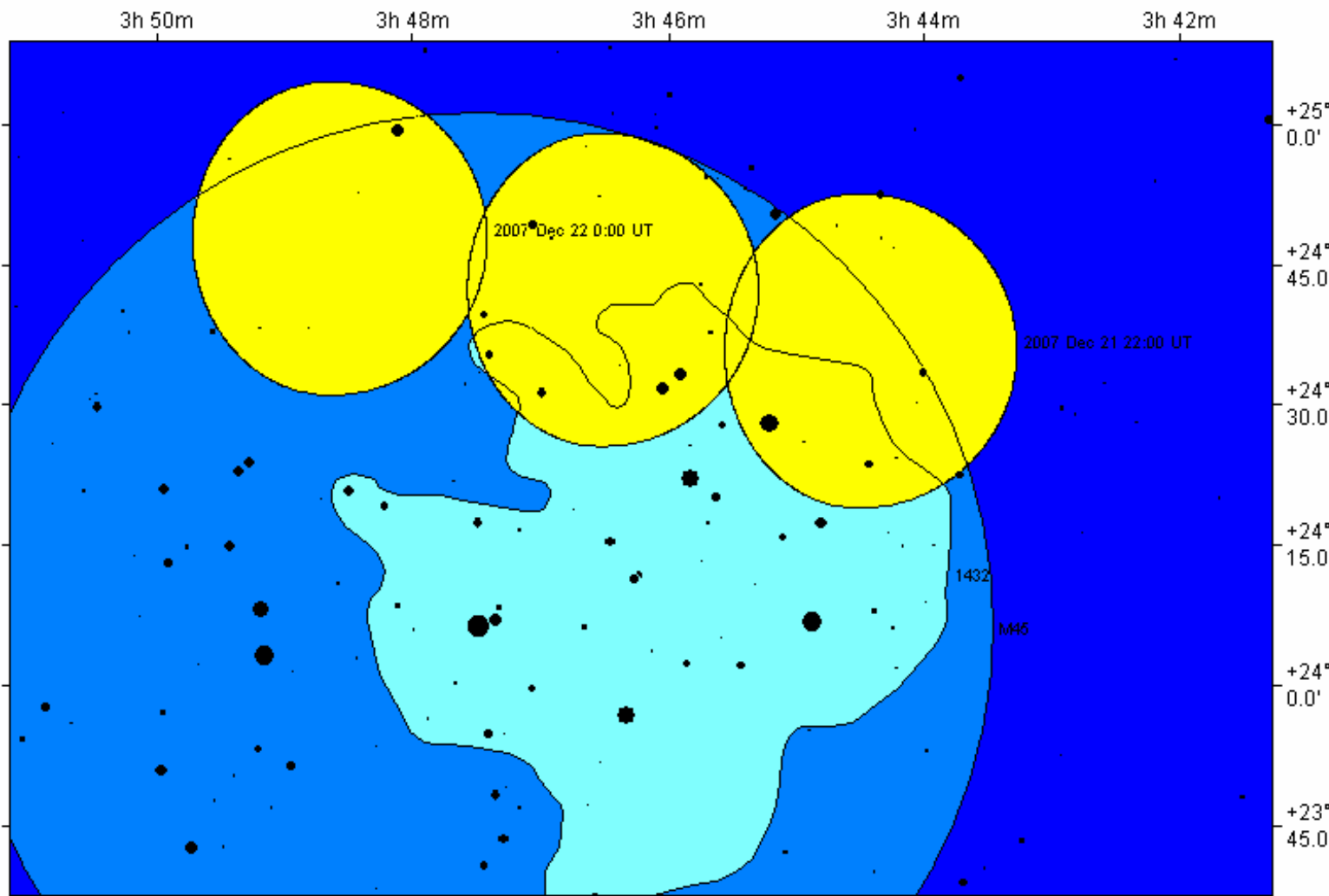
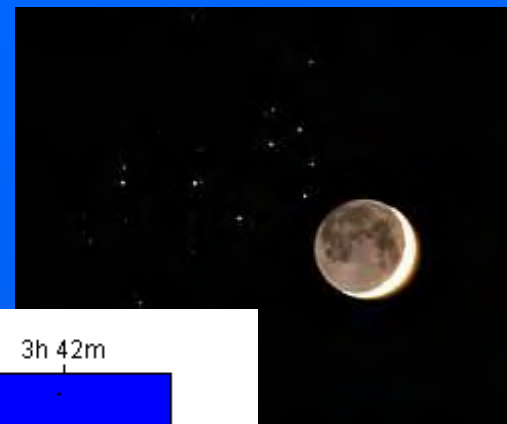
Totální zákryty 2007

Zákryt Plejád Měsícem 27. 10. 2007



Totální zákryty 2007

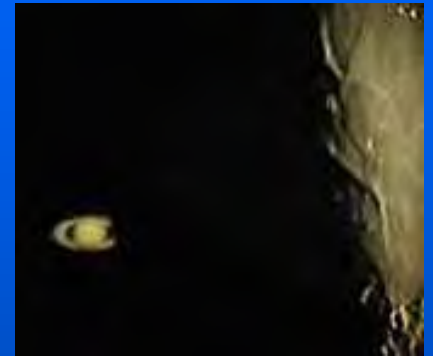
Zákryt Plejád Měsícem 22. 12. 2007



Zákryty planet Měsícem 2007



Zákryt SATURNU Měsícem 2. 3. 2007



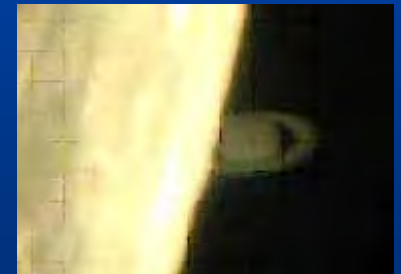
day	time	P	Star	Mag	% Elon	Sun	Moon	CA	PA	VA	WA	Libration	A	B
y m d	h m s		No	V	ill	Alt	Alt Az	o	o	o	o	L B	m/o	m/o
07	03	02	2 35 43	D	Saturn	0.0	97+ 159	25 266	34S	169	127	152	+4.3 -2.2	-0.4 -2.4
Duration of Partial Stage for Disk = 57 s														
07	03	02	3 14 54	R	Saturn	0.0	97+ 159	18 273	-48S	250	208	233	+4.2 -2.2	+0.5 -1.4
Duration of Partial Stage for Disk = 55 s														



D



R



Zákryty planet Měsícem 2007

Zákryt SATURNU Měsícem

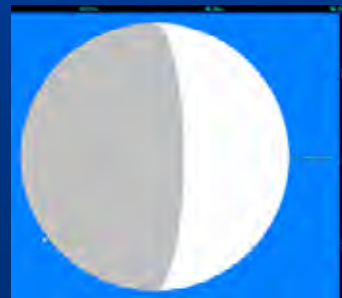
22. 5. 2007



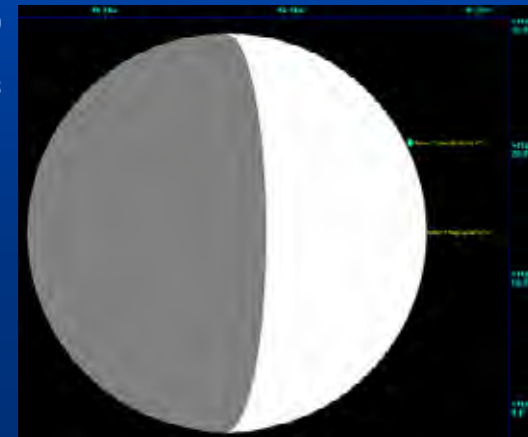
day	time	P	Star	Mag	%	Elon	Sun	Moon	CA	PA	VA	WA	Libration	A	B				
y	m	d	h	m	s	No	V	ill	Alt	Alt	Az	o	o	o	o	L	B	m/o	m/o
07	05	22	19	24	1	D	Saturn	0.5	39+	78	-5	41	243	72S	126	89	109	+6.6	-2.0
Duration of Partial Stage for Disk = 38 s																			
07	05	22	19	29	26	d	Titan	8.4	39+	78	-6	40	244	78S	120	83	103	+6.6	-2.0
Duration of Partial Stage for Disk = 1608 ms																			
07	05	22	20	30	57	R	Saturn	0.5	40+	78		31	258	-80N	298	257	281	+6.5	-1.8
Duration of Partial Stage for Disk = 35 s																			



D



R

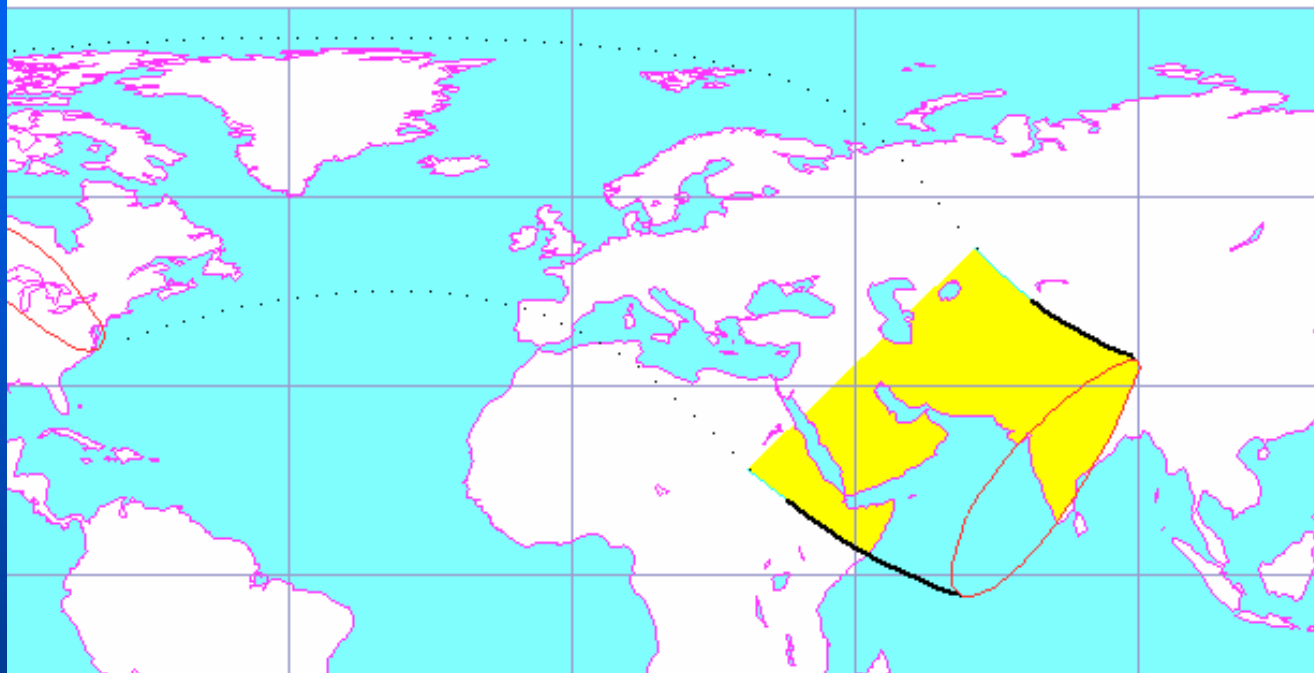


Zákryty planet Měsícem 2007

Zákryt VENUŠE Měsícem 18. 6. 2007



Occultation of Venus, Magnitude -4.4, on pondělí 2007 červen 18



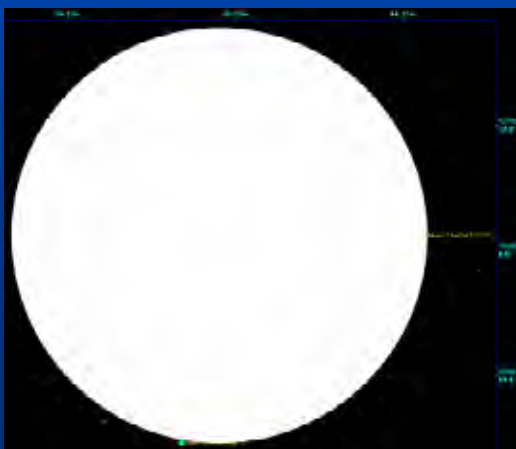
R

Zákryty planet Měsícem 2007

Zákryt MARSU Měsícem 24. 12. 2007



day			time			P	Star	Mag	% Elon	Sun	Moon	CA	PA	VA	WA	Libration	A	B		
y	m	d	h	m	s		No	V	ill	Alt	Az	o	o	o	o	L	B	m/o	m/o	
07	12	24	3	49	4	D	Mars	-1.6	100-	176	32	275	62S	167	121	167	+3.0	-4.9	-0.9	-3.6
Duration of Partial Stage for Disk = 65 s																				
07	12	24	4	12	4	R	Mars	-1.6	100-	176	28	279	72N	216	170	216	+3.0	-4.9	+1.3	+0.4
Duration of Partial Stage for Disk = 63 s																				



D



R



Tečné zákryty hvězd Měsícem

Pozorování na rozhraní
zákrytu a apulsu



Enter angles for event

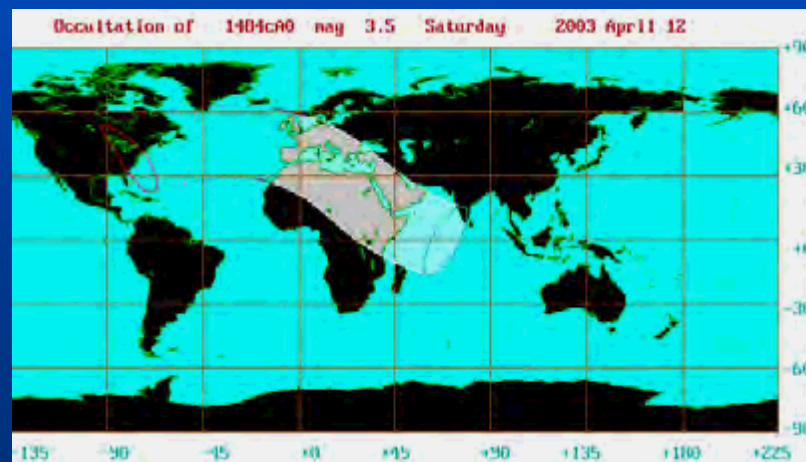
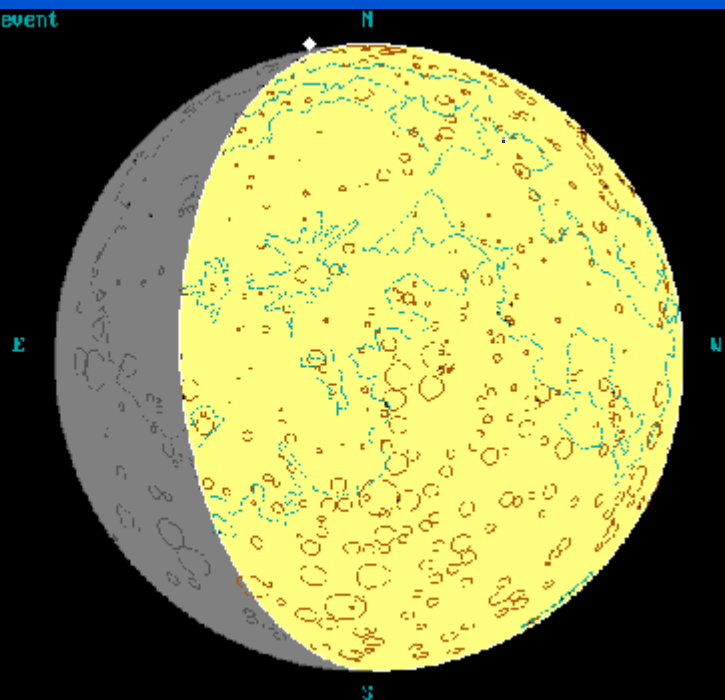
Ch 4m *

MA 45

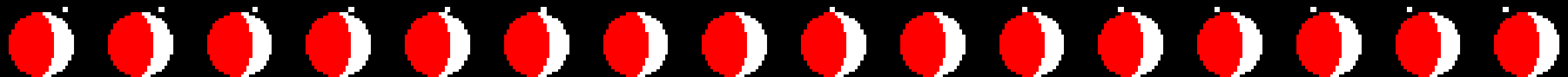
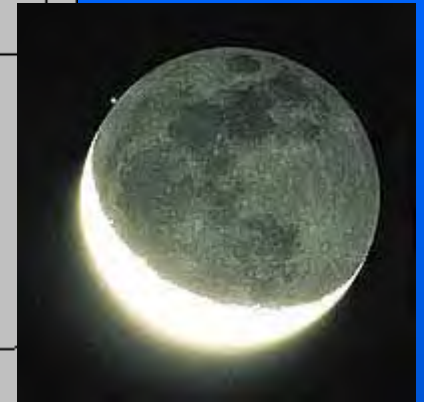
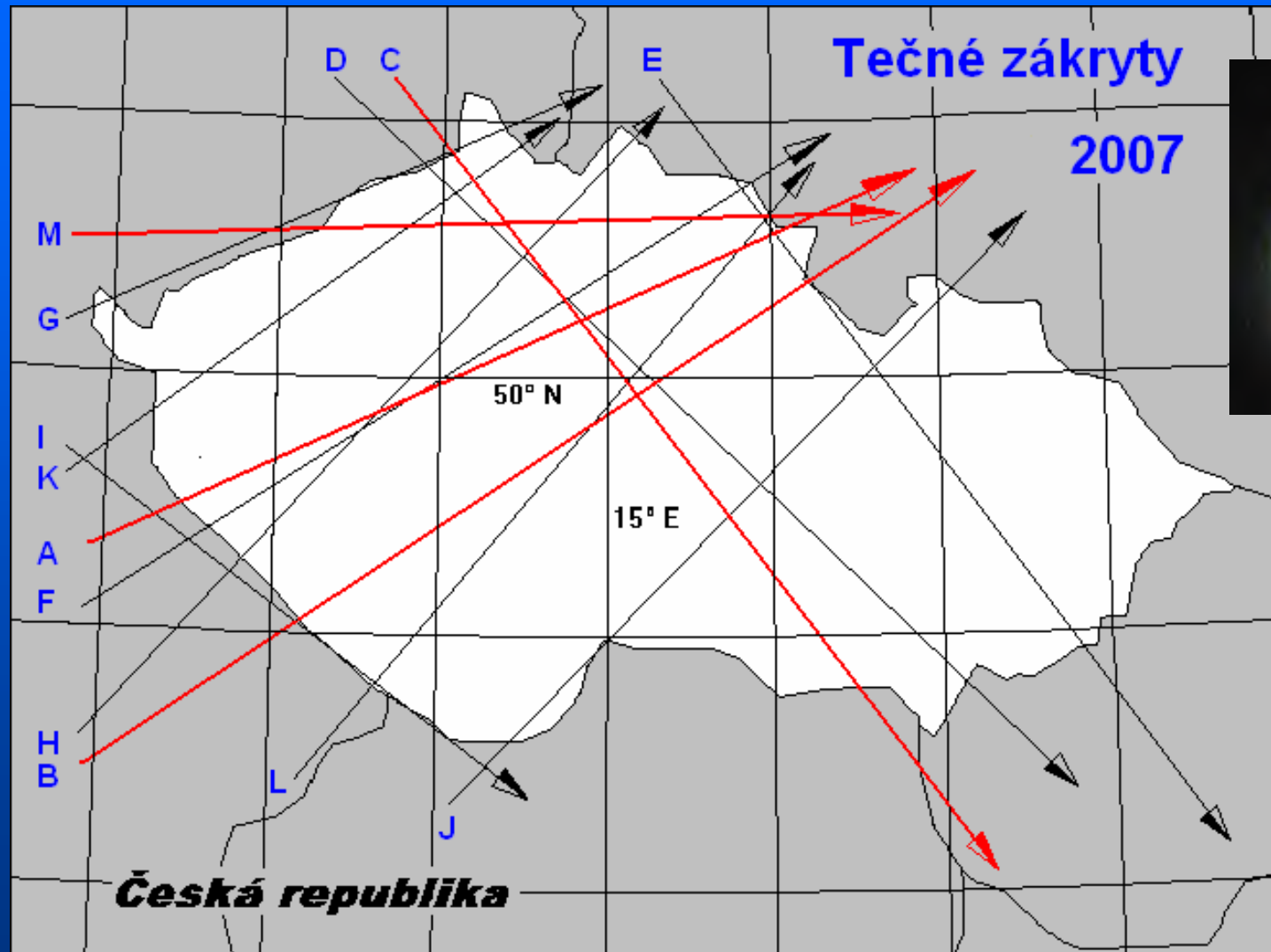
L -7.4

B -5.9

Elon +127



Tečné zákryty 2007



Tečné zákryty 2007

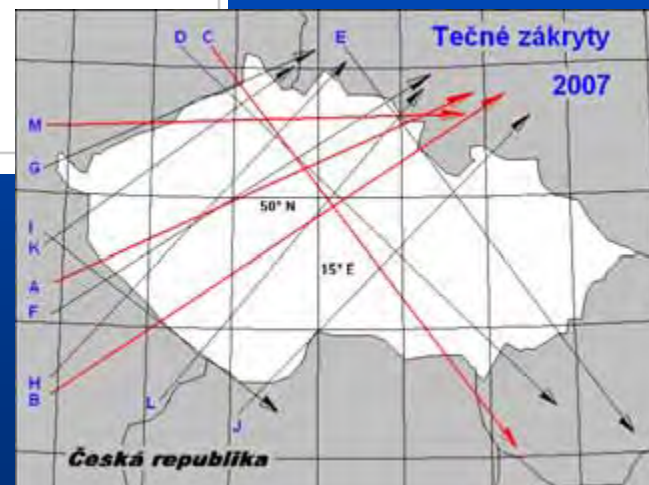
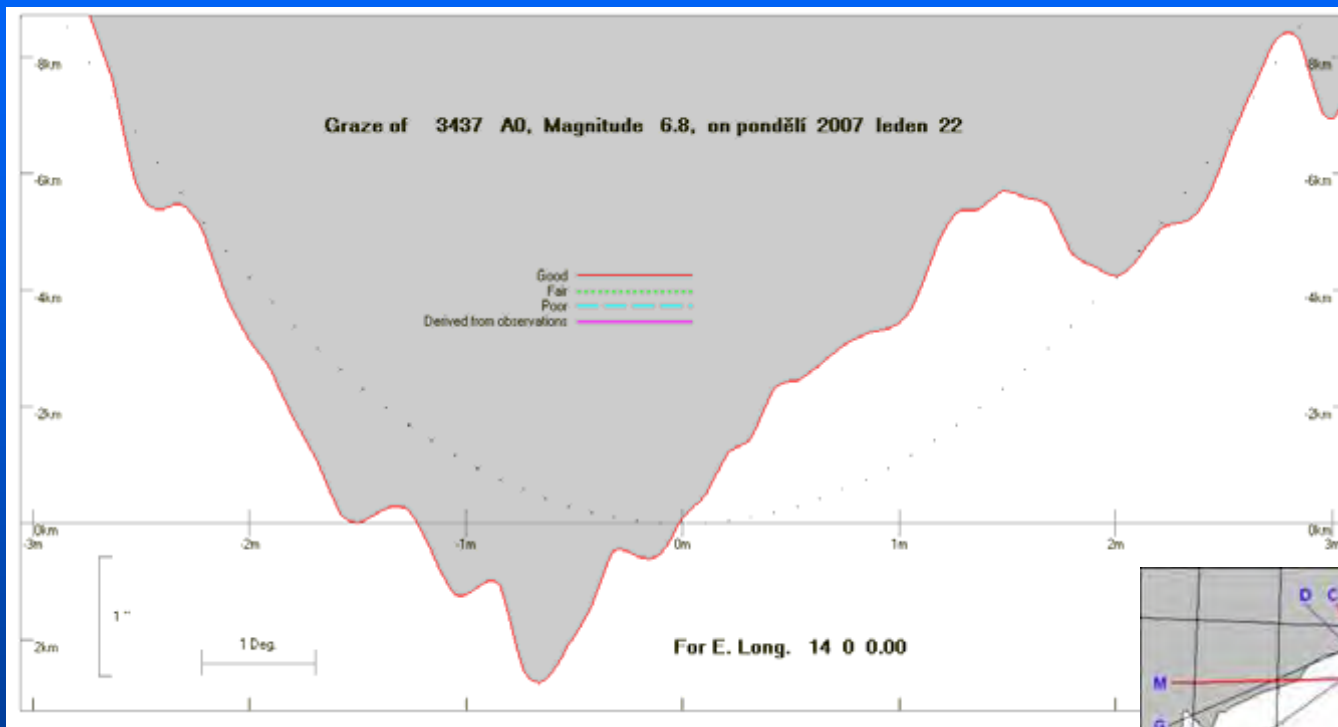


	čas	UT	hvězda		Měsíc			CA	Ø dal.	oblast
	2007	hh:mm	číslo	mag	fáze	h °	A °		mm	
A	22.01.	18:26	3437	6,8	16%+	14	245	10S	100	ZČ, VČ
B	27.01.	17:08	553	6,8	69%+	61	143	11S	100	ZČ, VČ
C	03.03.	23:50	X199910	10,1	3%E	45	194	28U	50	SČ, JM
D	22.04.	19:44	79022	8,0	35%+	41	264	12N	150	SČ, VČ, JM
E	30.04.	21:14	1919	6,9	98%+	28	173	27N	200	SM
F	02.09.	02:46	93005	7,9	72%-	60	175	8N	200	ZČ, VČ
G	07.09.	02:51	79610	7,2	19%-	30	86	5N	150	SČ, D
H	30.09.	22:22	76472	7,2	77%-	36	92	6N	200	ZČ, VČ
I	28.11.	03:58	79679	7,7	83%-	59	226	15S	150	JČ, D
J	18.12.	17:46	109413	7,9	64%+	48	178	14S	150	JČ, zM
K	18.12.	18:55	109437	7,8	65%+	46	199	13S	150	szČ
L	21.12.	16:20	75987	7,2	92%+	35	94	15S	200	JČ, VČ
M	21.12.	22:31	541	3,9	93%+	57	228	8S	100	SČ, VČ

Tečné zákryty 2007

Grazing Occultation of 3437 A0 Magnitude 6.8
 Date 2007 leden 22 (pondělí) Nominal site altitude 0m

A



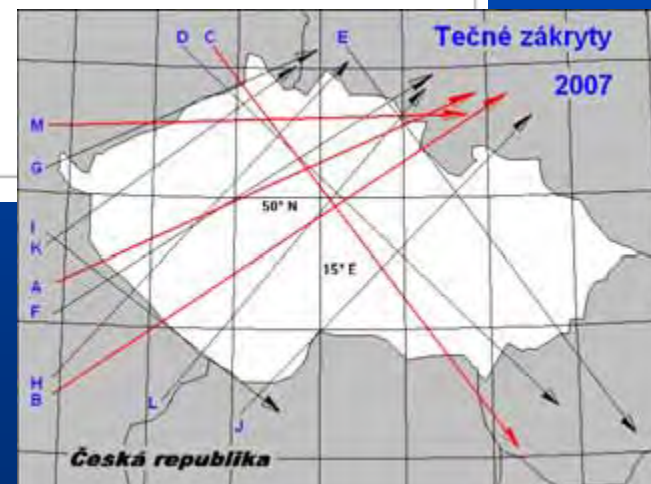
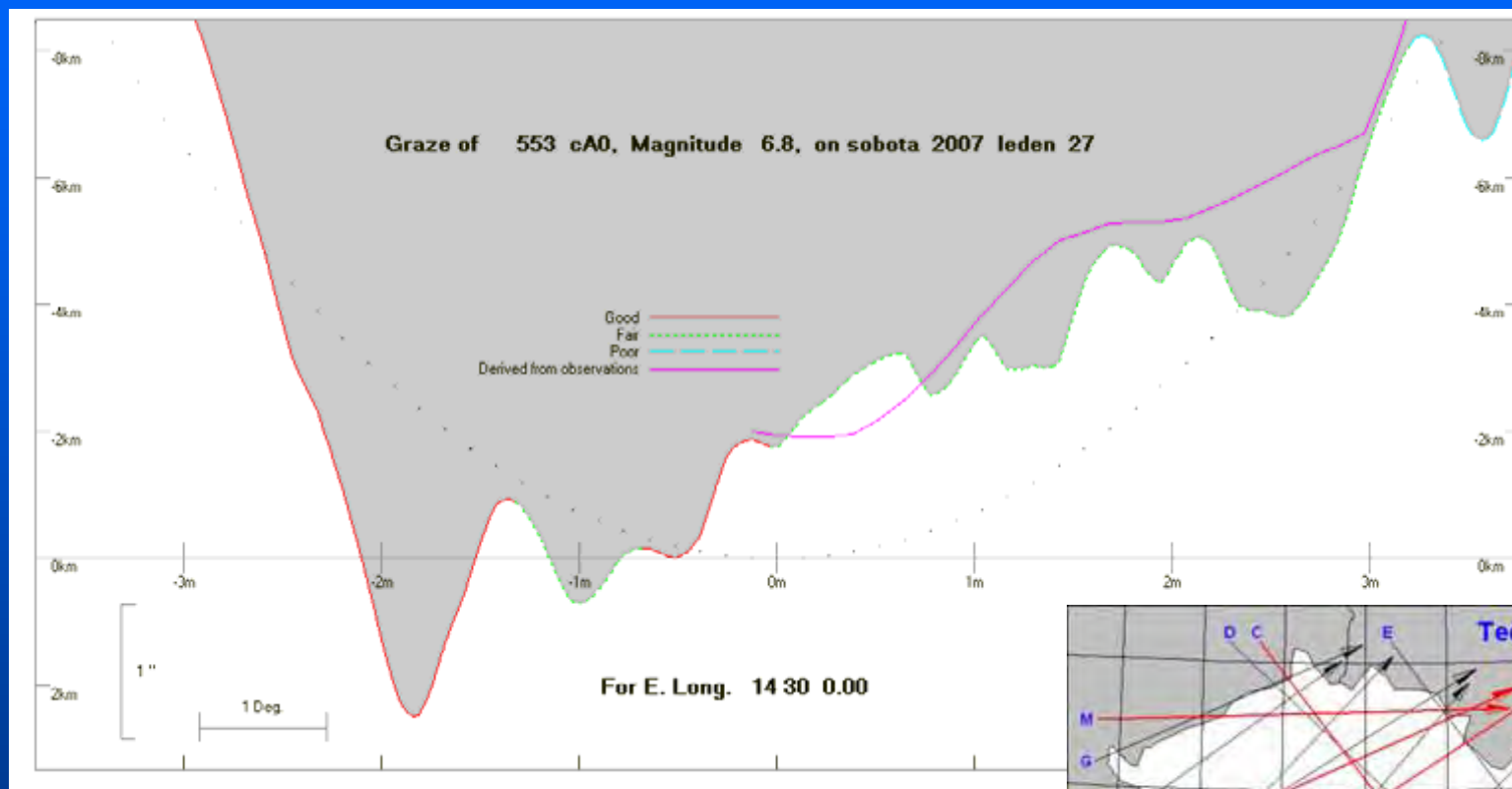
Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
5.4	5.7	7.1	7.9	8.4	8.8	9.0	9.2
7.4	5.8	7.2	8.0	8.5	8.8	9.1	9.3
9.4	5.8	7.3	8.0	8.6	8.9	9.2	9.3
11.4	5.9	7.3	8.1	8.6	9.0	9.2	9.4
13.4	5.9	7.4	8.2	8.7	9.0	9.3	9.5

Tečné zákryty 2007

B

Grazing Occultation of 553 cA0 Magnitude 6.8
Date 2007 leden 27 (sobota) Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

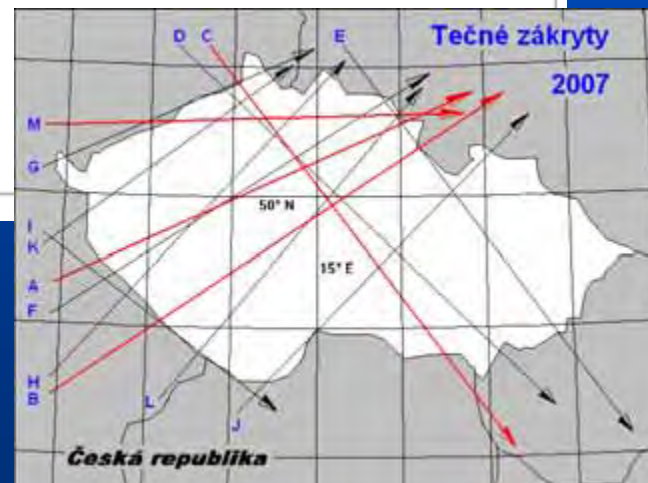
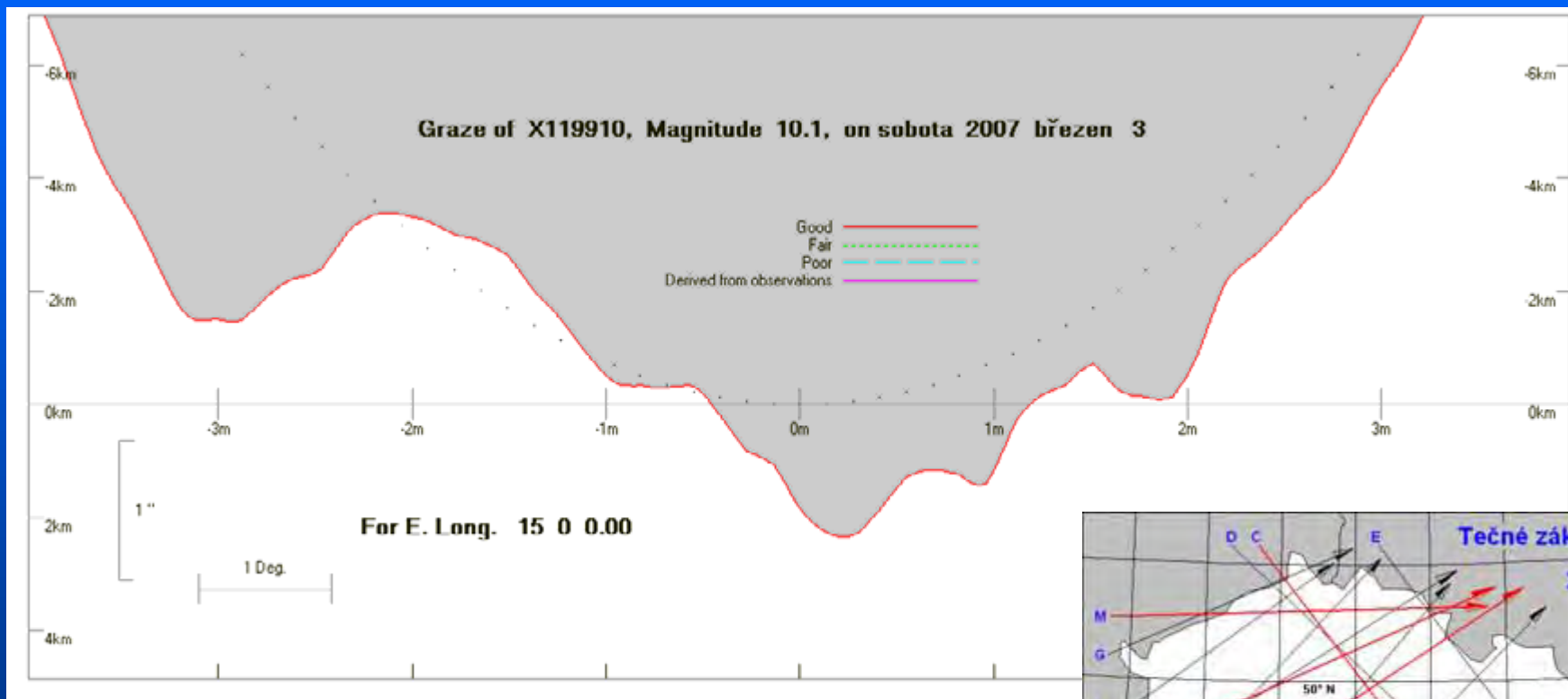
CA\Tdia	50	100	150	200	250	300	350
6.0	5.7	7.1	7.9	8.5	8.8	9.1	9.3
8.0	5.7	7.2	8.0	8.5	8.9	9.2	9.4
10.0	5.7	7.2	8.0	8.5	8.9	9.2	9.4
12.0	5.7	7.2	8.0	8.6	8.9	9.2	9.4
14.0	5.8	7.2	8.0	8.6	8.9	9.2	9.4

Tečné zákryty 2007

C

Grazing Occultation of X119910
Date 2007 březen 3 (sobota)

Magnitude 10.1
Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

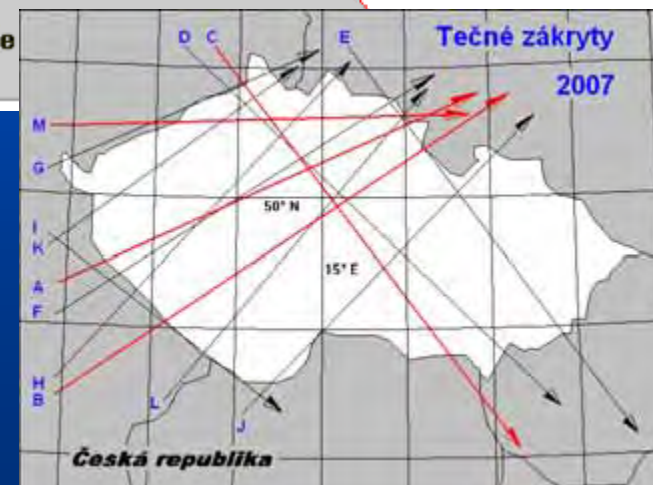
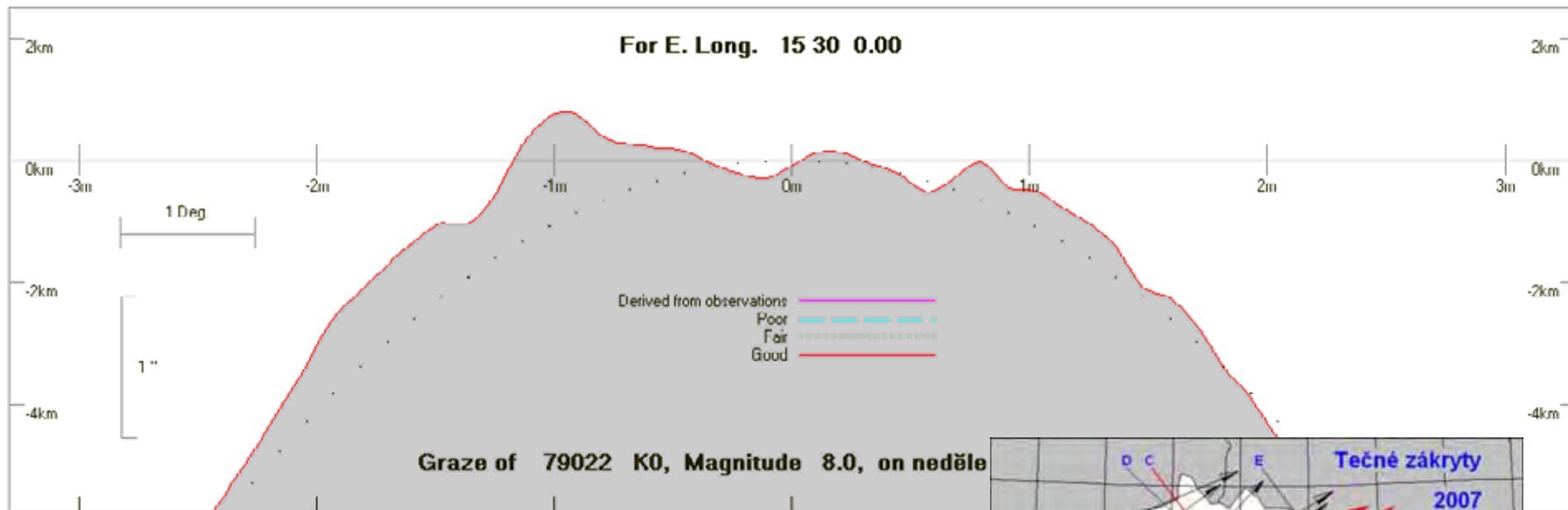
CA\Tdia	50	100	150	200	250	300	350
40.0	10.6	11.3	11.9	12.5	13.1	13.8	14.4
42.0	10.6	11.3	11.9	12.5	13.1	13.8	14.4
44.0	10.6	11.3	11.9	12.5	13.1	13.8	14.4
46.0	10.6	11.3	11.9	12.5	13.1	13.8	14.4
48.0	10.6	11.3	11.9	12.5	13.1	13.8	14.4

Tečné zákryty 2007

D

Grazing Occultation of 79022 K0 Magnitude 8.0
Date 2007 duben 22 (neděle) Nominal site altitude 0m

winOCCULT 3.1.0



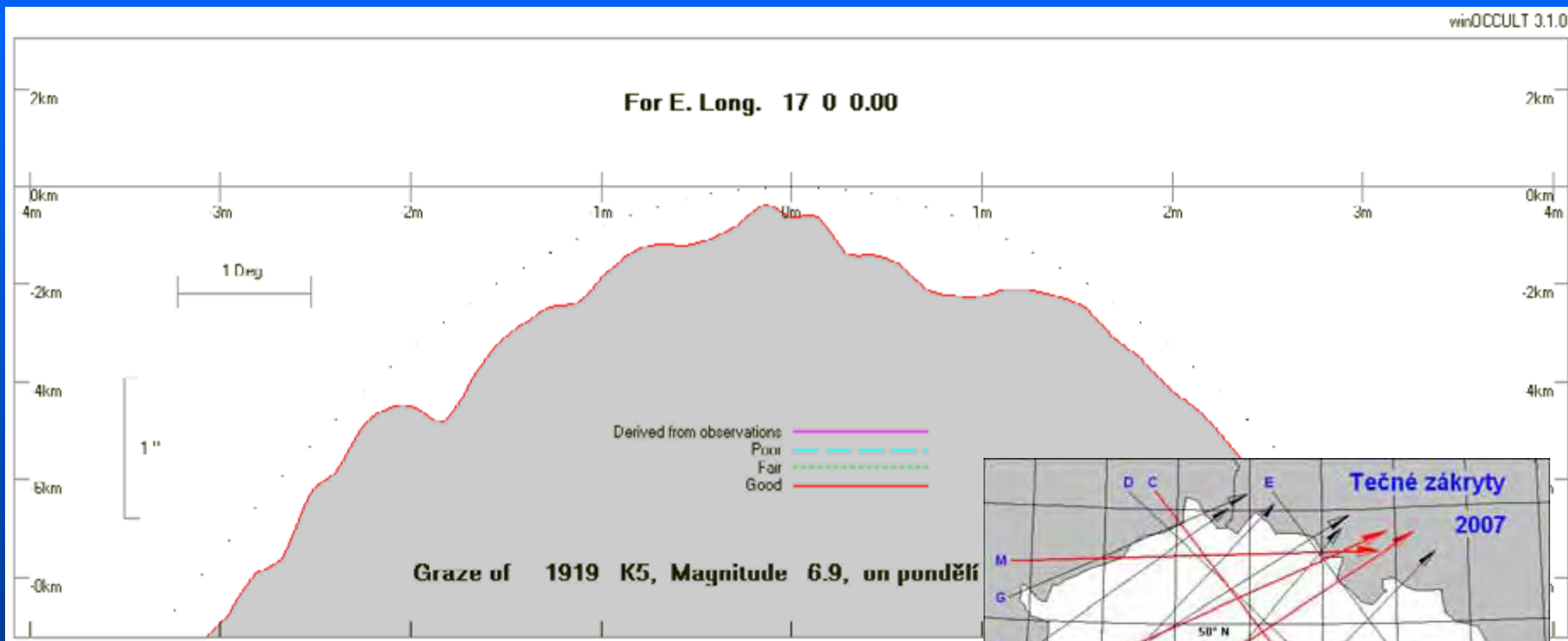
Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
9.2	5.9	7.3	8.2	8.7	9.1	9.3	9.6
11.2	5.9	7.4	8.2	8.7	9.1	9.4	9.6
13.2	5.9	7.4	8.2	8.7	9.1	9.4	9.6
15.2	5.9	7.4	8.2	8.7	9.1	9.4	9.6
17.2	5.9	7.4	8.2	8.7	9.1	9.4	9.6

Tečné zákryty 2007

E

Grazing Occultation of 1919 K5 Magnitude 6.9s
 Date 2007 duben 30 (pondělí) Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

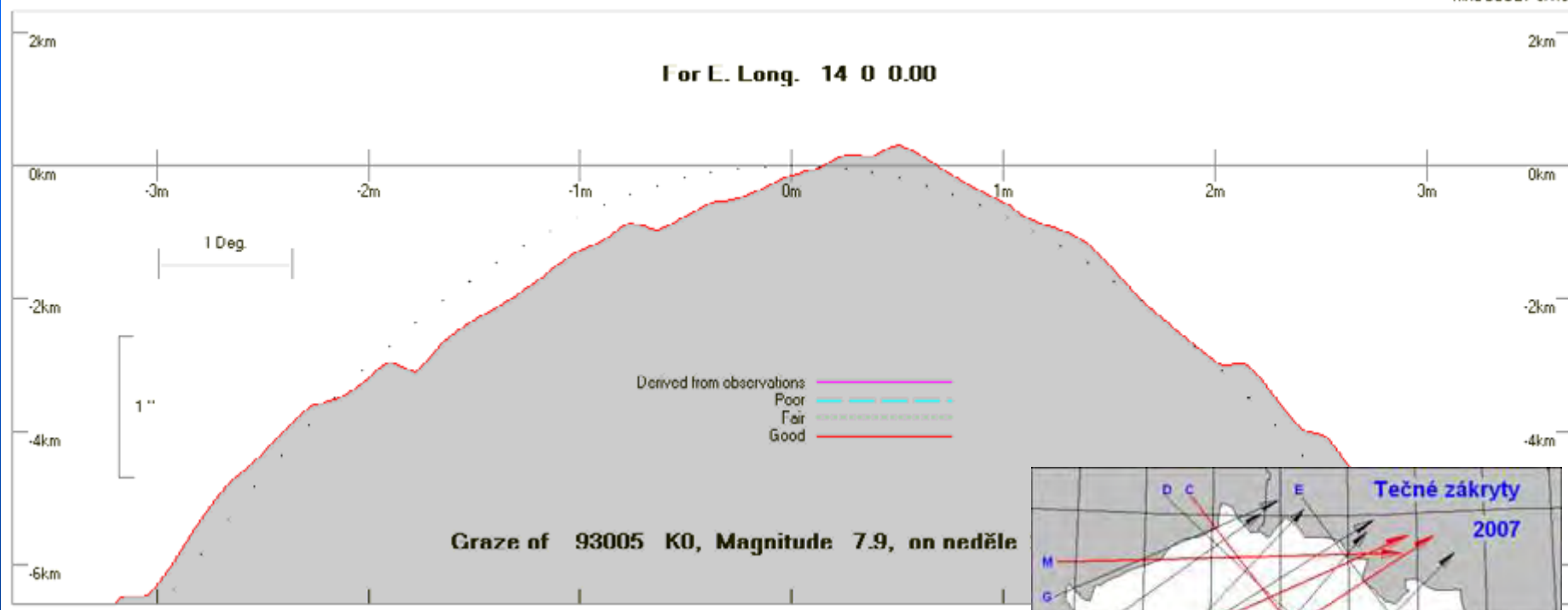
CA\Tdia	50	100	150	200	250	300	350
24.6	4.7	6.1	6.9	7.3	7.6	7.8	8.0
26.6	4.9	6.3	7.0	7.5	7.8	8.0	8.1
28.6	5.1	6.5	7.2	7.7	8.0	8.2	8.3
30.6	5.2	6.6	7.4	7.8	8.1	8.3	8.5
32.6	5.2	6.6	7.4	7.8	8.1	8.3	8.5

Tečné zákryty 2007

F

Grazing Occultation of 93005 K0 Magnitude 7.9
Date 2007 září 2 (neděle) Nominal site altitude 0m

winOCCULT 3.1.0



Limiting Magnitudes for various telescope apertures (in mm)

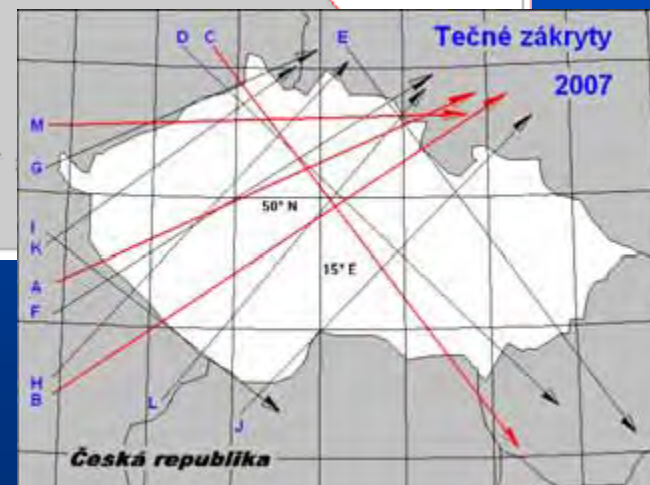
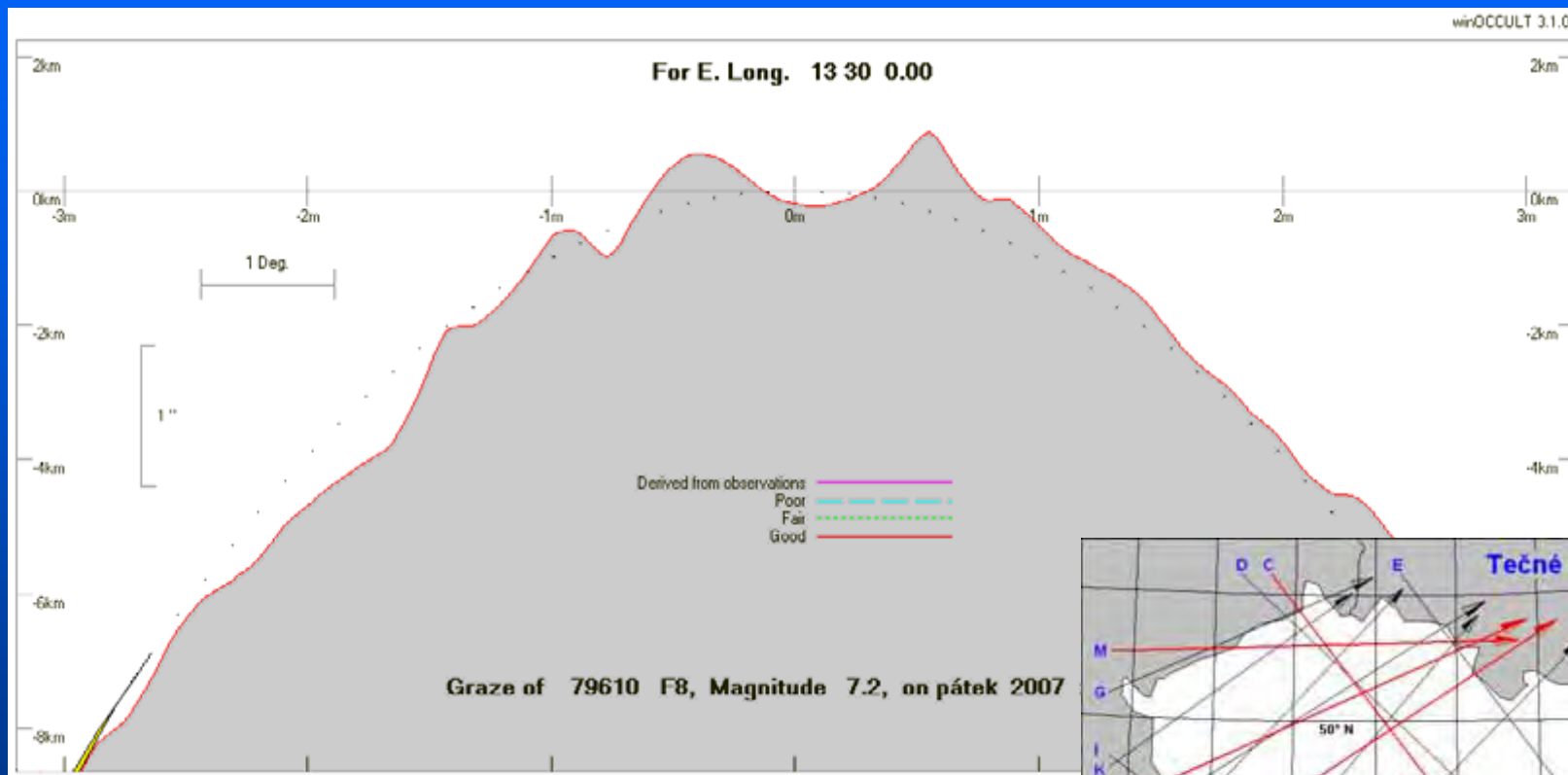
CA\Tdia	50	100	150	200	250	300	350
2.4	4.8	6.2	7.0	7.6	7.9	8.2	8.3
4.4	4.8	6.3	7.1	7.6	7.9	8.2	8.4
6.4	5.6	7.0	7.8	8.4	8.7	9.0	9.2
8.4	5.7	7.1	7.9	8.5	8.8	9.1	9.3
10.4	5.7	7.2	8.0	8.5	8.9	9.1	9.3



Tečné zákryty 2007

G

Grazing Occultation of 79610 F8 Magnitude 7.2
Date 2007 září 7 (pátek) Nominal site altitude 0m



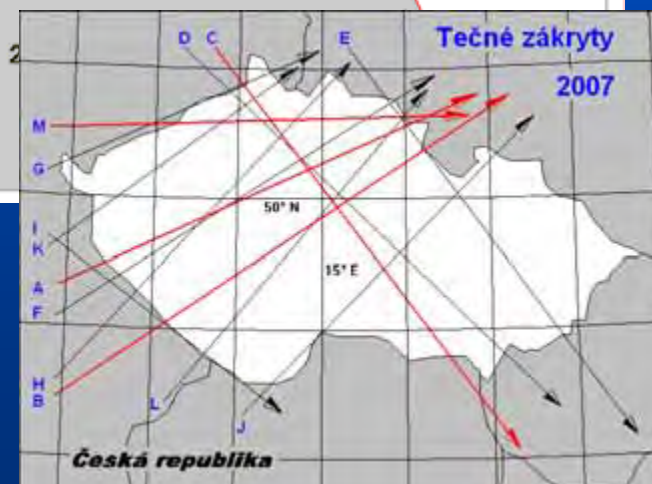
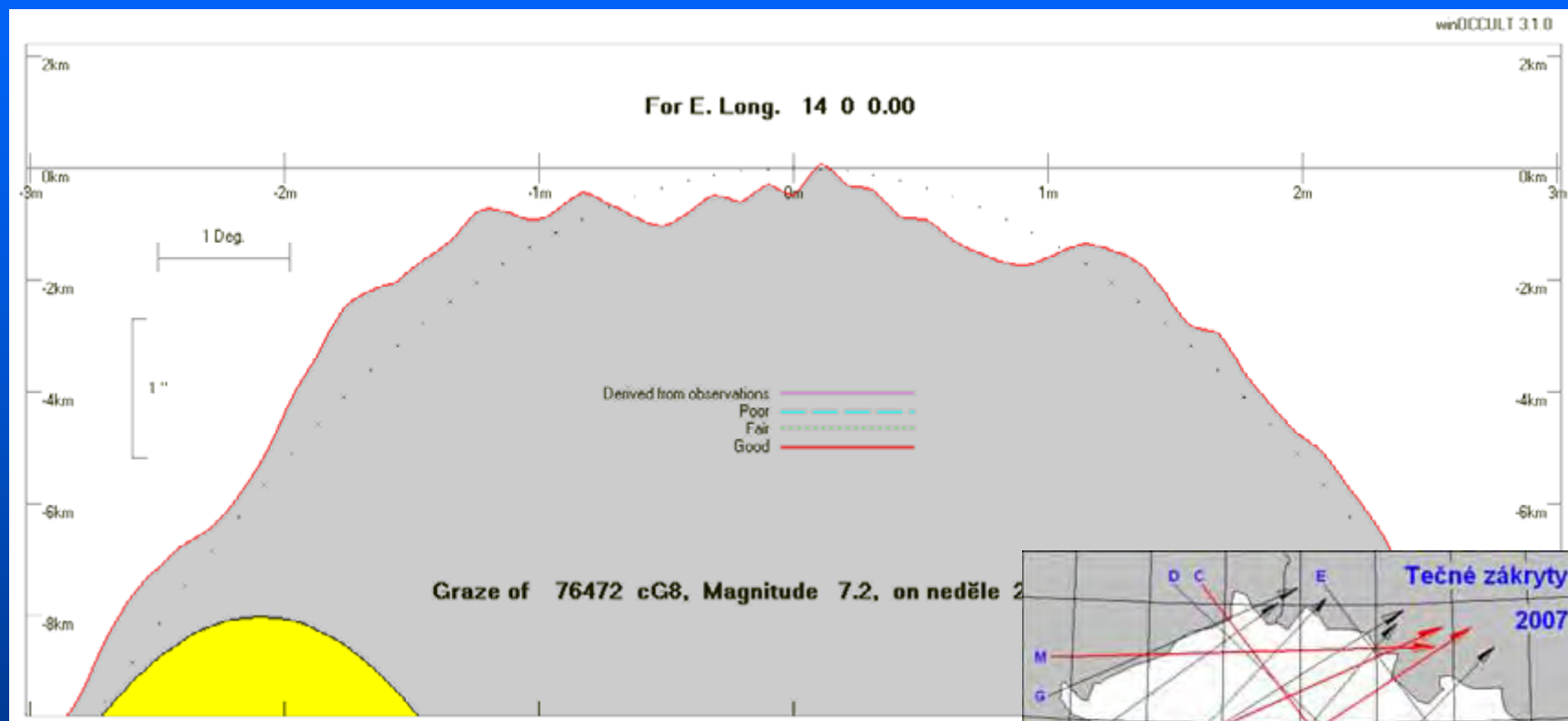
Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
-0.1	3.4	4.8	5.5	6.0	6.3	6.5	6.6
1.9	5.2	6.6	7.4	7.9	8.3	8.6	8.8
3.9	5.5	6.9	7.7	8.3	8.6	8.9	9.1
5.9	6.0	7.5	8.3	8.9	9.3	9.6	9.8
7.9	6.1	7.6	8.4	8.9	9.3	9.6	9.9

Tečné zákryty 2007

H

Grazing Occultation of 76472 cG8 Magnitude 7.2
Date 2007 září 30 (neděle) Nominal site altitude 0m



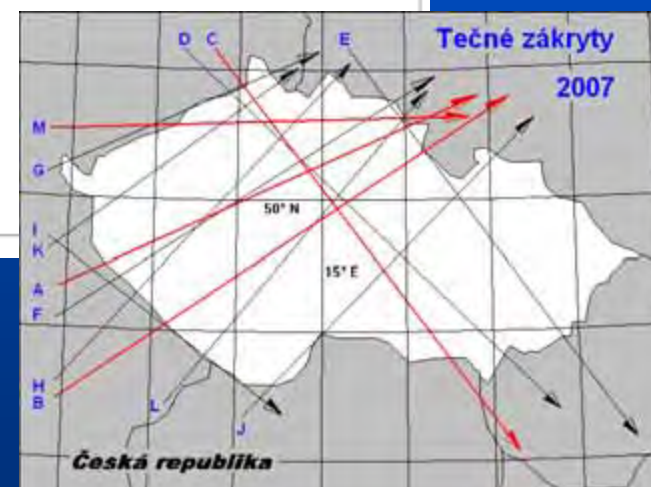
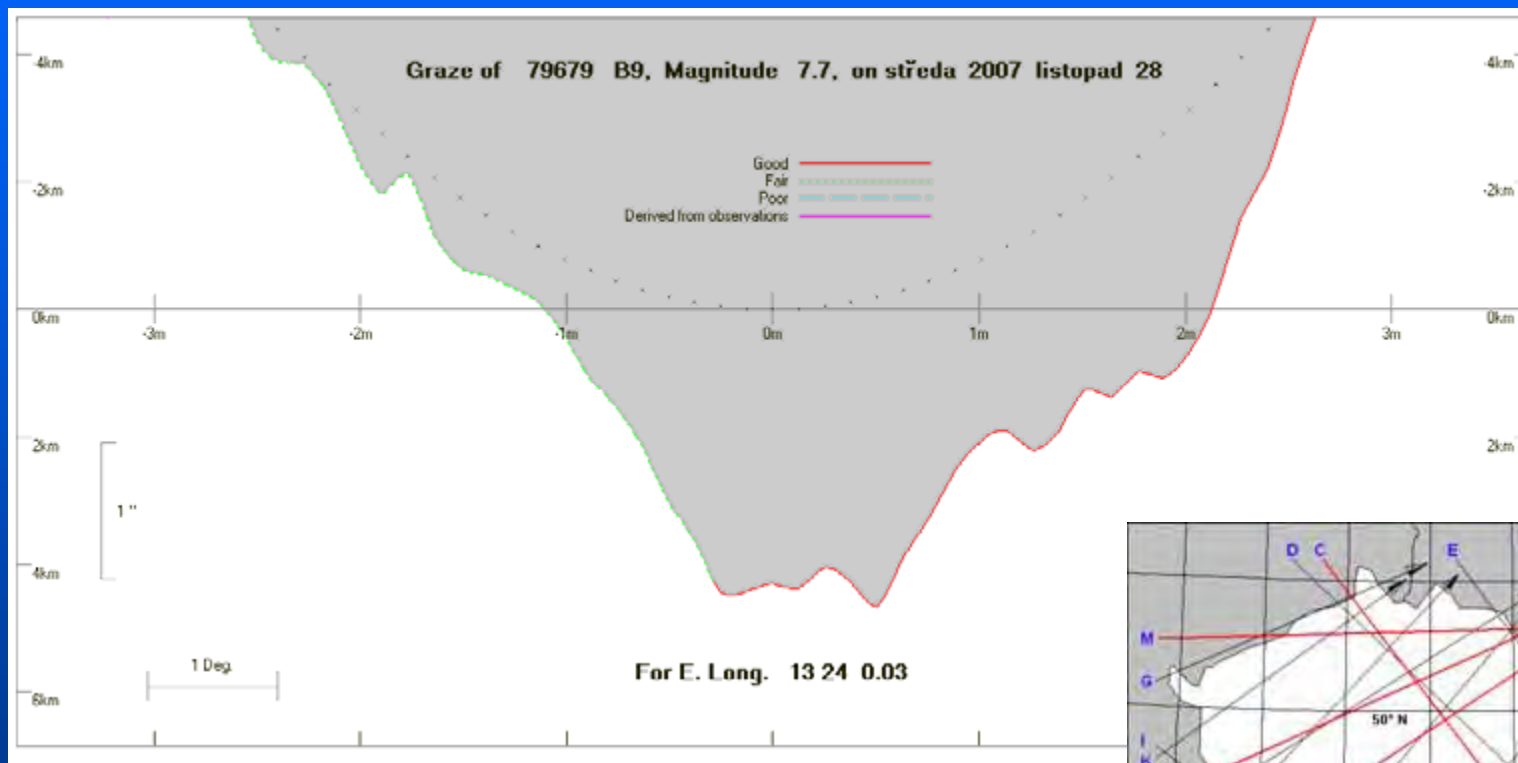
Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
1.0	2.7	4.1	4.9	5.3	5.6	5.9	6.0
3.0	4.7	6.1	6.9	7.3	7.7	7.9	8.1
5.0	4.7	6.1	6.9	7.4	7.7	7.9	8.1
7.0	5.3	6.7	7.5	8.0	8.3	8.6	8.7
9.0	5.5	7.0	7.8	8.2	8.6	8.8	9.0

Tečné zákryty 2007

I

Grazing Occultation of 79679 B9 Magnitude 7.7
 Date 2007 listopad 28 (středa) Nominal site altitude 0m

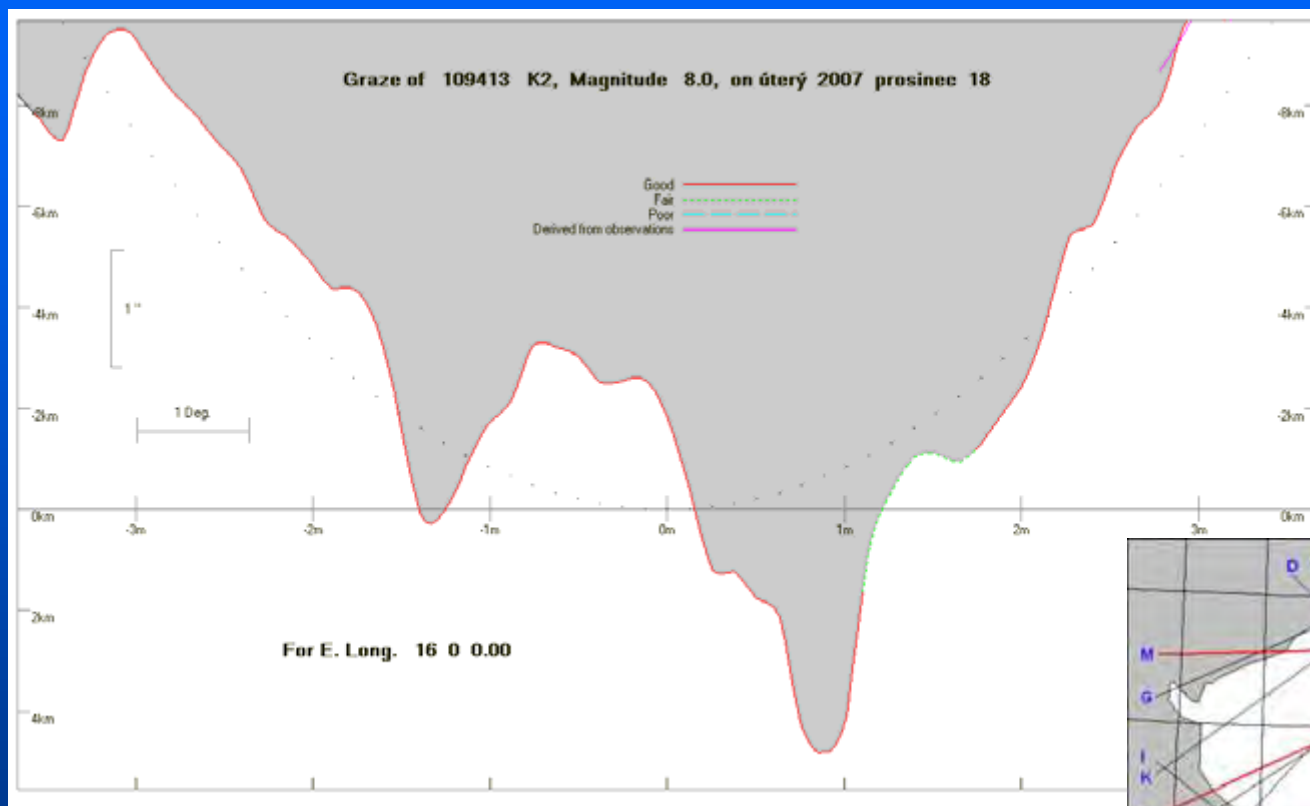


Limiting Magnitudes for various telescope apertures (in mm)

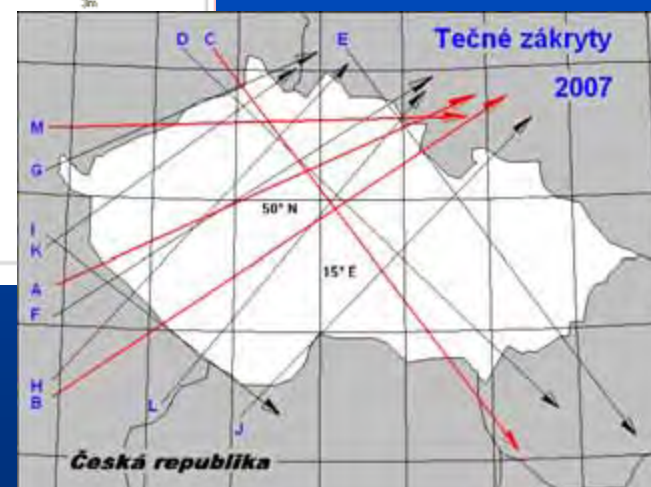
CA\Tdia	50	100	150	200	250	300	350
11.7	5.6	7.0	7.8	8.4	8.7	9.0	9.2
13.7	5.6	7.1	7.9	8.4	8.7	9.0	9.2
15.7	5.6	7.1	7.9	8.4	8.7	9.0	9.2
17.7	5.6	7.1	7.9	8.4	8.8	9.0	9.2
19.7	5.6	7.1	7.9	8.4	8.8	9.0	9.2

Tečné zákryty 2007

Grazing Occultation of 109413 K2 Magnitude 8.0
 Date 2007 prosinec 18 (úterý) Nominal site altitude 0m



J

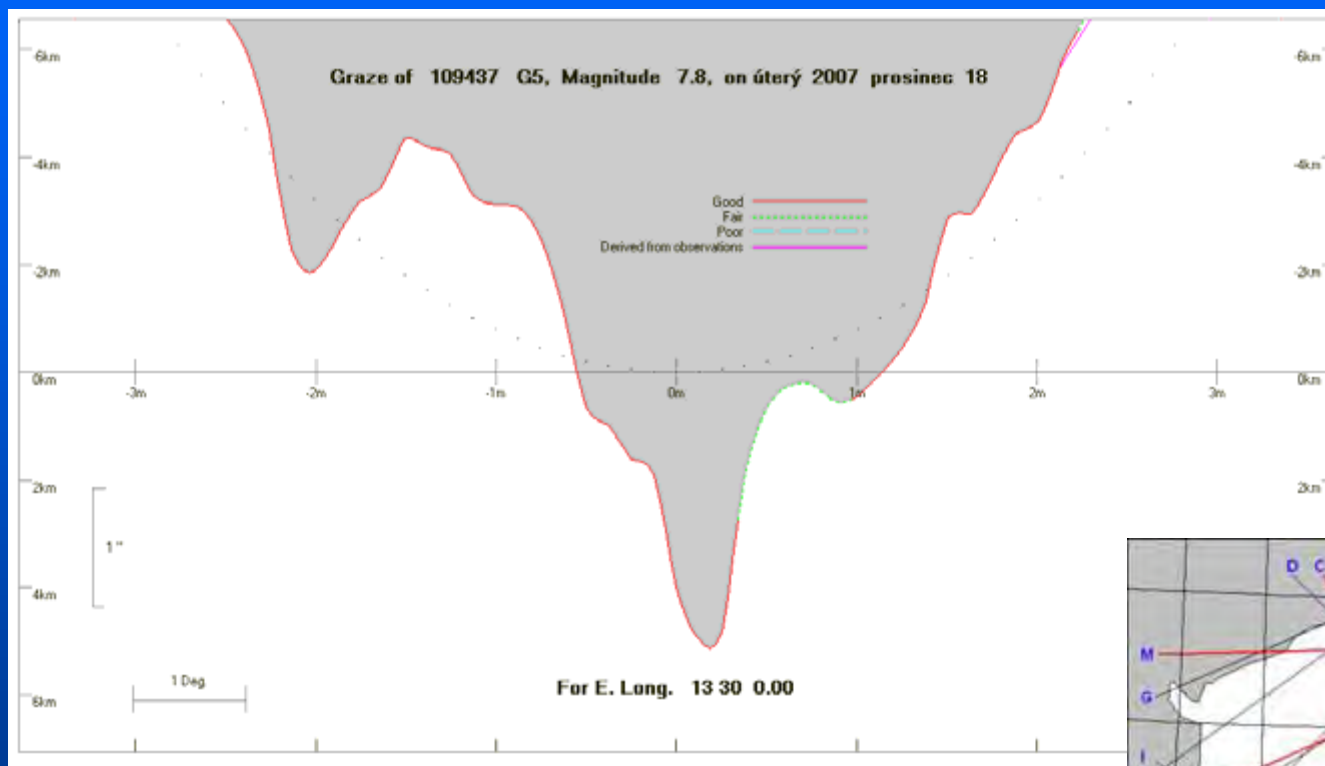


Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
9.4	5.7	7.1	7.9	8.5	8.8	9.1	9.3
11.4	5.7	7.2	7.9	8.5	8.8	9.1	9.3
13.4	5.7	7.2	8.0	8.5	8.8	9.1	9.3
15.4	5.7	7.2	8.0	8.5	8.9	9.1	9.3
17.4	5.7	7.2	8.0	8.5	8.9	9.1	9.3

Tečné zákryty 2007

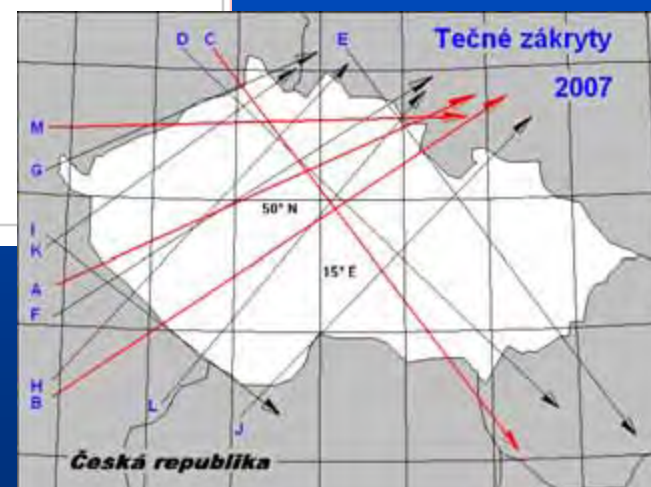
Grazing Occultation of 109437 G5 Magnitude 7.8
Date 2007 prosinec 18 (úterý) Nominal site altitude 0m



K

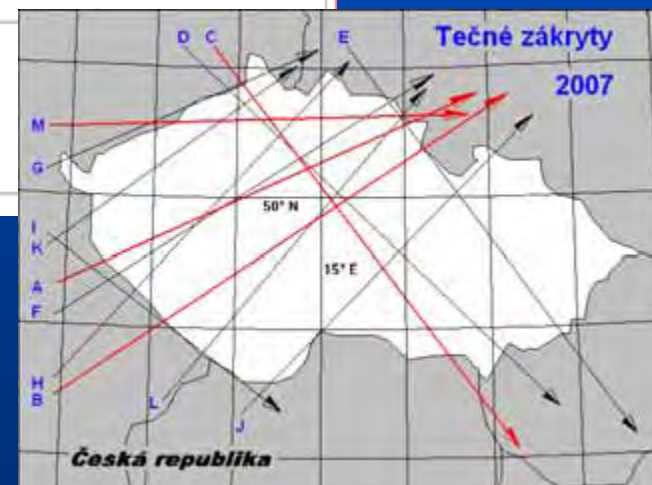
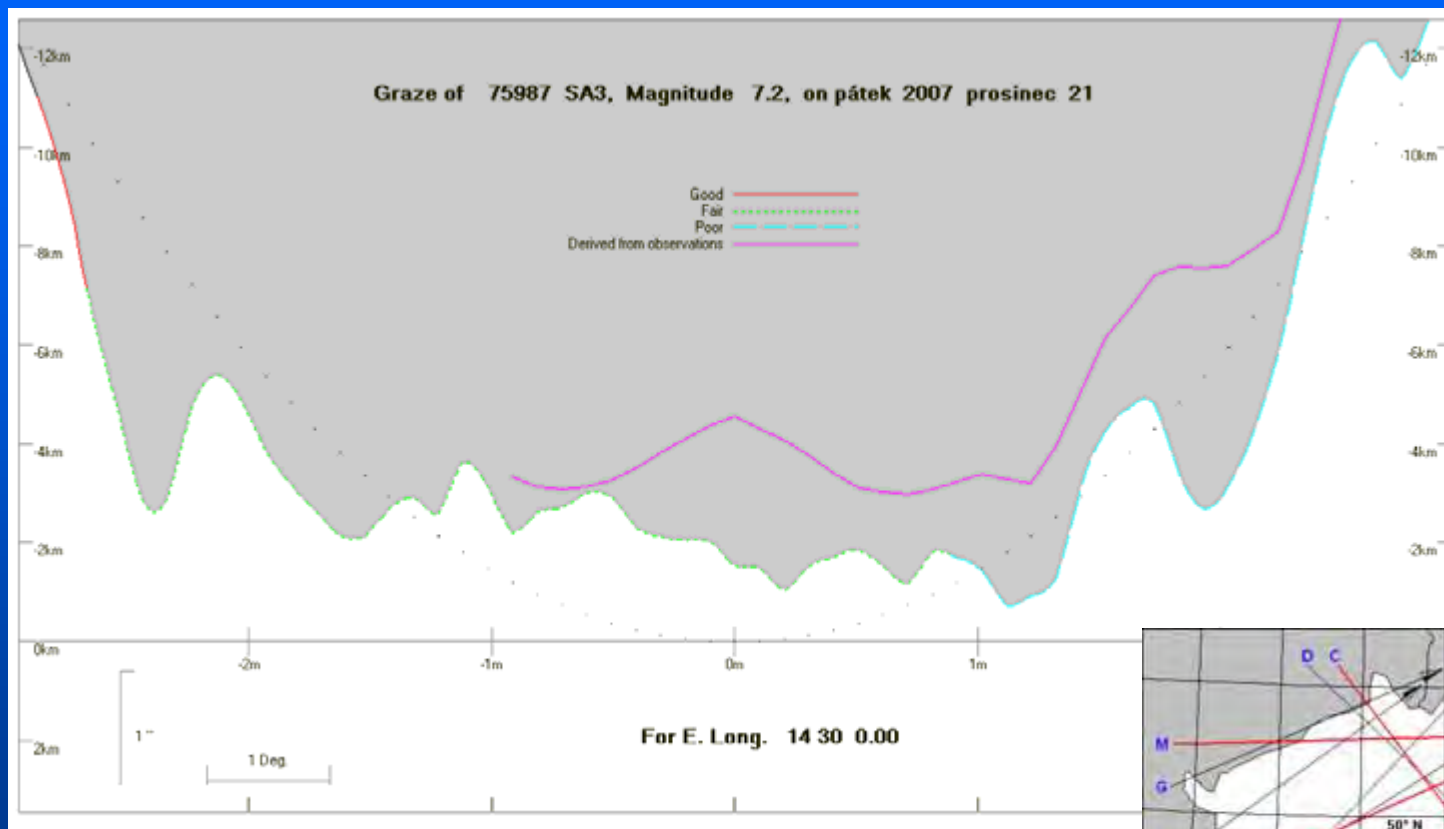
Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
7.7	5.6	7.1	7.9	8.4	8.7	9.0	9.2
9.7	5.6	7.1	7.9	8.4	8.7	9.0	9.2
11.7	5.7	7.1	7.9	8.4	8.8	9.0	9.2
13.7	5.7	7.1	7.9	8.4	8.8	9.0	9.2
15.7	5.7	7.1	7.9	8.4	8.8	9.0	9.2



Tečné zákryty 2007

Grazing Occultation of 75987 SA3 Magnitude 7.2
 Date 2007 prosinec 21 (pátek) Nominal site altitude 0m



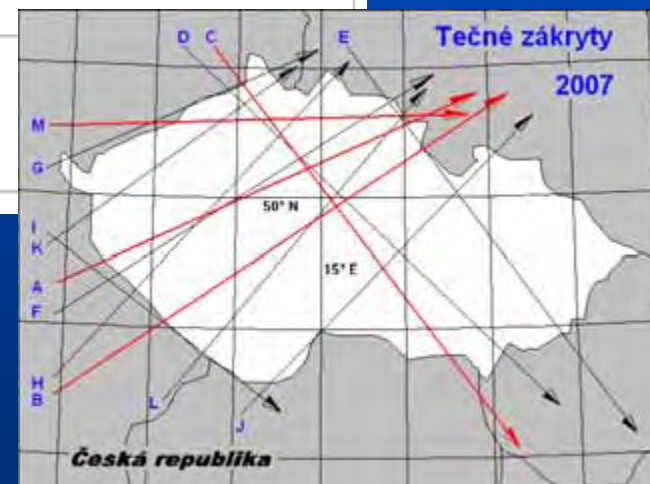
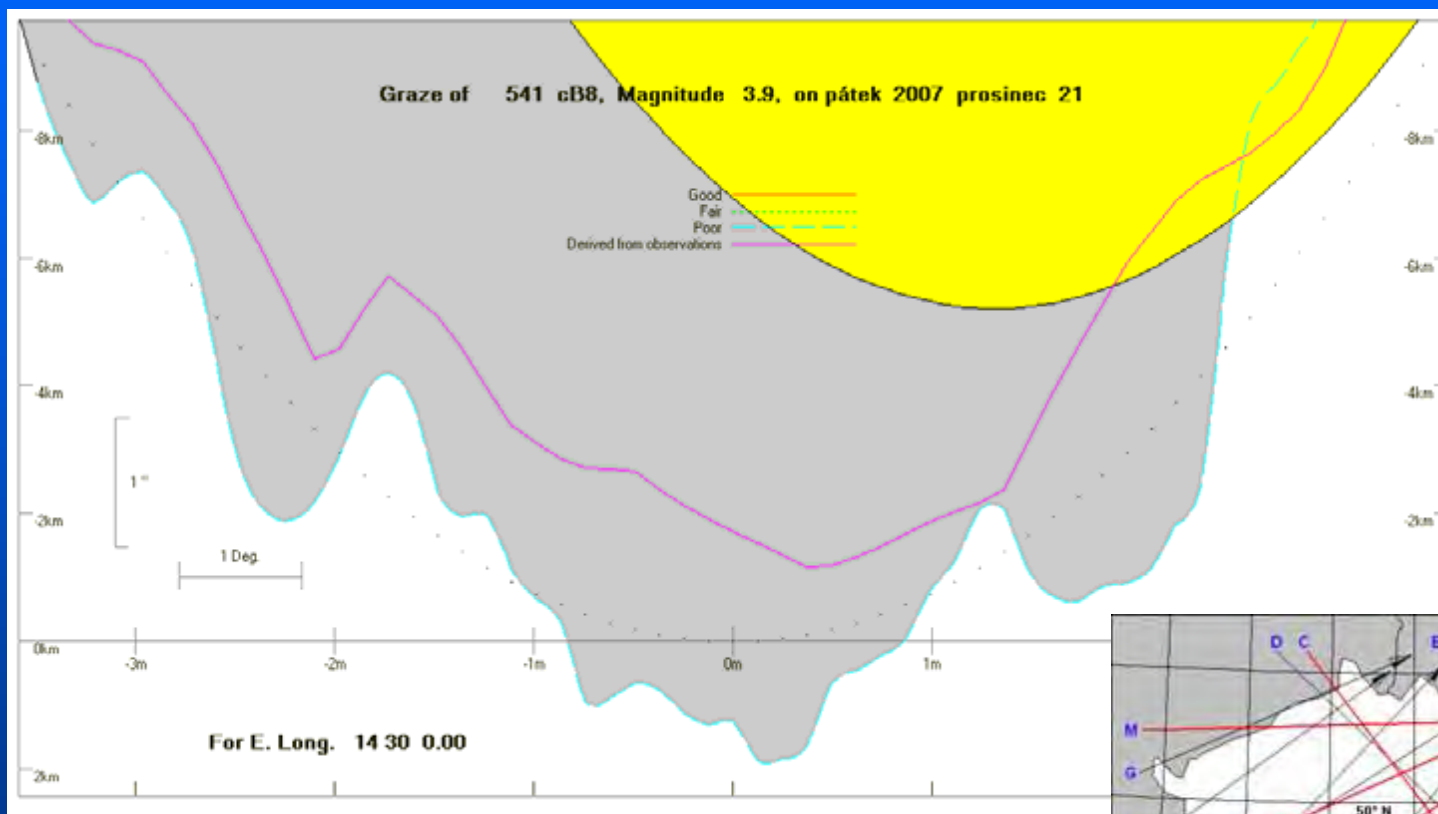
Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
10.4	4.6	6.1	6.8	7.3	7.6	7.8	8.0
12.4	5.0	6.4	7.1	7.6	7.9	8.2	8.3
14.4	5.4	6.8	7.6	8.0	8.4	8.6	8.8
16.4	5.4	6.8	7.6	8.1	8.4	8.6	8.8
18.4	5.4	6.8	7.6	8.1	8.4	8.6	8.8

Tečné zákryty 2007

Grazing Occultation of 541 cB8 Magnitude 3.9
 541 = Maia = 20 Tauri
 Date 2007 prosinec 21 (pátek) Nominal site altitude 0m

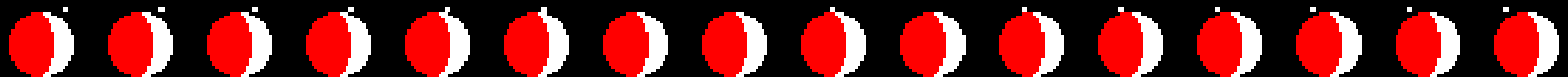
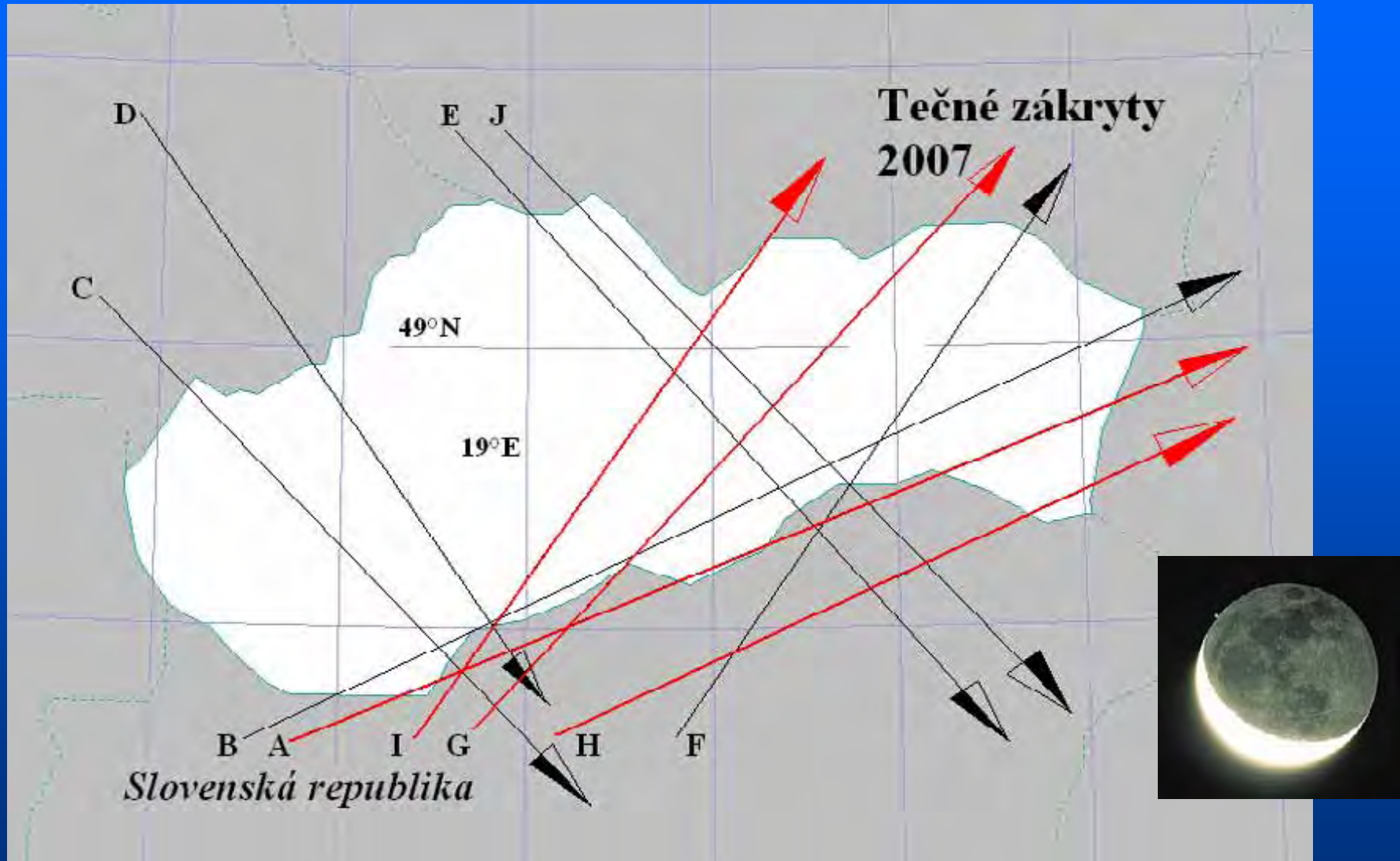
M

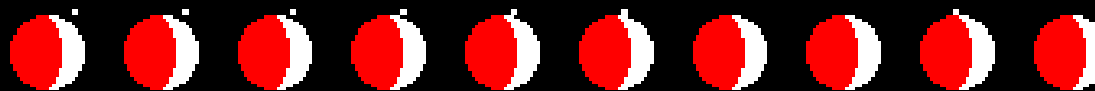


Limiting Magnitudes for various telescope apertures (in mm)

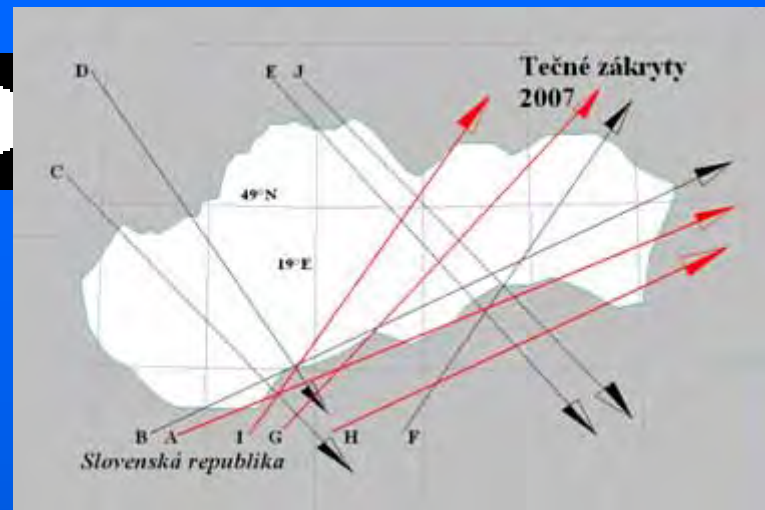
CA\Tdia	50	100	150	200	250	300	350
3.3	2.4	3.8	4.6	5.1	5.4	5.6	5.8
5.3	2.7	4.2	4.9	5.4	5.8	6.0	6.1
7.3	4.0	5.4	6.2	6.7	7.0	7.3	7.5
9.3	4.6	6.0	6.8	7.3	7.6	7.9	8.1
11.3	4.7	6.2	7.0	7.5	7.8	8.0	8.2

Tečné zákryty 2007





Tečné zákryty 2007

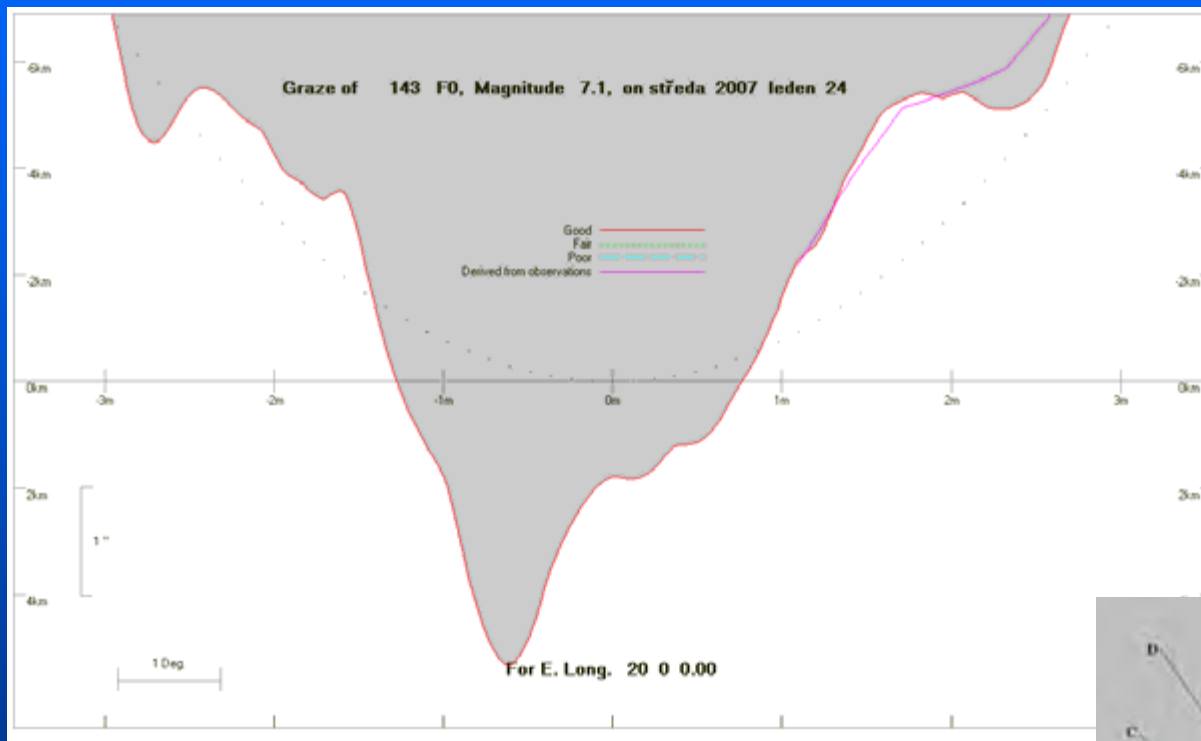


	čas	UT	hvězda		Měsíc			CA	Ø dal.	oblast
	2007	hh:mm	číslo	mag	fáze	h °	A °		mm	
A	24.01.	17:51	143	7,1	36%+	40	230	10S	100	j SS
B	28.01.	17:38	76764	7,9	79%+	63	136	10S	200	ZS, VS
C	22.04.	19:49	79022	8,0	35%+	40	267	13N	150	ZS
D	30.04.	21:16	1919	6,9	98%+	30	175	28N	150	ZS
E	19.05.	20:31	1028	7,5	12%+	11	298	13N	150	SS
F	07.08.	00:19	537	3,7	37%-	27	84	-10S	100	VS
G	07.08.	02:12	555	6,4	36%-	44	102	11N	100	SS, VS
H	03.09.	03:03	518	6,0	61%-	66	171	6N	100	VS
I	15.12.	15:50	3262	6,9	31%+	29	189	16S	100	SS
J	26.12.	03:24	80063	7,6	94%-	47	245	17S	200	SS

Tečné zákryty 2007

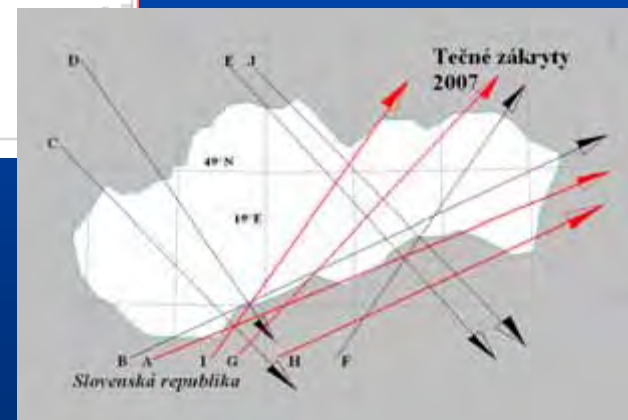
Grazing Occultation of 143 F0 Magnitude 7.1
 Date 2007 leden 24 (středa) Nominal site altitude 0m

A



Limiting Magnitudes for various telescope apertures (in mm)

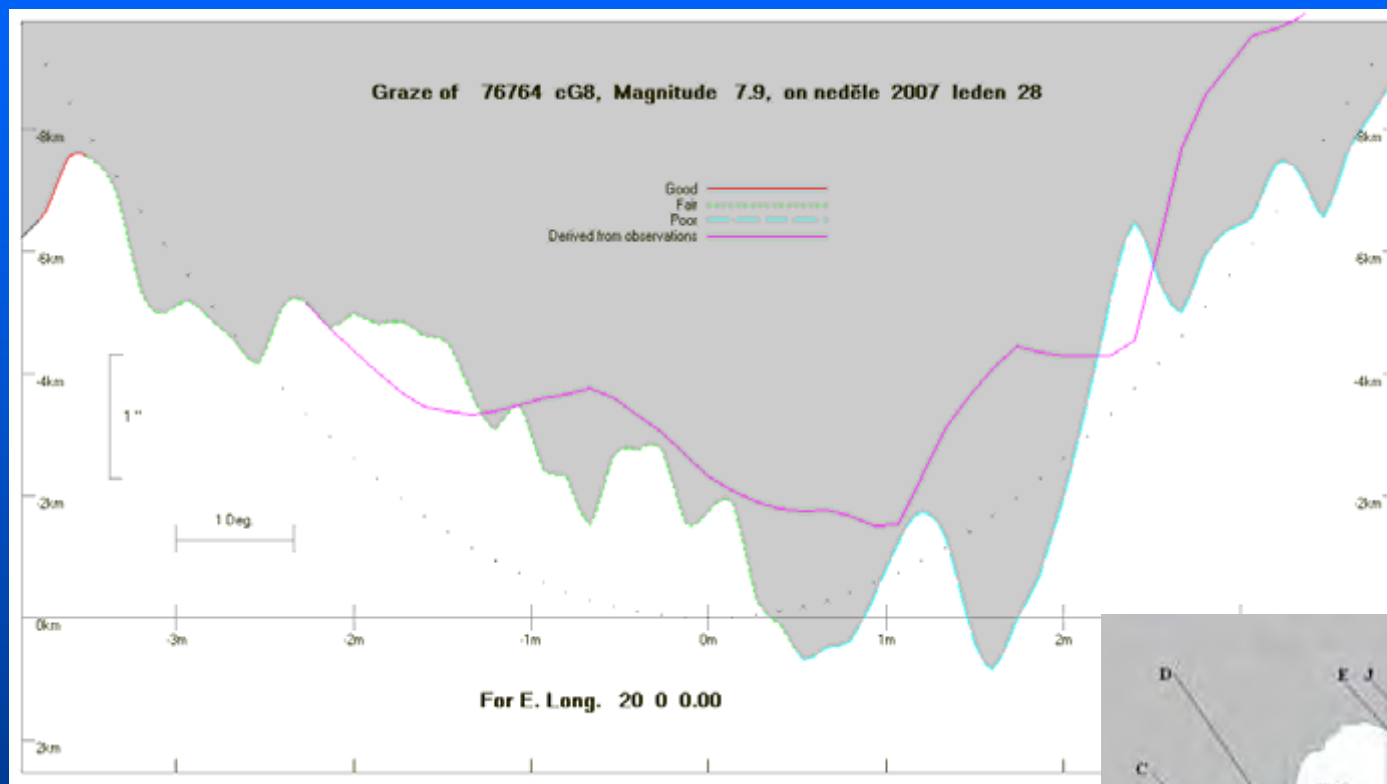
CA\Tdia	50	100	150	200	250	300	350
5.2	5.8	7.3	8.1	8.6	9.0	9.3	9.5
7.2	5.9	7.3	8.1	8.7	9.0	9.3	9.5
9.2	5.9	7.3	8.1	8.7	9.1	9.3	9.5
11.2	5.9	7.3	8.2	8.7	9.1	9.4	9.6
13.2	5.9	7.4	8.2	8.7	9.1	9.4	9.6



Tečné zákryty 2007

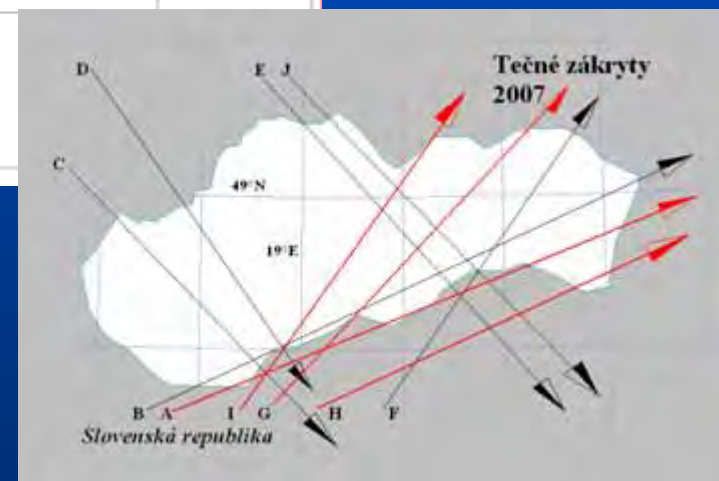
B

Grazing Occultation of 76764 cG8 Magnitude 7.9
Date 2007 leden 28 (neděle) Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
5.3	4.8	6.2	7.0	7.6	7.9	8.2	8.4
7.3	5.3	6.8	7.6	8.1	8.5	8.7	8.9
9.3	5.7	7.1	7.9	8.4	8.8	9.1	9.3
11.3	5.7	7.1	7.9	8.5	8.8	9.1	9.3
13.3	5.7	7.1	7.9	8.5	8.8	9.1	9.3

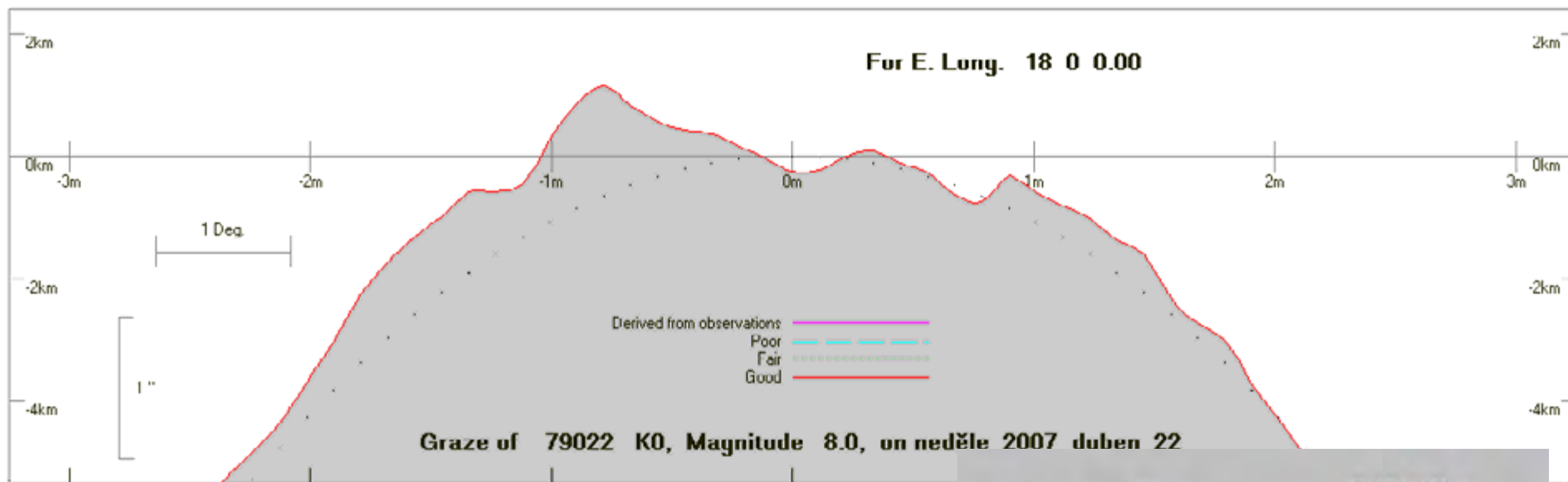


Tečné zákryty 2007

C

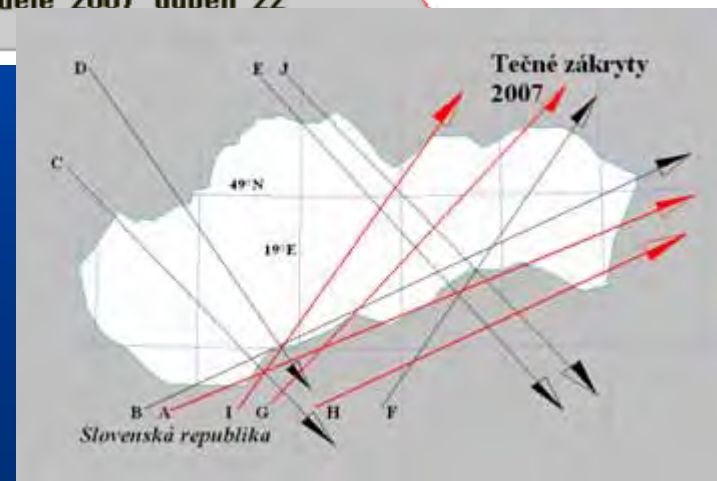
Grazing Occultation of 79022 K0 Magnitude 8.0
Date 2007 duben 22 (neděle) Nominal site altitude 0m

winOCCULT 3.1.0



Limiting Magnitudes for various telescope apertures (in mm)

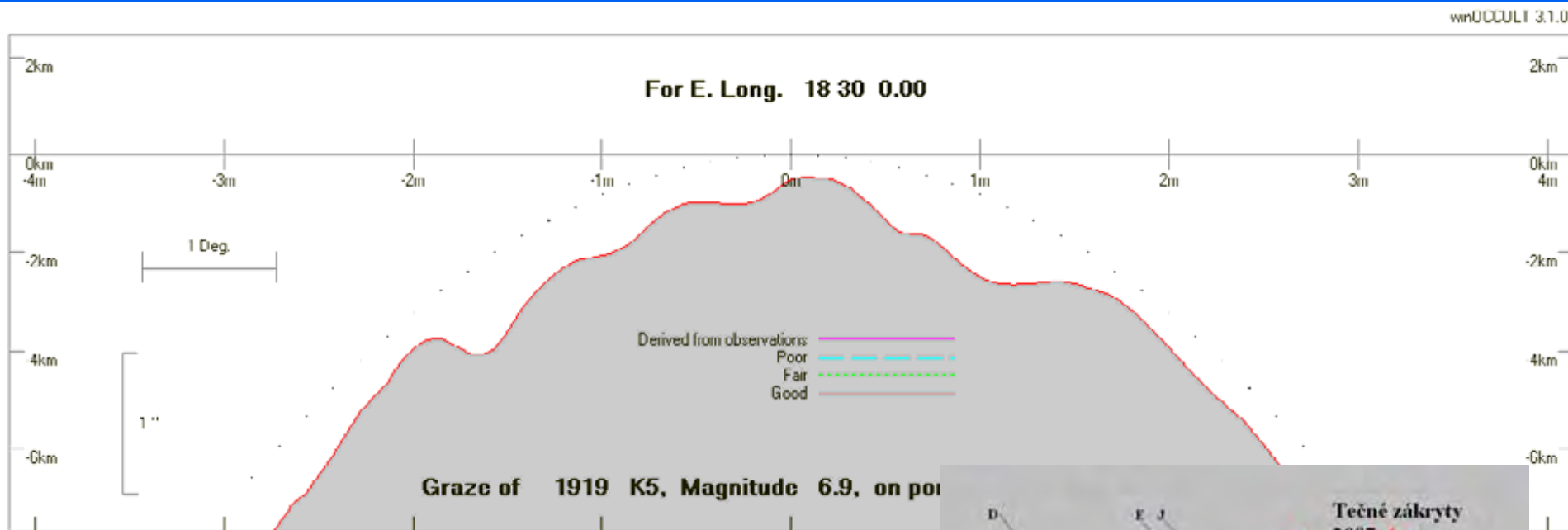
CA\Tdia	50	100	150	200	250	300	350
9.4	5.8	7.3	8.1	8.6	9.0	9.3	9.5
11.4	5.9	7.3	8.1	8.7	9.0	9.3	9.5
13.4	5.9	7.3	8.1	8.7	9.0	9.3	9.5
15.4	5.9	7.3	8.1	8.7	9.1	9.3	9.5
17.4	5.9	7.3	8.2	8.7	9.1	9.4	9.6



Tečné zákryty 2007

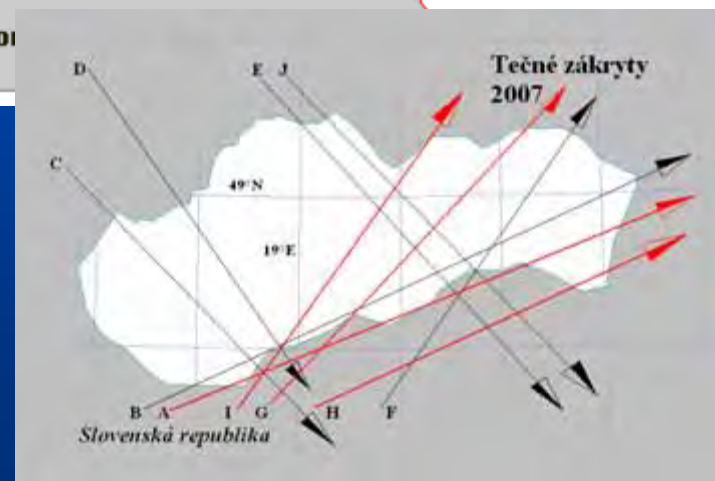
D

Grazing Occultation of 1919 K5 Magnitude 6.9s
 Date 2007 duben 30 (pondělí) Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
25.1	4.8	6.2	7.0	7.4	7.7	7.9	8.1
27.1	5.0	6.4	7.2	7.6	7.9	8.1	8.3
29.1	5.2	6.6	7.4	7.8	8.1	8.3	8.5
31.1	5.2	6.7	7.4	7.9	8.2	8.4	8.6
33.1	5.2	6.7	7.4	7.9	8.2	8.4	8.6

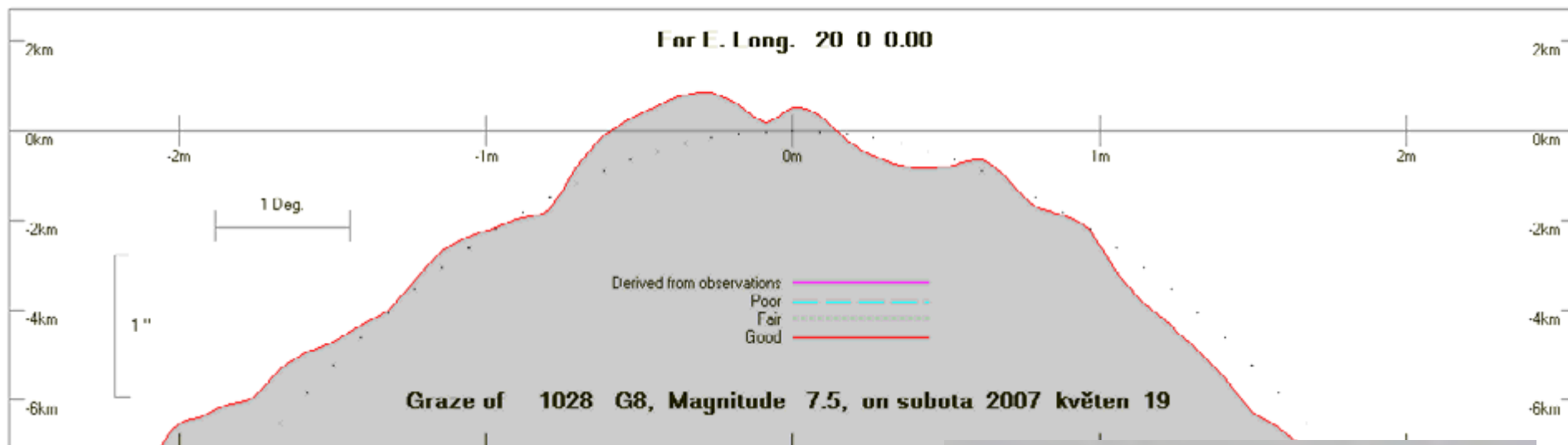


Tečné zákryty 2007

E

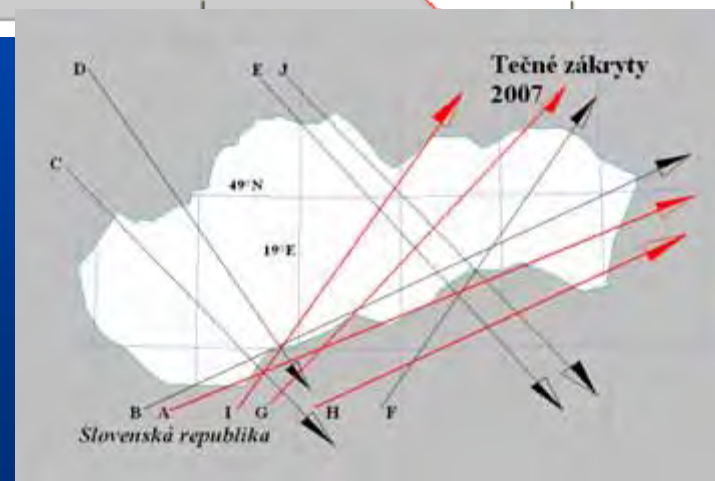
Grazing Occultation of 1028 G8 Magnitude 7.5
Date 2007 květen 19 (sobota) Nominal site altitude 0m

winOCCULT 3.1.0



Limiting Magnitudes for various telescope apertures (in mm)

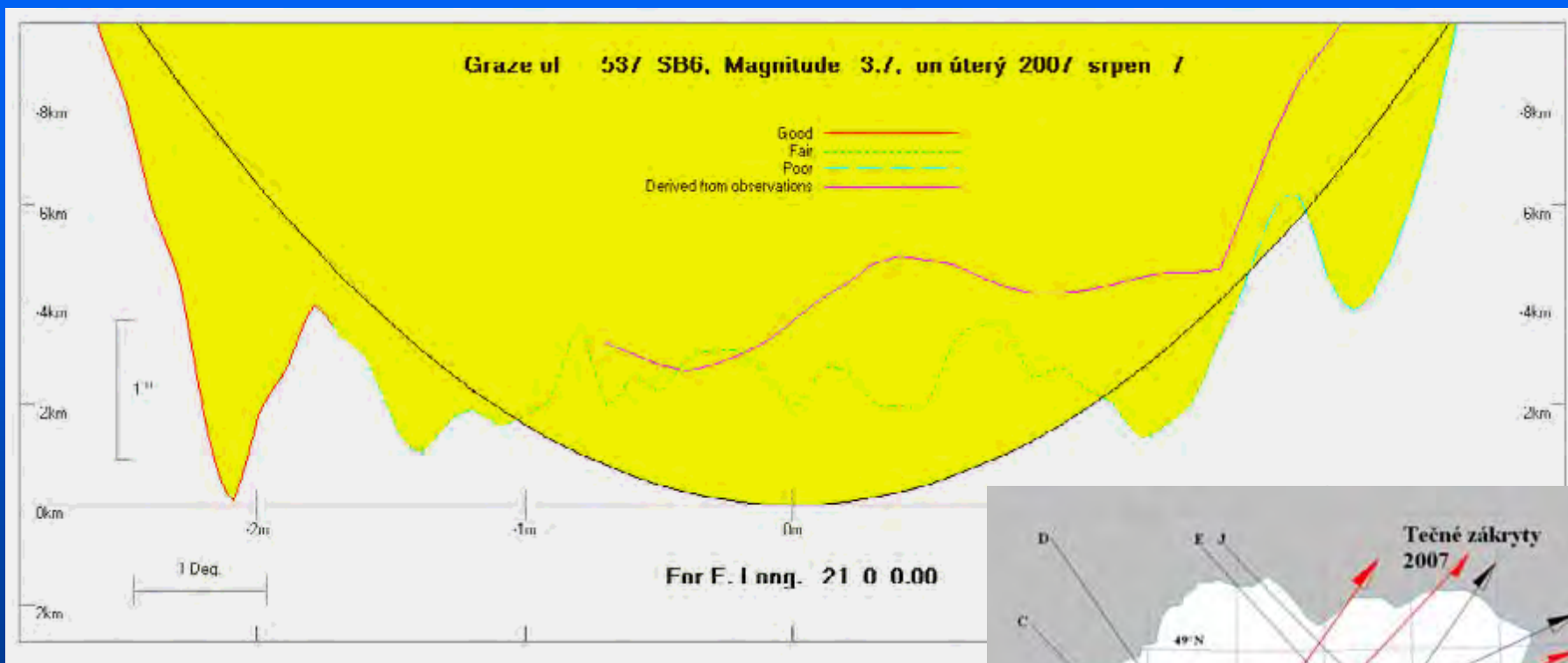
CA\Tdia	50	100	150	200	250	300	350
8.8	5.9	7.4	8.2	8.7	9.1	9.3	9.5
10.8	6.0	7.4	8.2	8.8	9.1	9.4	9.6
12.8	6.0	7.5	8.3	8.8	9.2	9.5	9.7
14.8	6.0	7.5	8.3	8.8	9.2	9.5	9.7
16.8	6.1	7.5	8.3	8.9	9.3	9.5	9.8



Tečné zákryty 2007

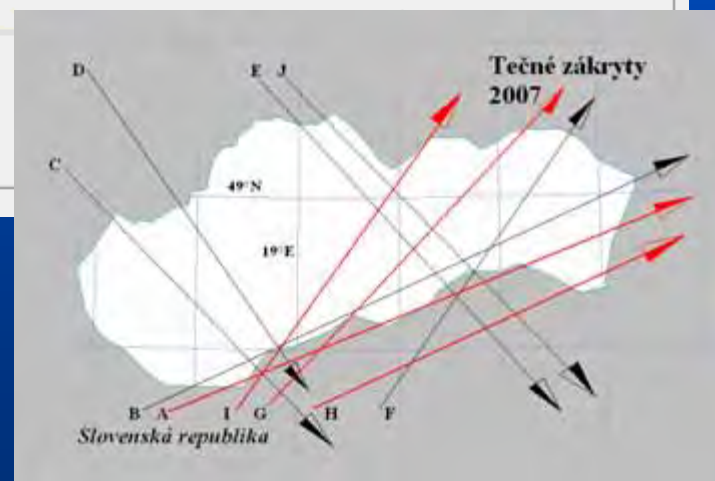
F

Grazing Occultation of 537 SB6 Magnitude 3.7s
 537 = Electra = 17 Tauri
 Date 2007 srpen 7 (úterý) Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

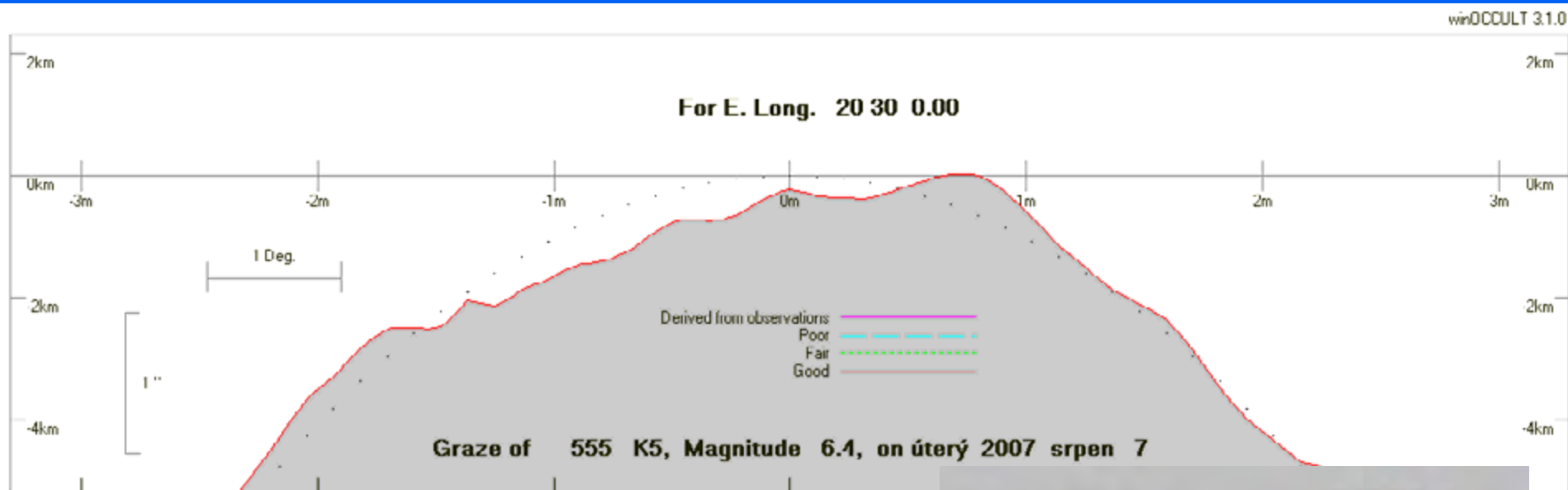
CA\Tdia	50	100	150	200	250	300	350
-13.5	3.1	4.5	5.2	5.7	5.9	6.1	6.2
-11.5	3.1	4.5	5.2	5.7	5.9	6.1	6.2
-9.5	3.1	4.5	5.2	5.7	5.9	6.1	6.2
-7.5	3.1	4.5	5.2	5.7	5.9	6.1	6.2
-5.5	3.1	4.5	5.2	5.7	5.9	6.1	6.2



Tečné zákryty 2007

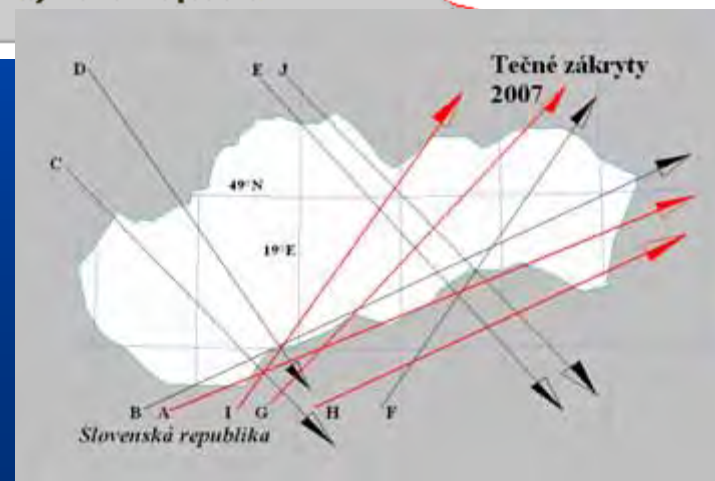
G

Grazing Occultation of 555 K5 Magnitude 6.4
Date 2007 srpen 7 (úterý) Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
6.8	5.9	7.4	8.2	8.7	9.1	9.4	9.6
8.8	5.9	7.4	8.2	8.7	9.1	9.4	9.6
10.8	5.9	7.4	8.2	8.7	9.1	9.4	9.6
12.8	5.9	7.4	8.2	8.8	9.1	9.4	9.6
14.8	5.9	7.4	8.2	8.8	9.2	9.4	9.7

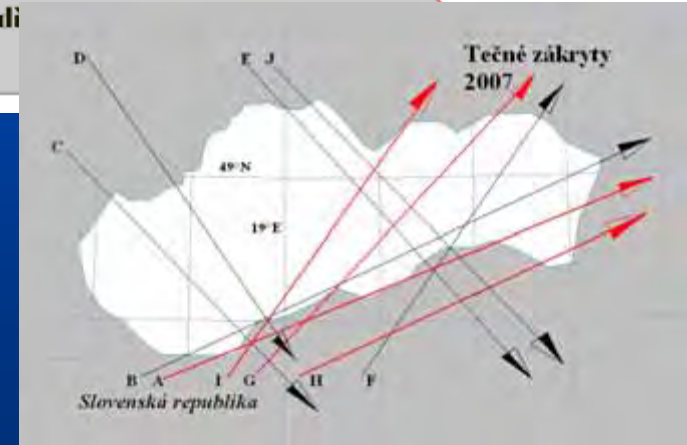
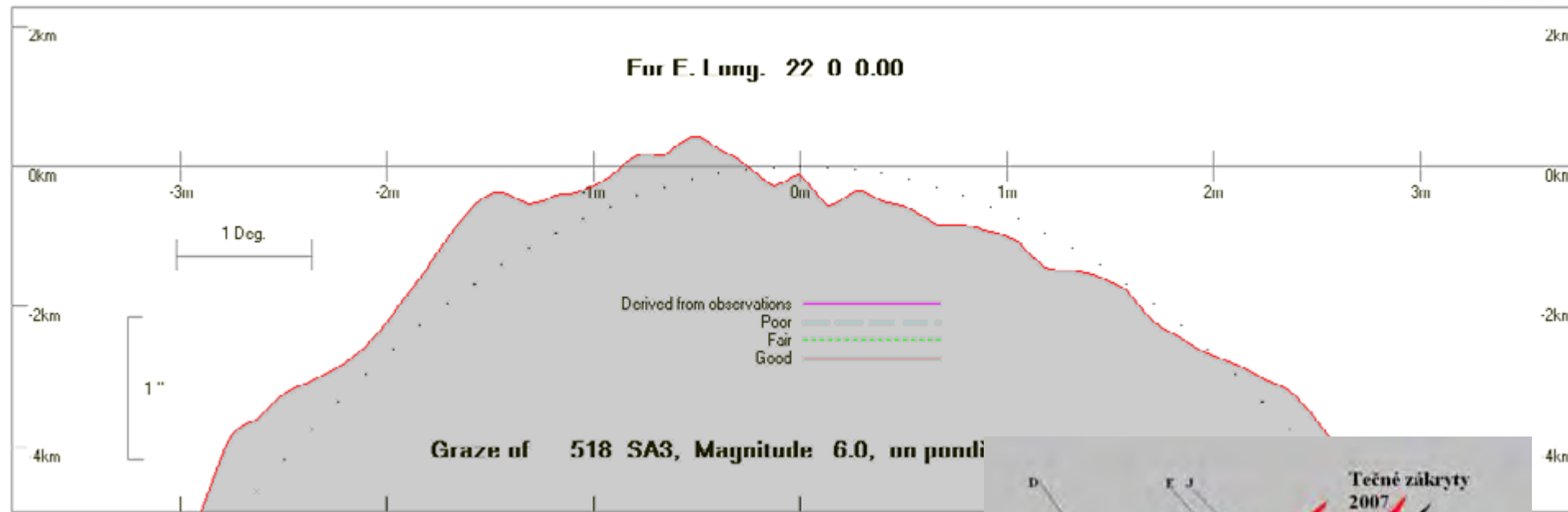


Tečné zákryty 2007

H

Grazing Occultation of 518 SA3 Magnitude 6.0s
 518 = 7 Tauri
 Date 2007 září 3 (pondělí) Nominal site altitude 0m

winOCCULT 3.1



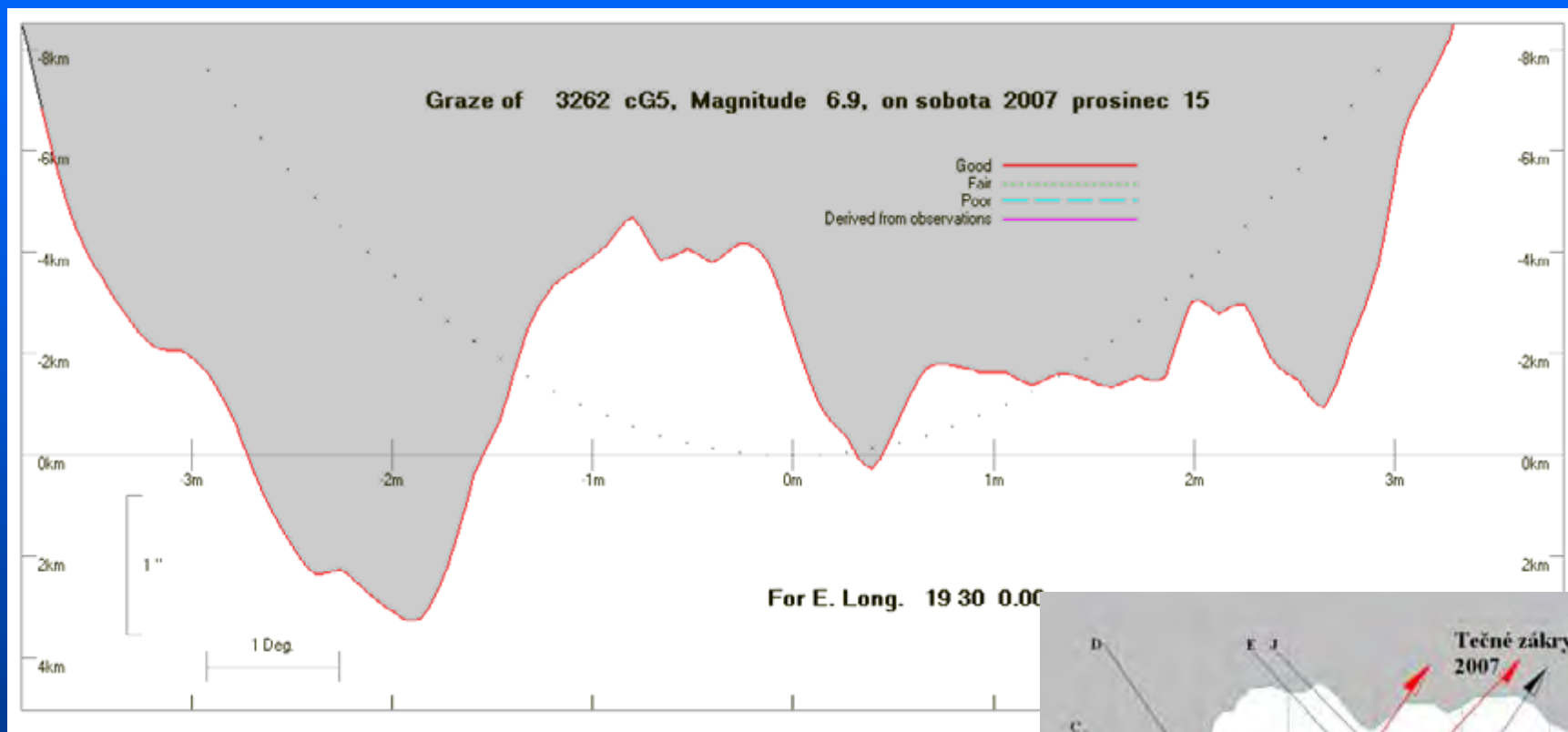
Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
2.0	4.9	6.4	7.2	7.7	8.1	8.3	8.5
4.0	5.0	6.4	7.2	7.7	8.1	8.4	8.6
6.0	5.8	7.3	8.1	8.6	9.0	9.3	9.5
8.0	5.8	7.3	8.1	8.6	9.0	9.3	9.5
10.0	5.8	7.3	8.1	8.6	9.0	9.3	9.5

Tečné zákryty 2007

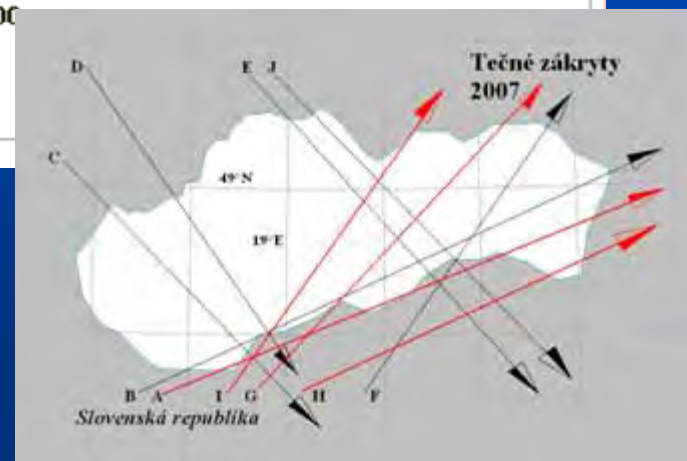
I

Grazing Occultation of 3262 cG5 Magnitude 6.9
 Date 2007 prosinec 15 (sobota) Nominal site altitude 0m



Limiting Magnitudes for various telescope apertures (in mm)

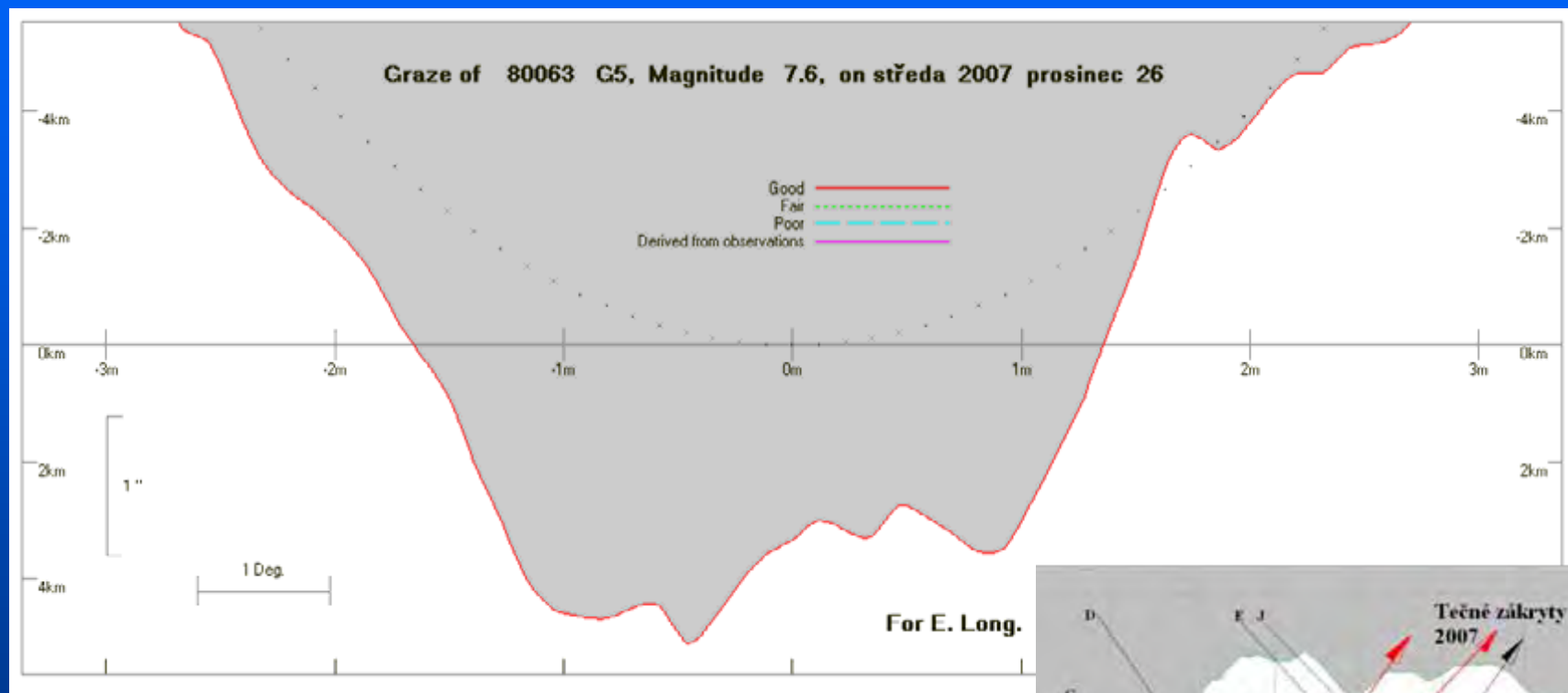
CA\Tdia	50	100	150	200	250	300	350
11.2	5.7	7.2	8.0	8.5	8.8	9.1	9.3
13.2	5.7	7.2	8.0	8.5	8.9	9.1	9.3
15.2	5.7	7.2	8.0	8.5	8.9	9.1	9.3
17.2	5.8	7.2	8.0	8.5	8.9	9.1	9.3
19.2	5.8	7.2	8.0	8.5	8.9	9.2	9.4



Tečné zákryty 2007

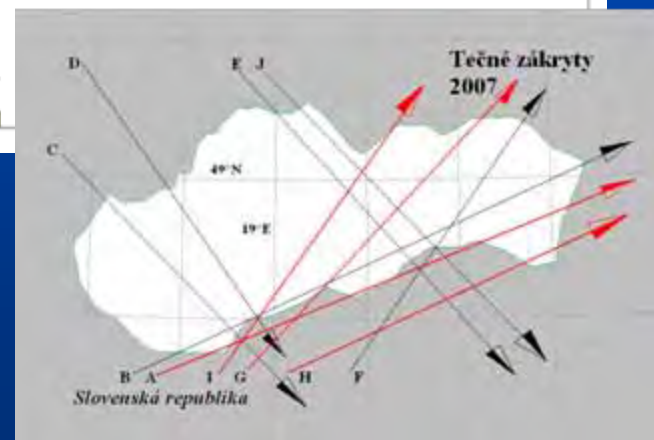
J

Grazing Occultation of 80063 G5 Magnitude 7.6
Date 2007 prosinec 26 (středa) Nominal site altitude 0m

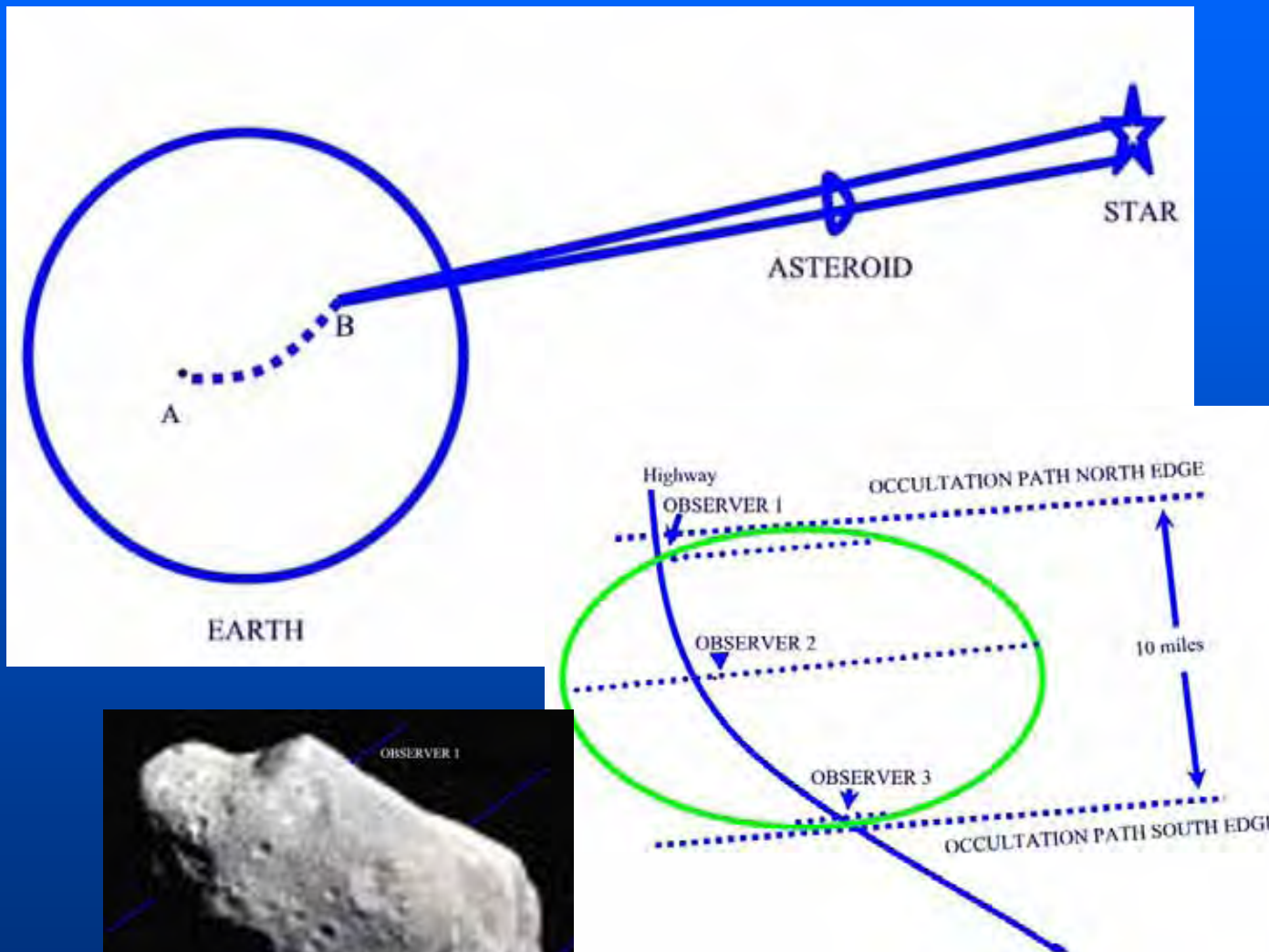
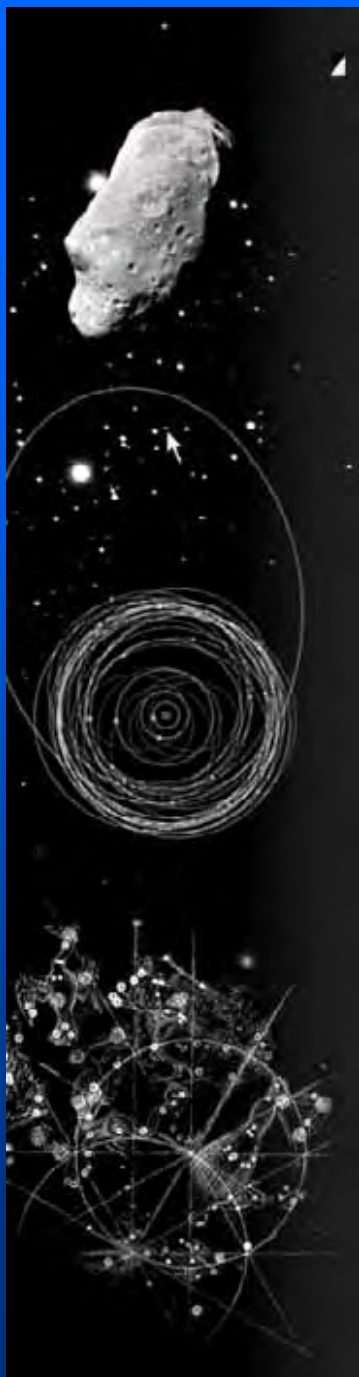


Limiting Magnitudes for various telescope apertures (in mm)

CA\Tdia	50	100	150	200	250	300	350
13.2	4.8	6.2	7.0	7.5	7.8	8.0	8.2
15.2	5.0	6.5	7.3	7.8	8.1	8.3	8.5
17.2	5.4	6.8	7.6	8.1	8.5	8.7	8.9
19.2	5.4	6.9	7.6	8.1	8.5	8.7	8.9
21.2	5.4	6.9	7.6	8.1	8.5	8.7	8.9



Zákryty hvězd planetkami

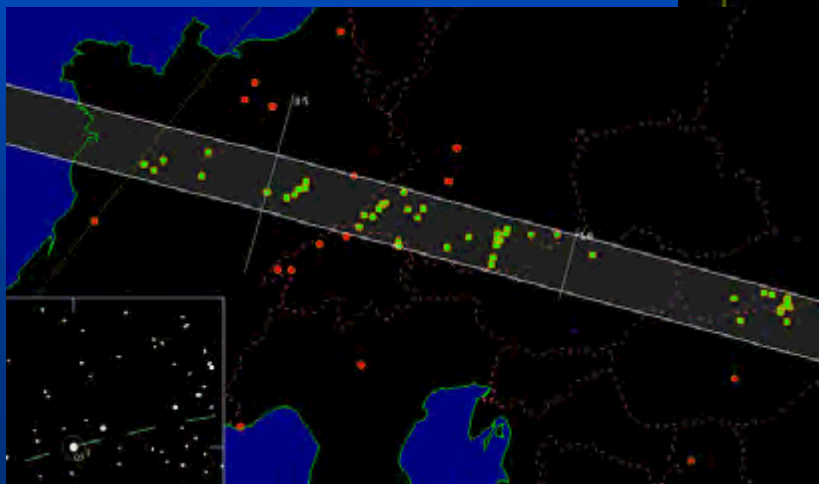
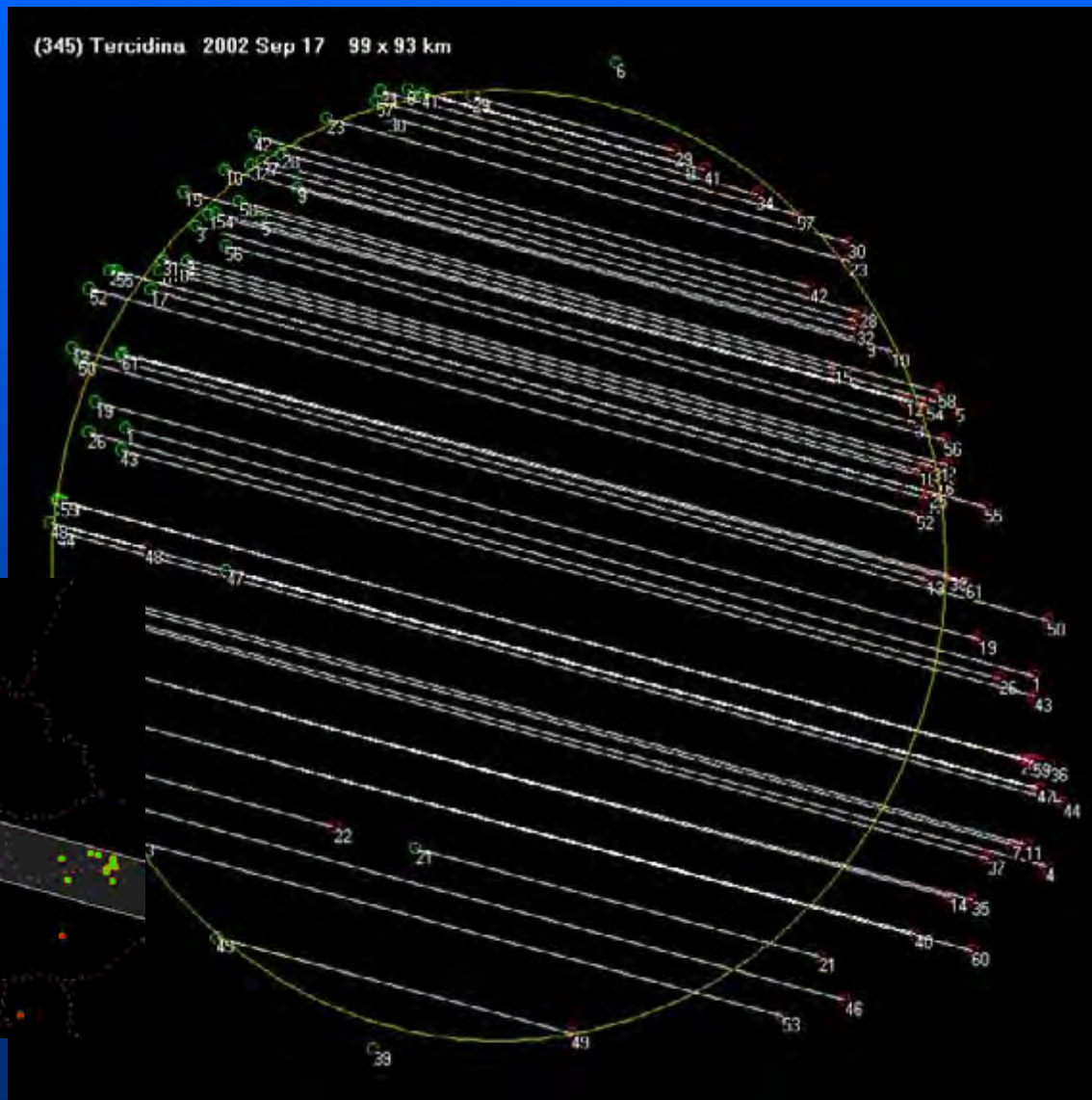


Zákryty hvězd planetkami

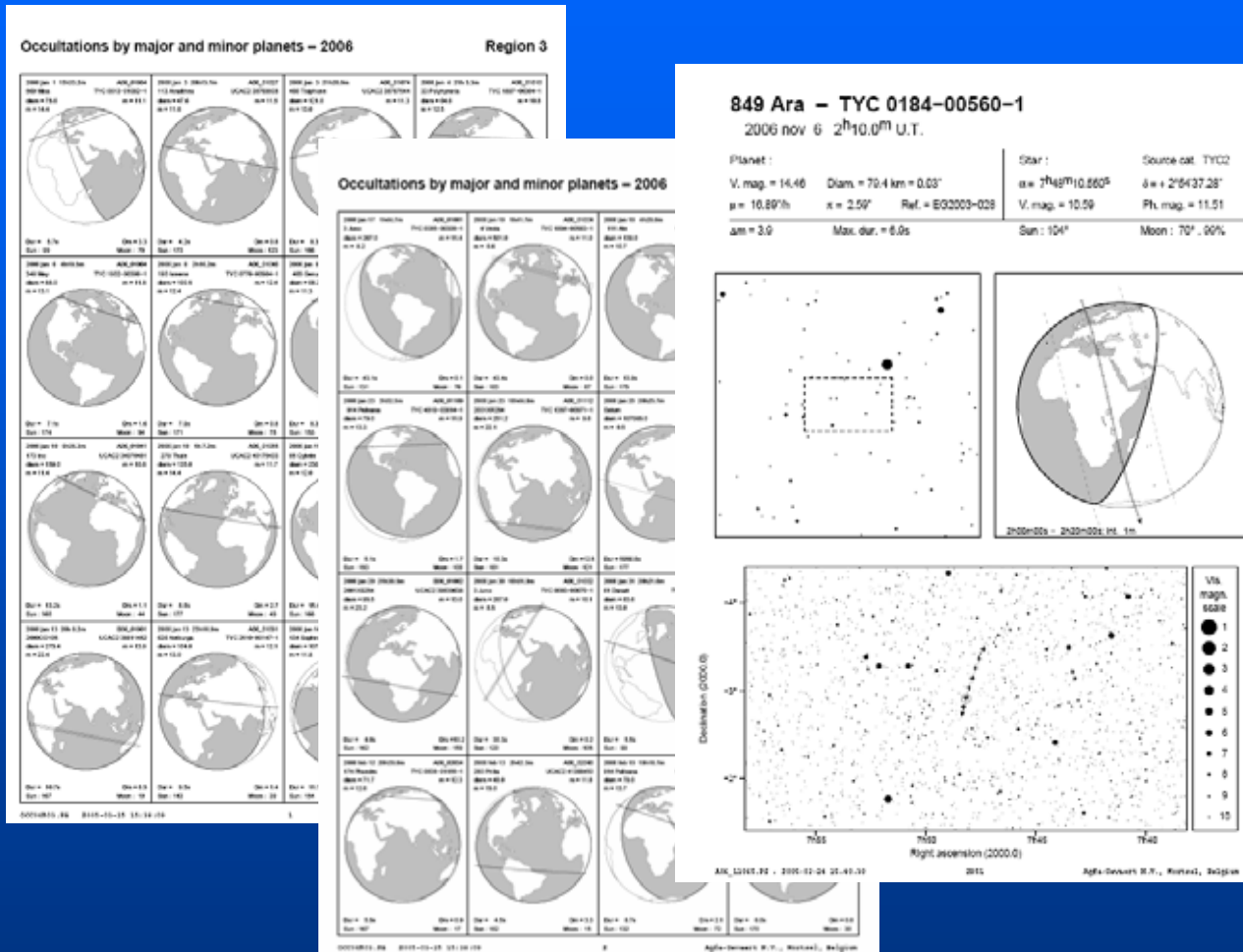
Když se po
povede!

57 pozitivních
měření +

2 nejbližší apulsy,
(kompletní seznam 63 míst)



Zákryty hvězd planetkami 2007



NOMINÁLNÍ PŘEDPOVĚDI

Edwin Goffin
Aartselaarstraat 14
B-2660 Hoboken

Belgium

ftp://ftp.ster.kuleuven.ac.be/dist/vvs/asteroids/2007/

Zákryty hvězd planetkami 2007

Nominální předpovědi REGION 3 – Evropa, severní Afriky, střední východ

Celkově předpověď 256 zákrytů

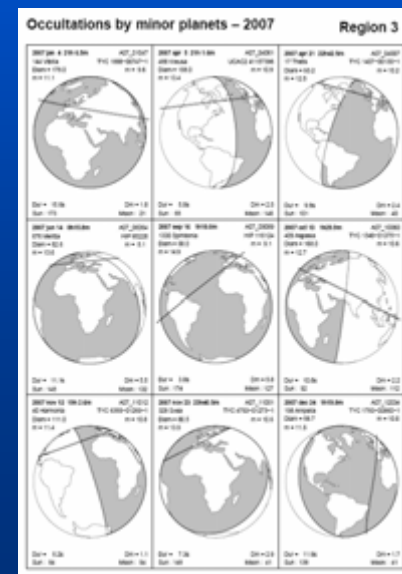
r	m	d	h	m	planetka	trv.	hvězda	mag	pok.
07	01	04	21	6.5	144 Vibilia	15.6	TYC 1888-00747-1	9.60	1.8
07	01	21	17	52.0	1796 Riga	8.6	HIP 22701	4.44	11.1
07	03	04	20	9.9	494 Virtus	8.4	TYC 2403-01283-1	8.90	5.8
07	03	07	1	43.1	539 Pamina	7.9	TYC 6130-00575-1	9.43	5.6
07	03	13	19	8.6	1072 Malva	8.6	TYC 2454-00643-1	9.17	6.1
07	03	22	19	35.7	7 Iris	9.0	TYC 1289-00060-1	9.59	0.9
07	04	10	1	39.3	11 Parthenope	16.8	HIP 57258	8.48	2.1
07	04	18	22	19.7	313 Chaldaea	10.6	TYC 5024-00428-1	9.96	2.3
07	05	05	22	28.9	252 Clementina	7.8	UCAC2 27321015	9.70	4.5
07	05	14	1	21.7	194 Prokne	9.3	TYC 0527-01767-1	9.76	2.2
07	05	18	22	20.1	1177 Gonnessia	6.6	HIP 76293	8.14	5.9
07	06	14	0	15.8	676 Melitta	11.1	HIP 95228	8.14	5.5
07	07	05	0	22.2	482 Petrina	5.1	TYC 5131-00253-1	8.90	3.9
07	07	24	1	6.9	137 Meliboea	18.3	TYC 0464-02162-1	9.07	2.5
07	07	31	2	44.6	718 Erida	26.4	HIP 1917	9.08	6.4
07	08	30	23	5.7	377 Campania	27.6	TYC 5719-01066-1	8.09	5.3
07	09	10	20	53.5	654 Zelinda	11.1	TYC 0539-00499-1	9.42	3.4
07	09	11	22	46.3	713 Luscinia	13.1	TYC 5193-00551-1	9.58	3.8
07	10	06	5	15.9	2000CG105	7.3	TYC 0824-01152-1	9.13	14.2
07	10	07	17	18.3	336 Lacadiera	6.9	TYC 1198-00291-1	9.37	3.4
07	11	05	20	28.4	584 Semiramis	8.1	TYC 2353-00176-1	9.33	1.6

Kriteria výběru:

* > 10. mag
trvání > 5s
pokles > 0,5 mag

Jiný pohled:

dráha stopy



Zákryty hvězd planetkami 2007

144 Vibilia – TYC 1888–00747–1

2007 jan 4 21^h 6.5^m U.T.

Planet :

V. mag. = 11.11

Diam. = 178.0 km = 0.16"

μ = 36.81"/h

π = 5.72"

Ref. = EG2004

Δm = 1.8

Max. dur. = 15.6s

Star :

Source cat. TYC2

α = 6^h39^m57.296^s

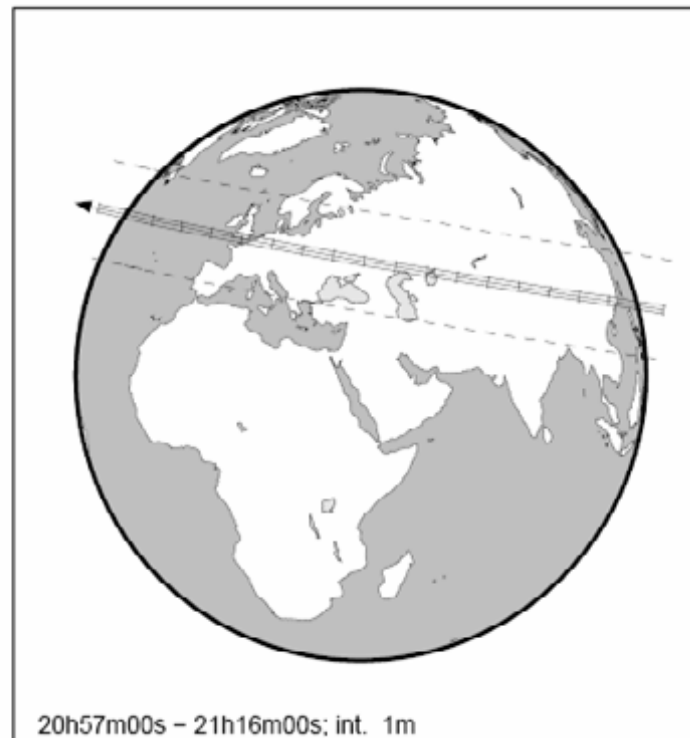
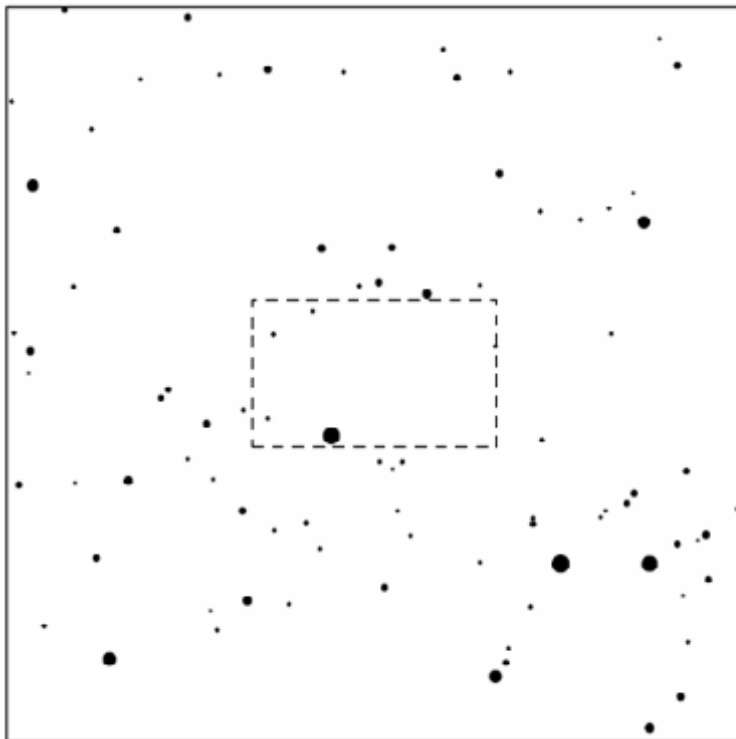
δ = +26°23'48.21"

V. mag. = 9.60

Ph. mag. = 9.80

Sun : 173°

Moon : 21° , 98%



Zákryty hvězd planetkami 2007

1024 Hale – TYC 2416-01207-1

2007 jan 10 20^h36.5^m U.T.

Planet :

V. mag. = 14.67

Diam. = 43.2 km = 0.03"

μ = 26.04"/h

π = 4.91"

Ref. = MPO77283

Star :

Source cat. TYC2

α = 5^h33^m44.313^s

δ = +37°28'27.48"

V. mag. = 11.03

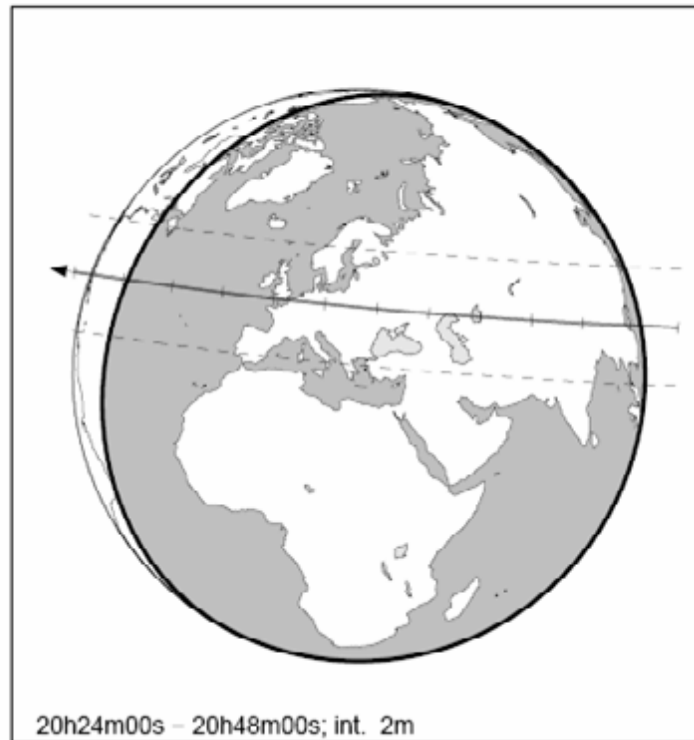
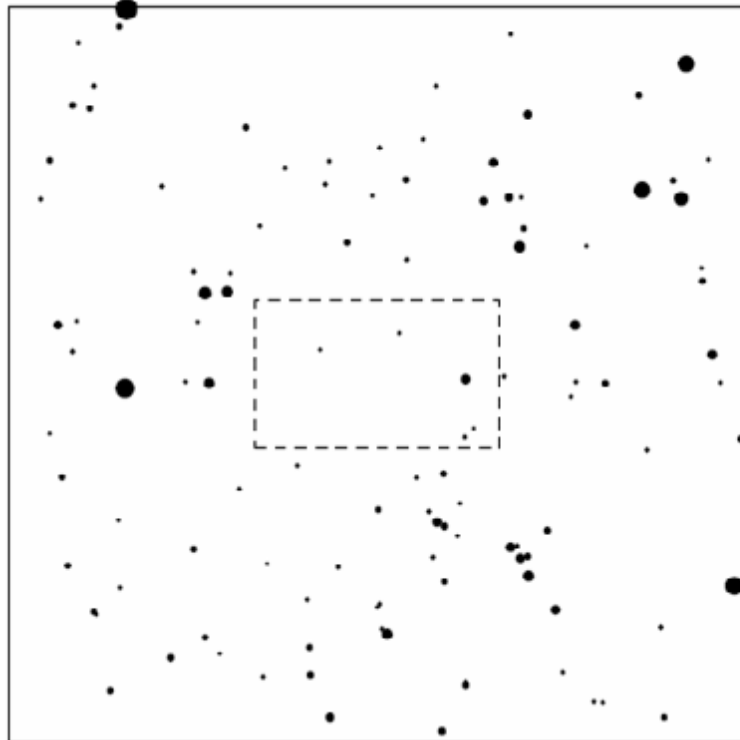
Ph. mag. = 11.08

Δm = 3.7

Max. dur. = 4.6s

Sun : 151°

Moon : 108° , 56%



Zákryty hvězd planetkami 2007

419 Aurelia – UCAC2 38407618

2007 jan 28 20^h 5.4^m U.T.

Planet :

V. mag. = 13.44

Diam. = 133.0 km = 0.08"

μ = 24.80"/h

π = 3.74"

Ref. = EG2003-055

Δm = 1.7

Max. dur. = 11.3s

Star :

Source cat. UCAC2

α = 6^h27^m17.143^s

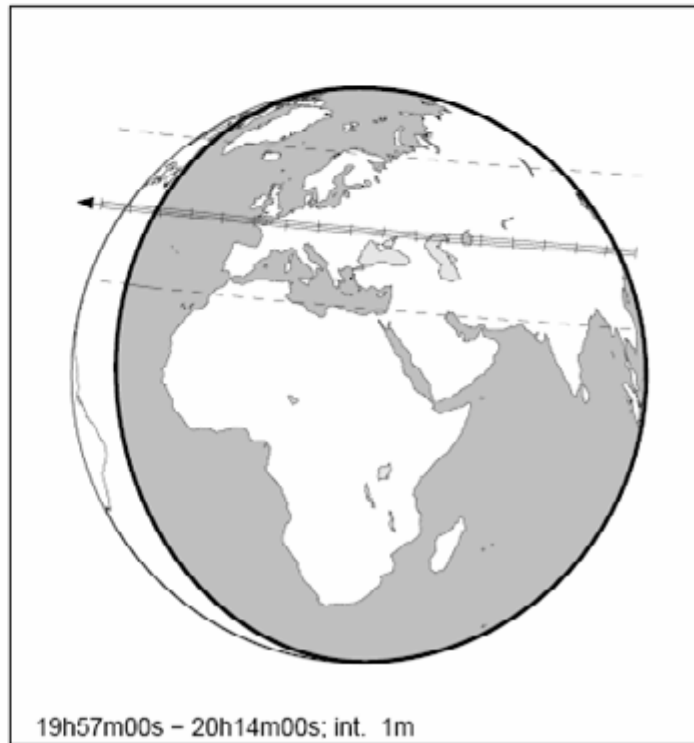
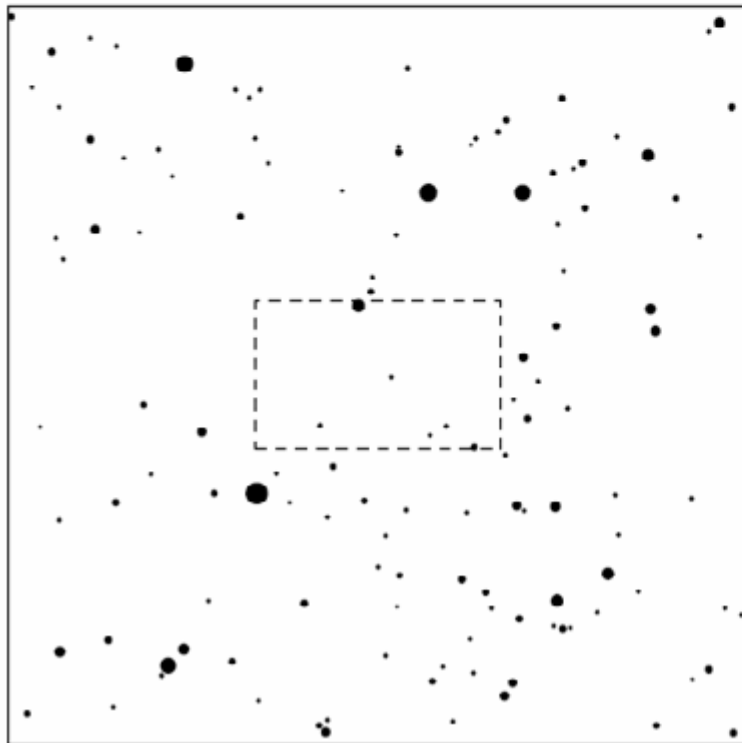
δ = +18°47'36.51"

V. mag. = 11.97

Ph. mag. = 0.00

Sun : 147°

Moon : 23° , 80%



Zákryty hvězd

389 Industria – UCAC2 39968314

planetkami 2007

2007 feb 27 18^h54.9^m U.T.

Planet :

V. mag. = 13.08

Diam. = 81.0 km = 0.04"

μ = 38.32"/h

π = 3.44"

Ref. = EG2005

Star :

Source cat. UCAC2

α = 3^h57^m31.778^s

δ = +23°11'56.24"

V. mag. = 11.31

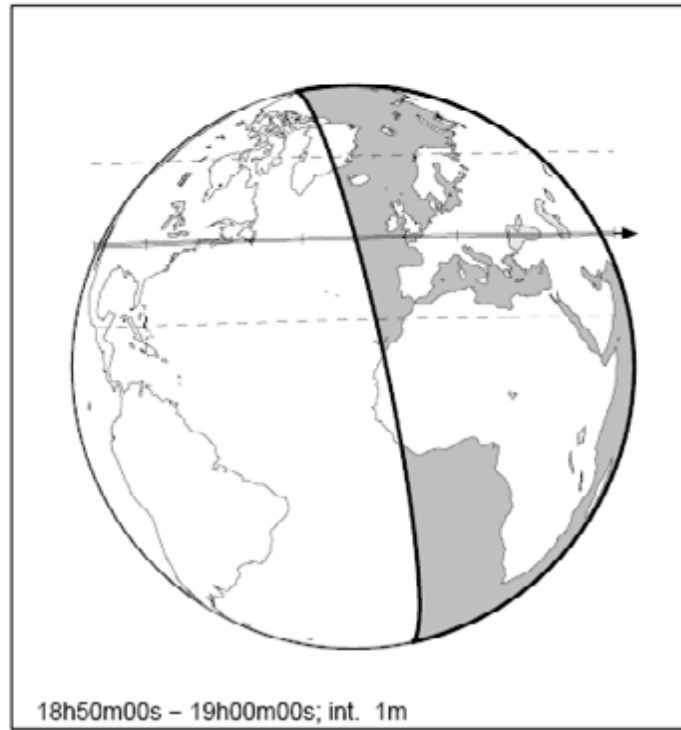
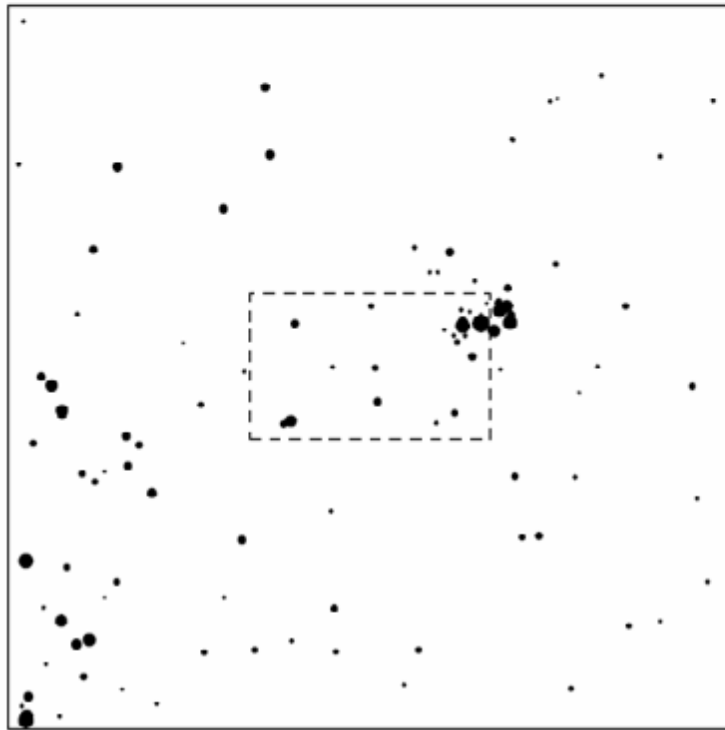
Ph. mag. = 0.00

Δm = 2.0

Max. dur. = 4.1s

Sun : 83°

Moon : 49° , 84%



Zákryty hvězd planetkami 2007

488 Kreusa – UCAC2 41157396

2007 apr 5 21^h 1.6^m U.T.

Planet :

V. mag. = 13.37

Diam. = 158.0 km = 0.07"

μ = 45.32"/h

π = 2.97"

Ref. = EG2005

Δm = 2.5

Max. dur. = 5.8s

Star :

Source cat. UCAC2

α = 5^h34^m16.608^s

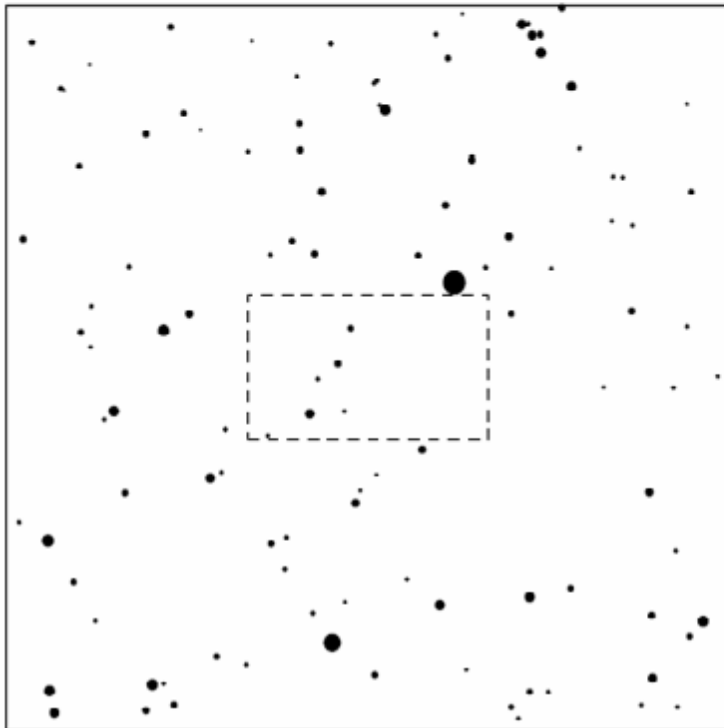
δ = +26°50'46.61"

V. mag. = 10.94

Ph. mag. = 0.00

Sun : 68°

Moon : 146° , 91%



20h58m00s – 21h05m00s, int. 30s

Zákryty hvězd

479 Caprera – TYC 5015–00309–1 planetkami 2007

2007 apr 18 23^h 1.3^m U.T.

Planet :

V. mag. = 14.62

Diam. = 77.5 km = 0.04"

μ = 27.32"/h

π = 3.69"

Ref. = EG2003–067

Δm = 3.3

Max. dur. = 5.9s

Star :

Source cat. TYC2

α = 15^h26^m01.976^s

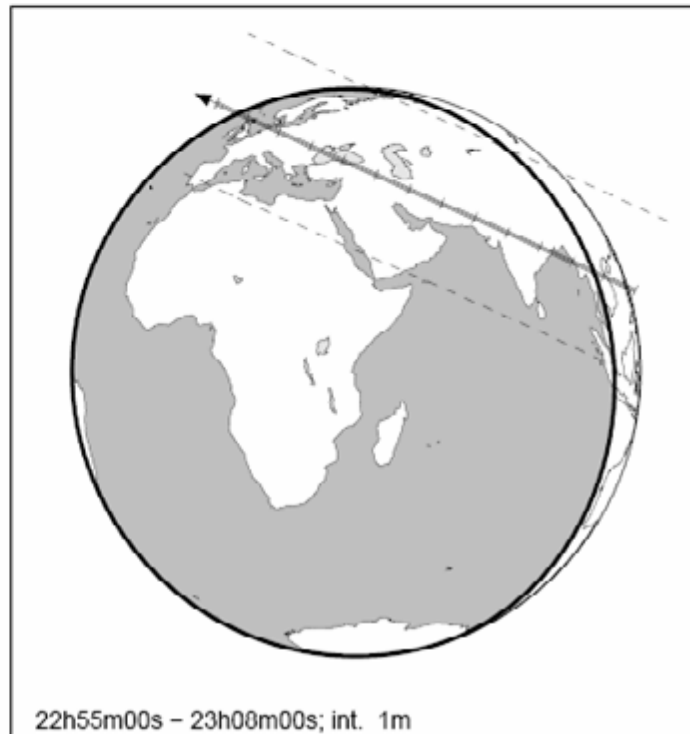
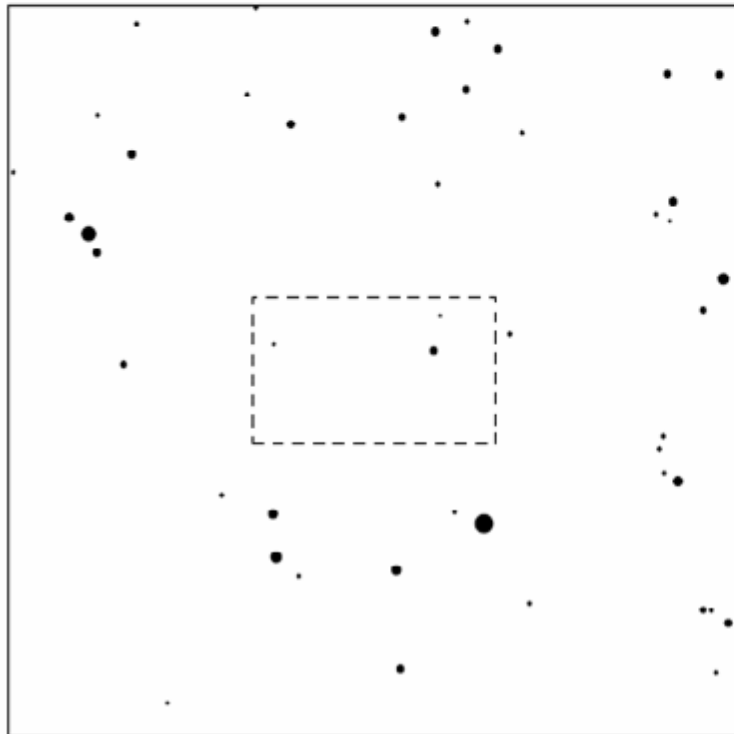
δ = – 6°14'45.68"

V. mag. = 11.38

Ph. mag. = 12.30

Sun : 154°

Moon : 163° , 3%



Zákryty hvězd planetkami 2007

17 Thetis – TYC 1407–00130–1

2007 apr 21 22^h42.5^m U.T.

Planet :

V. mag. = 12.48

Diam. = 93.2 km = 0.06"

μ = 22.23"/h

π = 4.17"

Ref. = MPC38747

Star :

Source cat. TYC2

α = 9^h06^m04.631^s

δ = +20°08'48.31"

V. mag. = 10.22

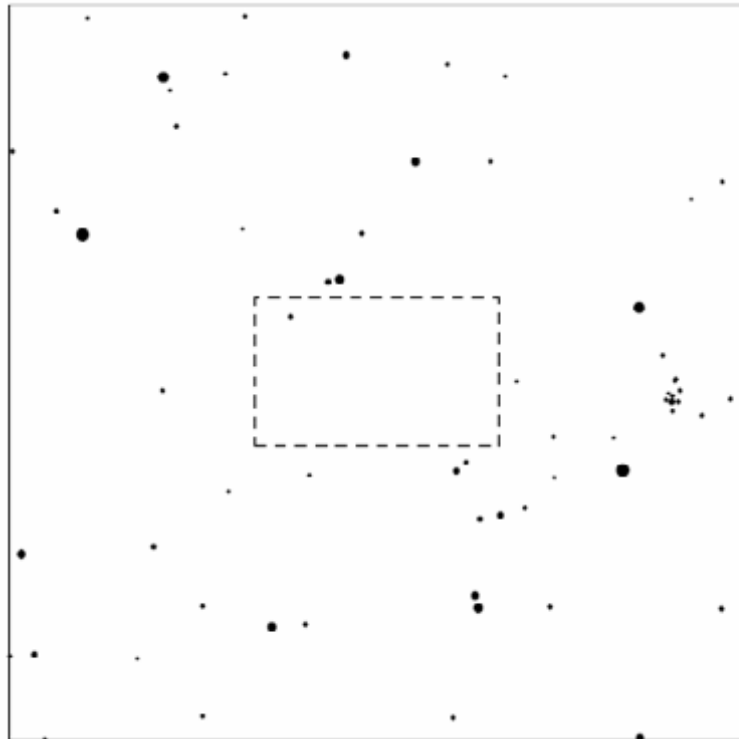
Ph. mag. = 11.24

Δm = 2.4

Max. dur. = 9.9s

Sun : 101°

Moon : 40°, 26%



Zákryty hvězd planetkami 2007

676 Melitta – TYC 5707-01189-1

2007 jul 12 21^h47.2^m U.T.

Planet :

V. mag. = 13.18

Diam. = 82.6 km = 0.06"

μ = 31.72"/h

π = 4.97"

Ref. = EG2005-084

Star :

Source cat. TYC2

α = 19^h02^m01.045^s

δ = - 8°40'23.23"

V. mag. = 11.66

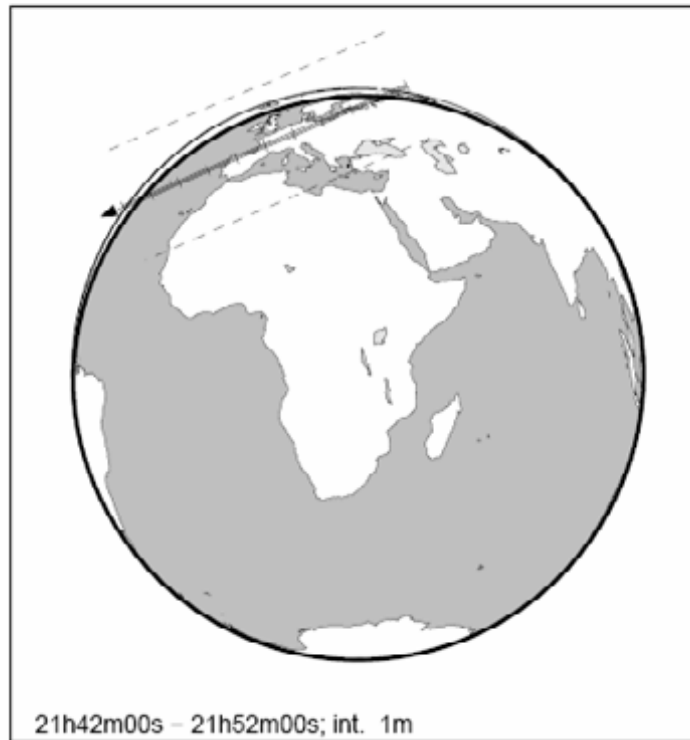
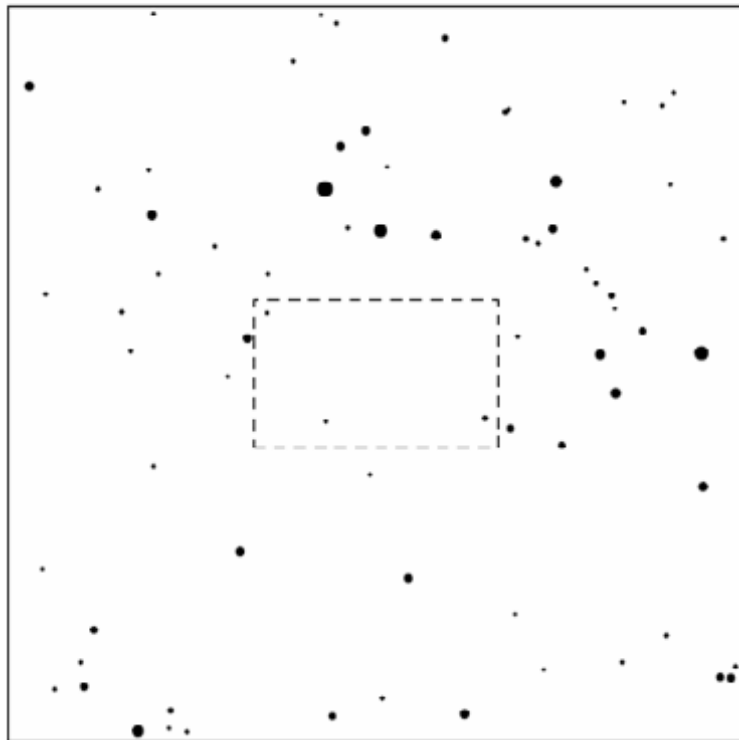
Ph. mag. = 12.36

Δm = 1.8

Max. dur. = 7.3s

Sun : 165°

Moon : 155° , 3%



Zákryty hvězd planetkami 2007

654 Zelinda – TYC 0564–00169–1

2007 jul 13 0^h 7.1^m U.T.

Planet :

V. mag. = 13.18

Diam. = 132.0 km = 0.09"

μ = 24.60"/h

π = 4.30"

Ref. = EG2005

Δm = 2.1

Max. dur. = 13.0s

Star :

Source cat. TYC2

α = 22^h08^m36.106^s

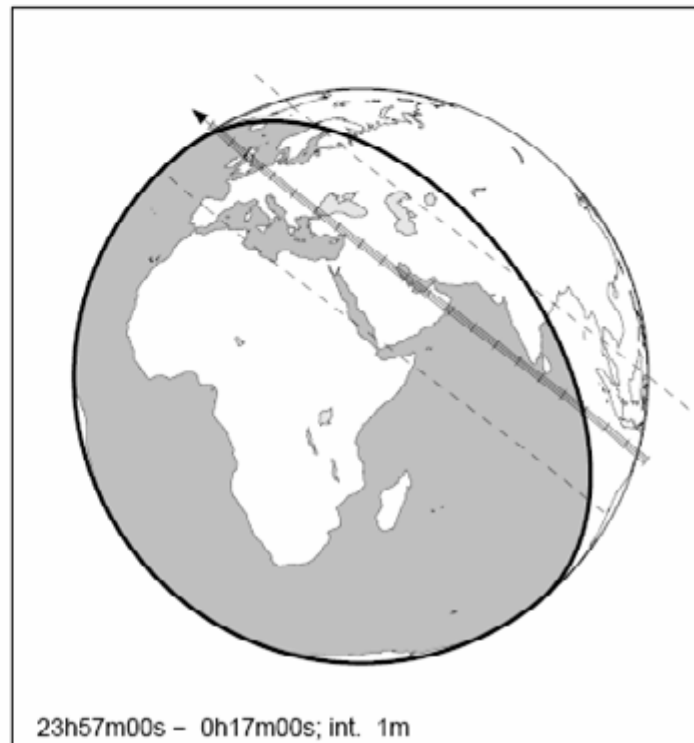
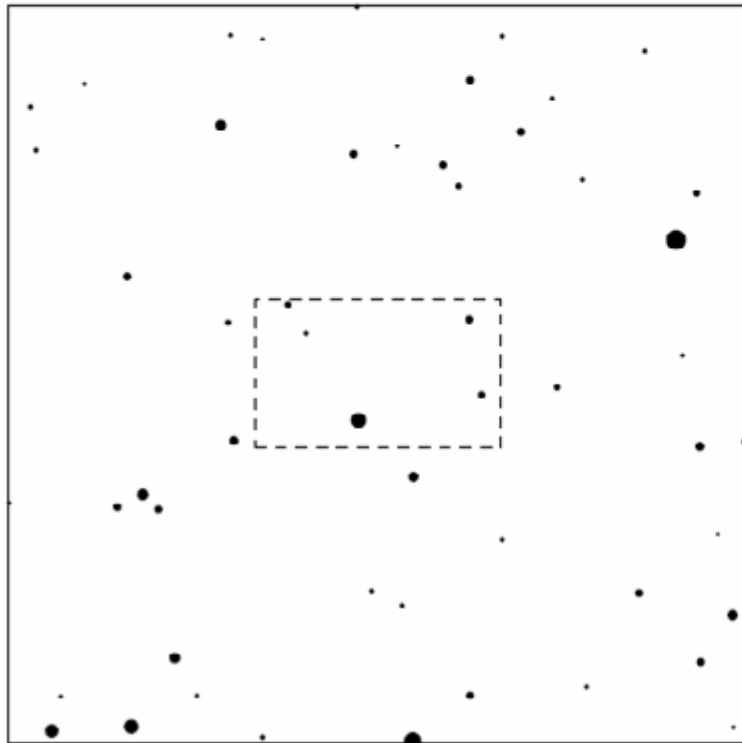
δ = + 7°08'20.60"

V. mag. = 11.29

Ph. mag. = 12.13

Sun : 130°

Moon : 111°, 3%



23h57m00s – 0h17m00s; int. 1m

Zákryty hvězd planetkami 2007

445 Edna – TYC 2255–00885–1

2007 aug 5 22^h23.3^m U.T.

Planet :

V. mag. = 13.84

Diam. = 89.0 km = 0.06"

μ = 30.00"/h

π = 4.47"

Ref. = EG2005

Star :

Source cat. TYC2

α = 23^h57^m30.772^s

δ = +26°54'45.85"

V. mag. = 10.90

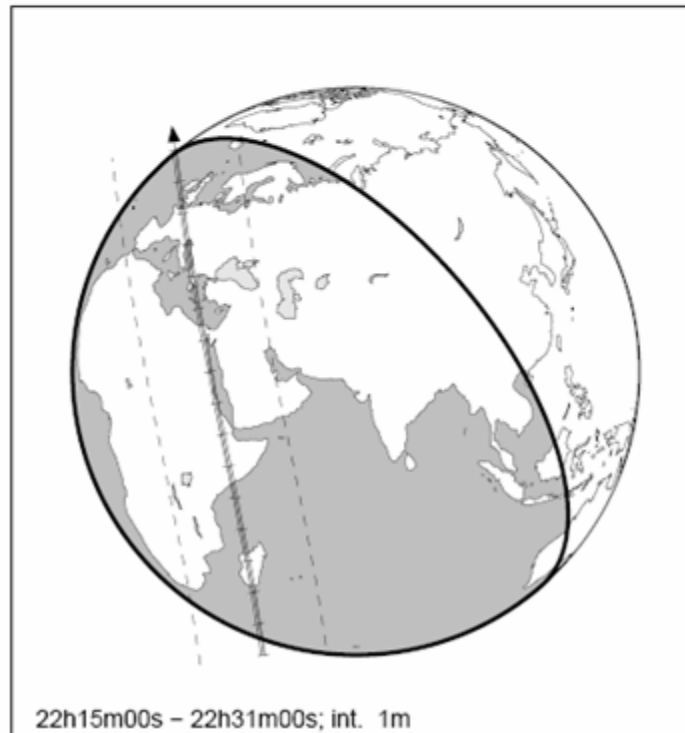
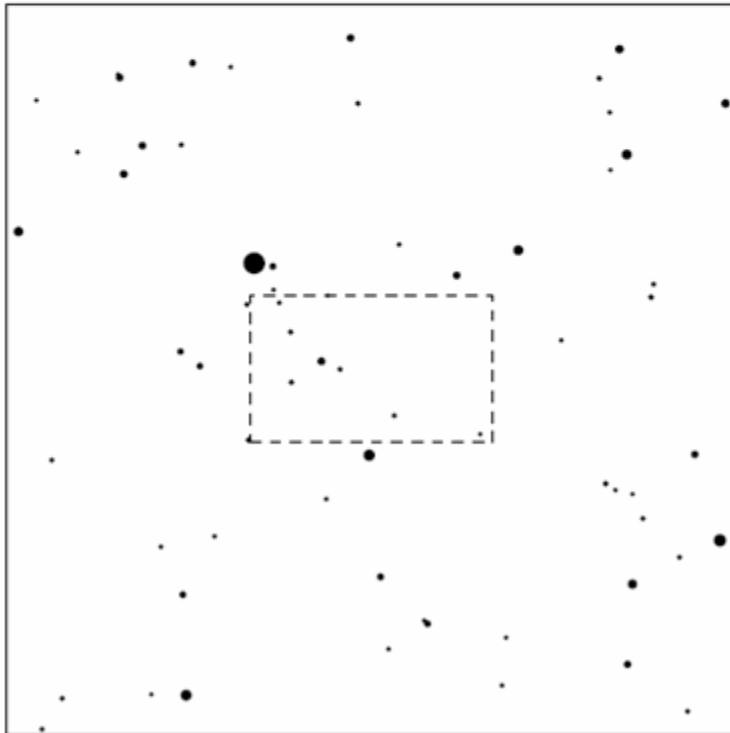
Ph. mag. = 12.57

Δm = 3.0

Max. dur. = 7.5s

Sun : 118°

Moon : 37° , 50%



Zákryty hvězd planetkami 2007

1330 Spiridonia – HIP 116124

2007 sep 16 1^h10.0^m U.T.

Planet :

V. mag. = 14.92

Diam. = 58.0 km = 0.03"

μ = 31.33"/h

π = 3.66"

Ref. = MPO73855

Δm = 5.8

Max. dur. = 3.8s

Star :

Source cat. HIP

α = 23^h31^m46.401^s

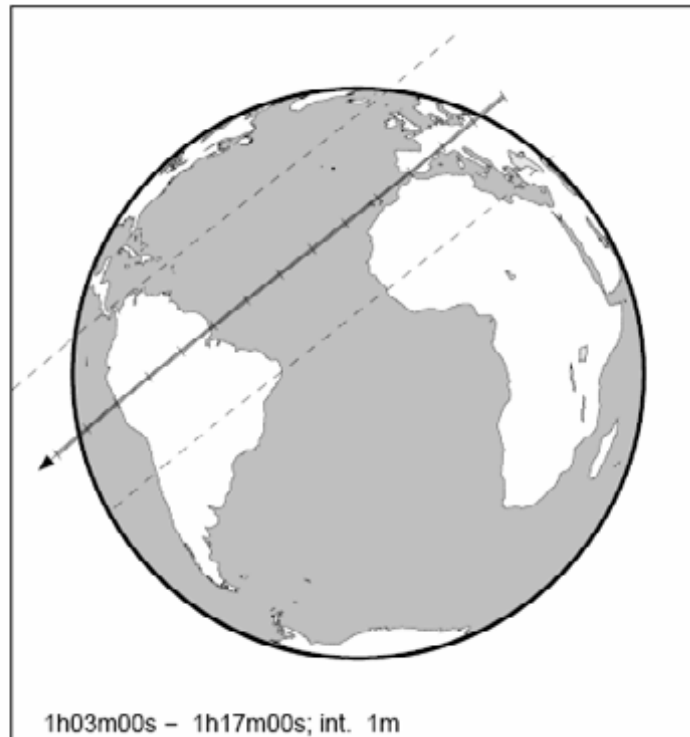
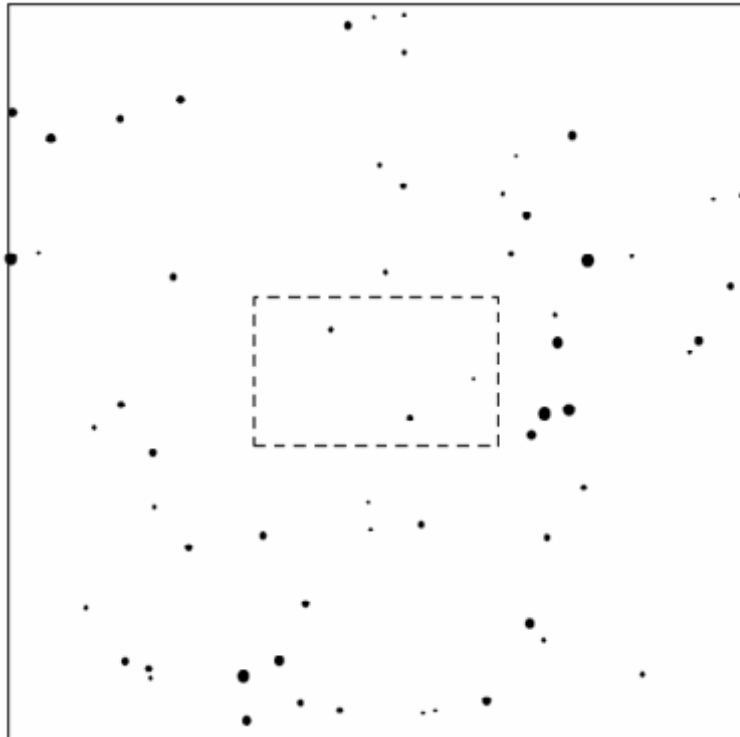
δ = - 8°19'43.24"

V. mag. = 9.11

Ph. mag. = 9.62

Sun : 174°

Moon : 127° , 18%



Zákryty hvězd planetkami 2007

903 Nealley – TYC 0751–00893–1

2007 oct 5 1^h11.6^m U.T.

Planet :

V. mag. = 15.63

Diam. = 65.7 km = 0.03"

μ = 27.08"/h

π = 2.93"

Ref. = EG2005

Δm = 3.6

Max. dur. = 4.0s

Star :

Source cat. TYC2

α = 6^h48^m22.787^s

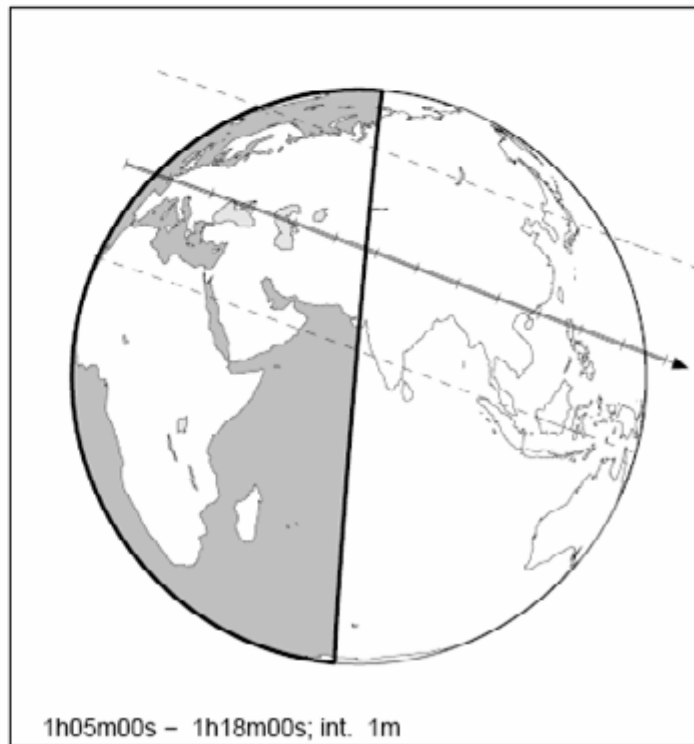
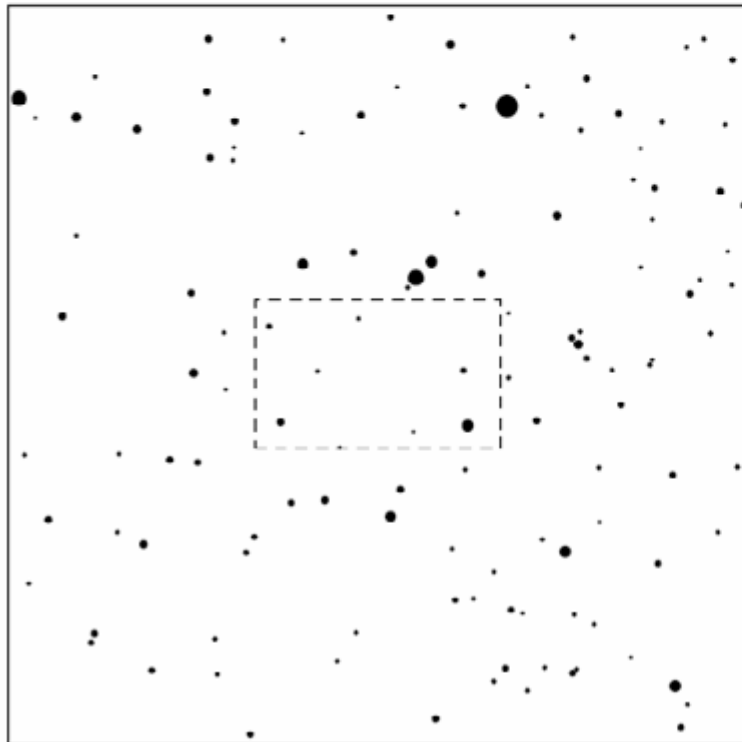
δ = +10°55'33.22"

V. mag. = 12.04

Ph. mag. = 12.50

Sun : 89°

Moon : 24° , 33%



Zákryty hvězd

409 Aspasia – TYC 1349-01375-1 planetkami 2007

2007 oct 13 1^h29.9^m U.T.

Planet :

V. mag. = 12.66

Diam. = 168.0 km = 0.09"

μ = 30.82"/h

π = 3.52"

Ref. = EG2003-066

Δm = 2.2

Max. dur. = 10.8s

Star :

Source cat. TYC2

α = 7^h11^m04.173^s

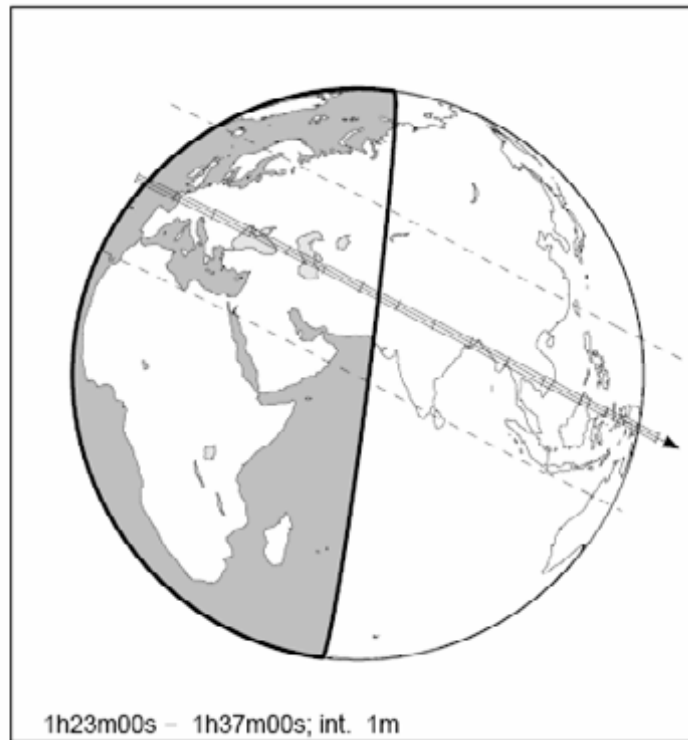
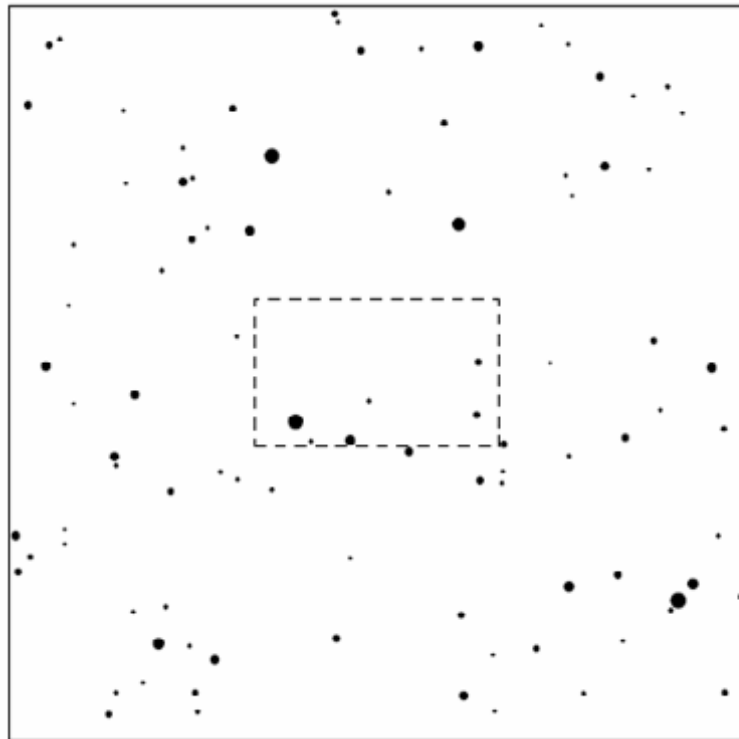
δ = +17°31'38.84"

V. mag. = 10.63

Ph. mag. = 11.83

Sun : 92°

Moon : 112° , 3%



Zákryty hvězd planetkami 2007

731 Sorga – TYC 0630-00383-1

2007 oct 24 3^h39.6^m U.T.

Planet :

V. mag. = 13.24

Diam. = 46.6 km = 0.04"

μ = 34.40"/h

π = 5.04"

Ref. = EG2002-042

Δm = 2.1

Max. dur. = 3.8s

Star :

Source cat. TYC2

α = 2^h05^m39.677^s

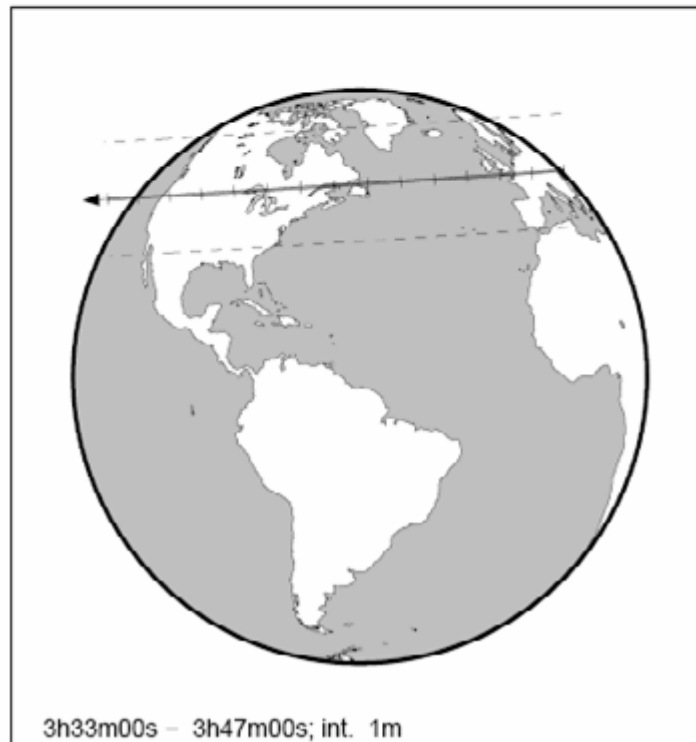
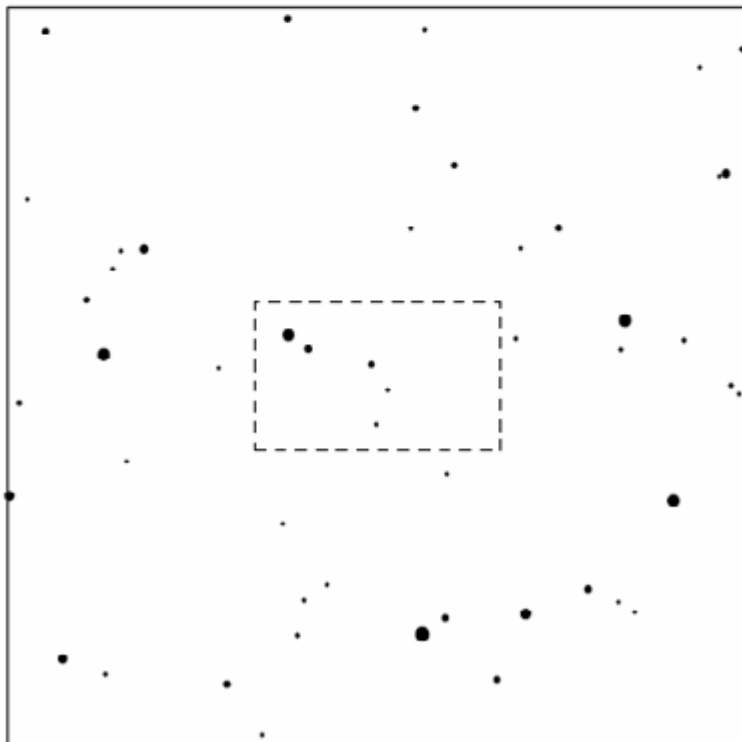
δ = + 8°00'09.98"

V. mag. = 11.31

Ph. mag. = 11.88

Sun : 175°

Moon : 31° , 94%



Zákryty hvězd planetkami 2007

329 Svea – TYC 4753–01273–1

2007 nov 23 23^h40.5^m U.T.

Planet :

V. mag. = 13.45

Diam. = 80.5 km = 0.07"

μ = 33.33"/h

π = 5.38"

Ref. = EG2005–177

Δm = 2.9

Max. dur. = 7.3s

Star :

Source cat. TYC2

α = 5^h28^m48.503^s

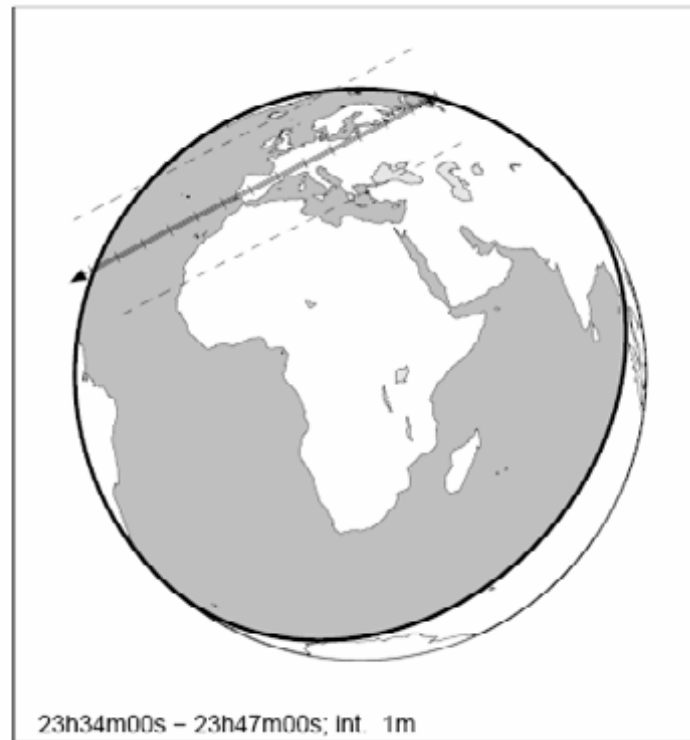
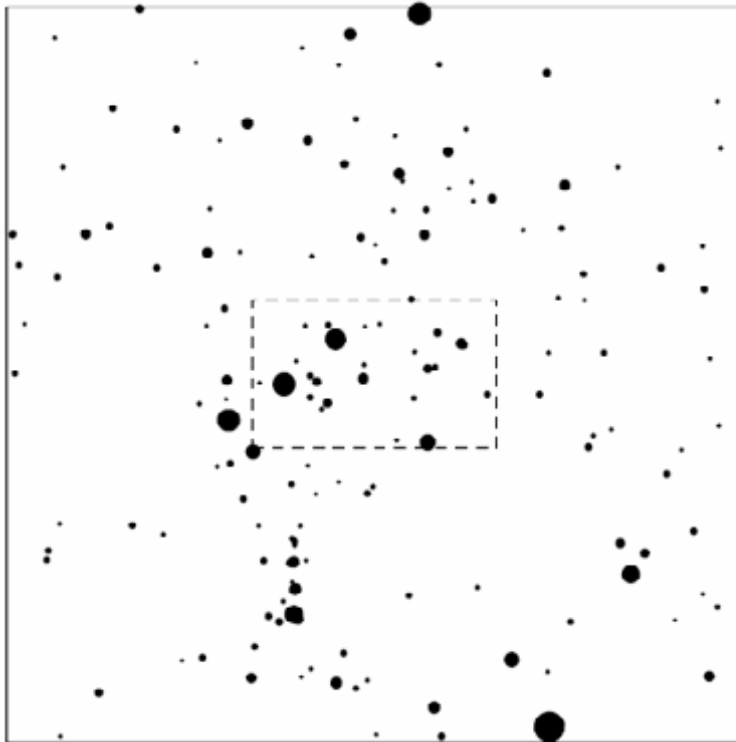
δ = – 1°00'35.33"

V. mag. = 10.64

Ph. mag. = 12.59

Sun : 148°

Moon : 41° , 99%



Zákryty hvězd

198 Ampella – TYC 1783-00860-1

planetkami 2007

2007 dec 24 1^h19.0^m U.T.

Planet :

V. mag. = 11.54

Diam. = 58.7 km = 0.06"

μ = 18.36"/h

π = 6.62"

Ref. = MPC30889

Star :

Source cat. TYC2

α = 3^h08^m02.393^s

δ = +23°07'33.31"

V. mag. = 10.04

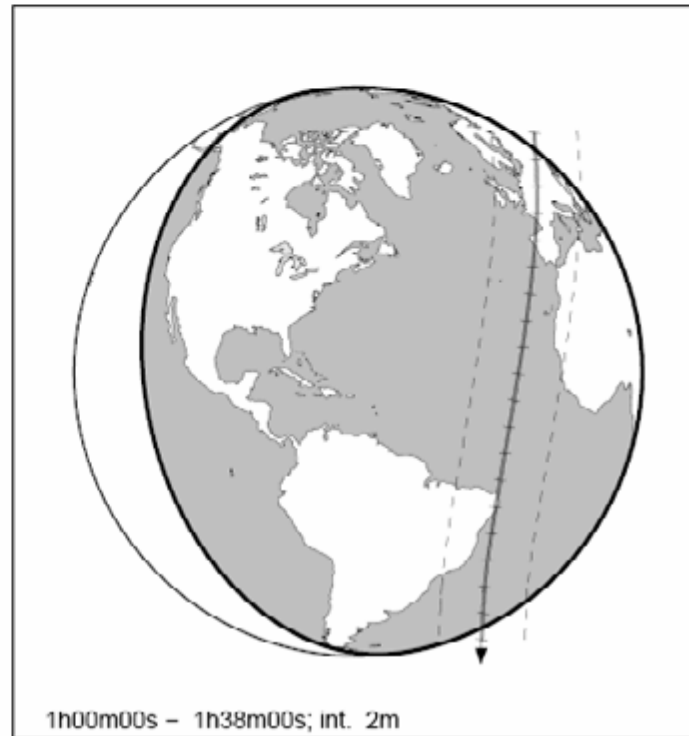
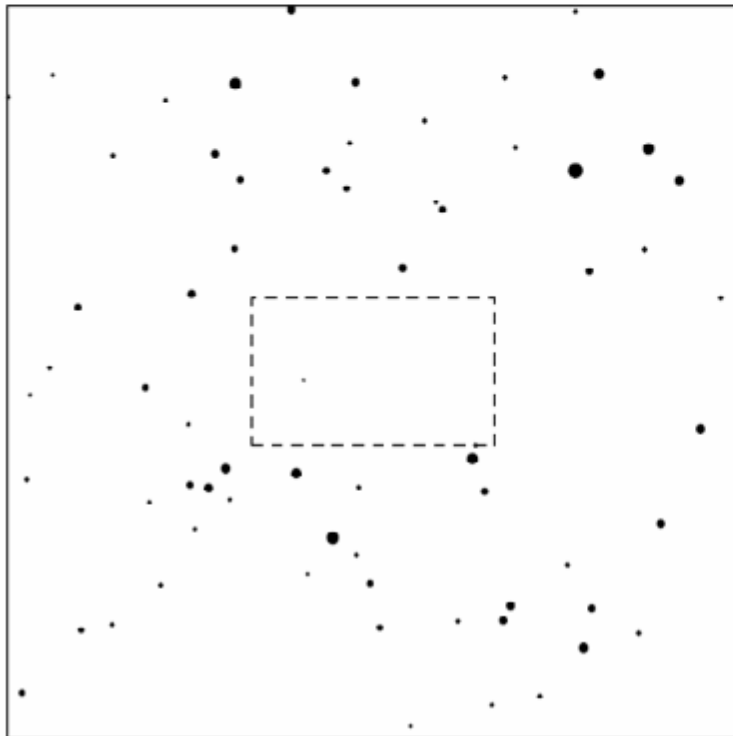
Ph. mag. = 10.42

Δm = 1.7

Max. dur. = 11.9s

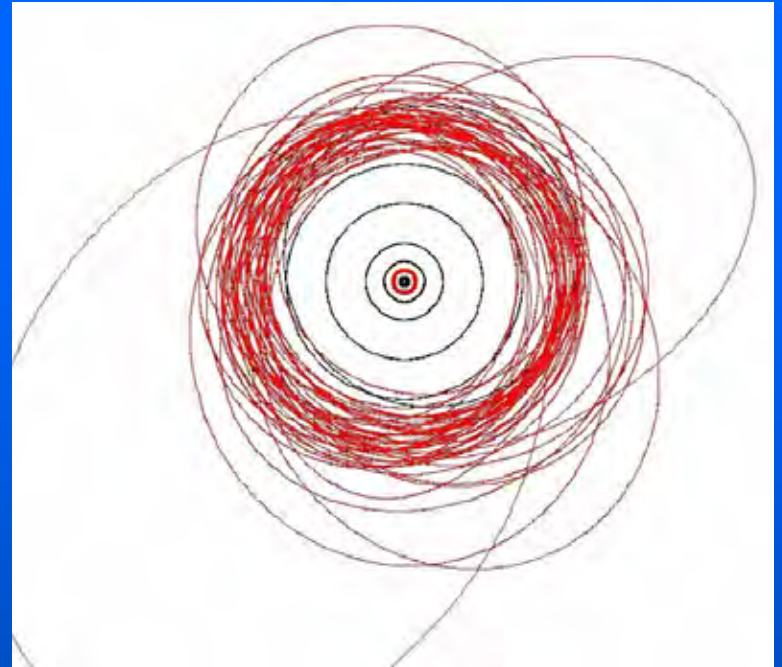
Sun : 138°

Moon : 41° ,100%



Zákryty hvězd transneptuny 2007

zajímavé a unikátní úkazy
mimořádně slabé zakrývané hvězdy



r	m	d	h	m	planetka	trv.	hvězda	mag	pok.
07	03	04	23	1.1	2001 HY65	8.2	TYC 4953-00316-1	11.9	10.5
07	04	08	22	5.2	2000 CJ105	10.0	UCAC2 34287196	12.4	10.4
07	05	30	21	14.3	1998 HH151	3.8	TYC 5554-00738-1	11.6	12.0
07	09	05	3	27.4	52975 Cyllarus	3.4	UCAC2 42203428	13.9	9.2
07	09	21	1	58.7	1995 WY2	18.4	UCAC2 4015862	13.1	11.0
07	10	07	23	16.2	2003 WL7	3.9	TYC 1791-00940-1	11.8	8.9
07	11	18	3	3.8	2002 XV93	14.1	UCAC2 43927695	13.5	7.6
07	11	20	21	2.6	2001 YJ140	5.8	UCAC2 41679848	13.3	8.6

UPŘESNĚNÍ

Up-dated: 2006 Jan 04, 21:07 UT

All Events

Upcoming Events:

January 2006

Event Date/Time	Reach	Asteroid	Star	Visibility	OS D A	Details
04 Jan, 05:07 UT '94	(113) Amalthea mag 11.6	TYC 1337-00403-1 mag 11.6	Caribbean, S Tx, Mexico	4 8m 4 0s 86°	[Link]	Schwaenen's predictions and the maps are produced by The phenomena were selected according the following second : diameter at least 25 km. Observation is marginal if star's magnitude > 11.5 : dia The table lists the following :
04 Jan, 05:16 UT '94	(347) Patia mag 16.3	20ACAC 34767145 mag 11.5	N Canada, Alaska	4 8m 2 0s 41°	[Link]	
04 Jan, 08:00 UT '73	(378) Bebeana mag 12.9	TYC 1300-00967-1 mag 9.5	Venezuela, Colomb			
04 Jan, 09:55 UT '94	(508) Oetavia mag 12.7	TYC 1917-02019-1 mag 10.0	Colombia, Mexico			
04 Jan, 11:06 UT '94	(140) Iwa mag 13.4	UCAC2 34316407 mag 12.0	Taiwan, Japan			
	(314) F. Scott	20ACAC 41110112				

Schwaenen's predictions and the maps are produced with WinOccult 3.6.0 and astorb.dat of December 21.

The phenomena were selected according the following criteria : star magnitude at least ≤ 12 ; magnitude drop at occultation at least 0.7 maximum ; duration at least 2 second ; diameter at least 25 km.

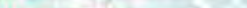
Observation is marginal if star's magnitude > 11.5 ; diameter < 25 km ; duration < 1.5 seconds

The name of the minor planet followed by a exclamation mark (!) indicates a marginal observation.

The name of the minor planet followed by two star (☆☆) indicates a double or suspected double asteroid.

The name of the minor planet followed by a red star (★) indicates a good observation, not too much difficult to make.

Day	Time U.T.	Minor planet	Coord	Country
01	15h28-15h39	569 Misa	Coord	Austria, Czech Rep, Poland, Belarus, Russia With data of Preston of December 14
01	21h21-21h35	466 Thelphosa	Coord	Turkey, Russia With data of Preston of December 14
04	20h51-21h16	1238 Thedappia (1)	Coord	Romania, Yugoslavia, Croatia, Slovenia, Italy, F
04	20h59-21h12	33 Polyhymnia	Coord	Russia, Sweden, Norway, United Kingdom With



Occultations astéroïdales pour la France en 2005-2006
2005-2008 Asteroidal Occultations for France

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Occultations astéroïdales pour la France
en 2005-2006

2005-2006 Asteroidal Occultations for France

[illegible]

Reviewed with Microsoft .NET 10-2009-08072 certificate and approvals. There are NOHC signatures for a maximum diameter of 11 cm, a maximum diameter of at least 2 cm, a the vt of each mag 12 and a maximum diameter of at least 10 mag.

Vous pouvez aussi les télécharger directement sur www.lespagesjaunes.fr ou les commander par téléphone au 01 40 40 40 40.

Les cartes ont été destinées à servir une mission de formation des candidats au baccalauréat et à promouvoir l'usage des équipements de communication. Tous les enseignants de cette partie du programme, sous réserve d'une mise-à-jour régulière, ont été impliqués.

These three have been produced only to give a further overview for anybody in a hurry - please note that social events are extremely interesting, so you have to make your own choice. ...)

ATTENTION: les deux DVD-R 128 CARTES sont en stock à jour en boutique sur les pages de [vous faire](#) ou de [vous faire](#). Ces deux à jour ont beaucoup plus de films et de vidéos que les autres DVD-R 128 CARTES.

Two bills, H.R. 1001 and H.R. 1002, were introduced in January of 2004 (H.R. 1001, H.R. 1002). These bills were the first attempts made with a goal to set up a

На 8 јул 1879 година, 2003. верзиона 22

15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
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1	2	3
---	---	---

725

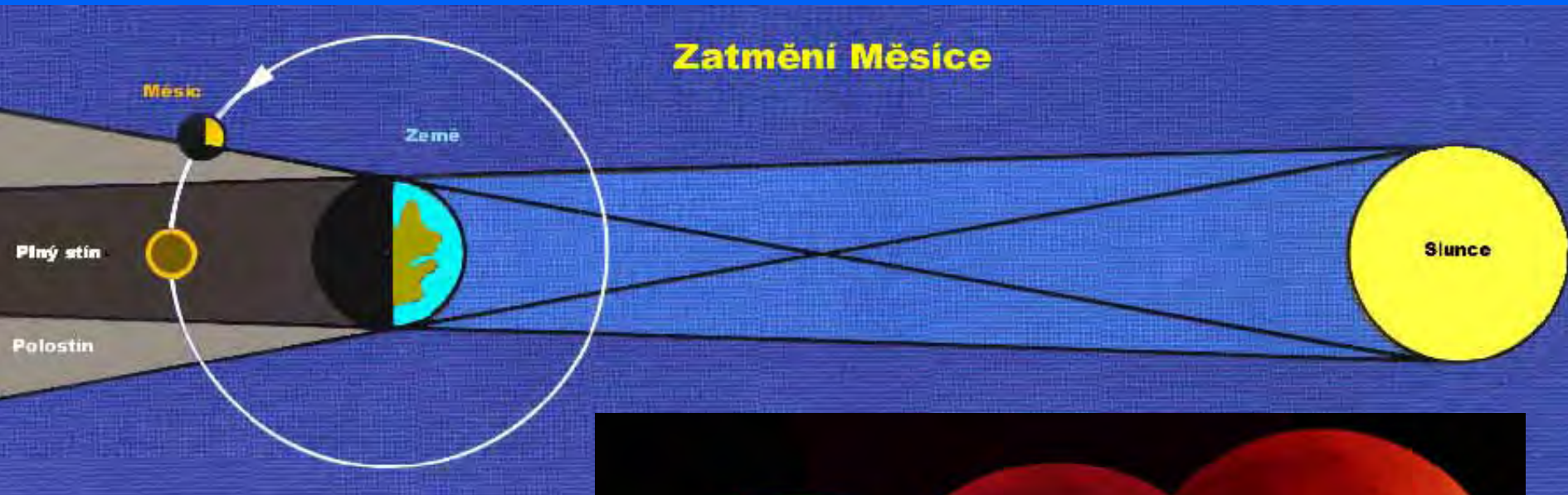
EAON
J. Schwaenen

<http://astrosurf.com/eaon/>

E. Frappa

<http://www.euraster.net/pred/index.html>

Příbuzné úkazy



Zatmění Měsíce



Úplné zatmění Měsíce

3. 3. 2007

Total Lunar Eclipse of 2007 Mar 03

Geocentric Conjunction = 23:00:47.6 UT J.D. = 2454163.45888
 Greatest Eclipse = 23:20:55.8 UT J.D. = 2454163.47287

Penumbral Magnitude = 2.3192 P. Radius = 1.1891° Gamma = 0.3174
 Umbral Magnitude = 1.2331 U. Radius = 0.6514° Axis = 0.2883°

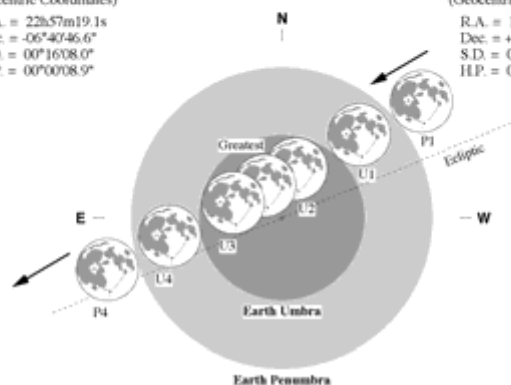
Saros Series = 123 Member = 52 of 73

Sun at Greatest Eclipse
 (Geocentric Coordinates)

R.A. = 22h57m19.1s
 Dec. = -06°40'46.6"
 S.D. = 00°16'08.0"
 H.P. = 00°00'08.9"

Moon at Greatest Eclipse
 (Geocentric Coordinates)

R.A. = 10h57m52.2s
 Dec. = +06°56'00.6"
 S.D. = 00°14'51.3"
 H.P. = 00°54'31.1"



Eclipse Semi-Durations

Penumbral = 03h02m46s
 Umbral = 01h50m33s
 Total = 00h36m42s

Eph. = Newcomb11E

Rule = CdT (Danjon)

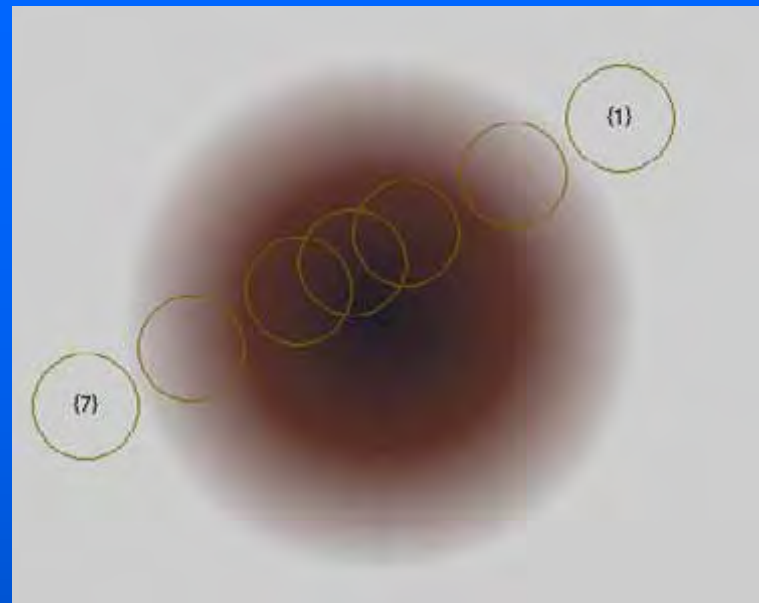
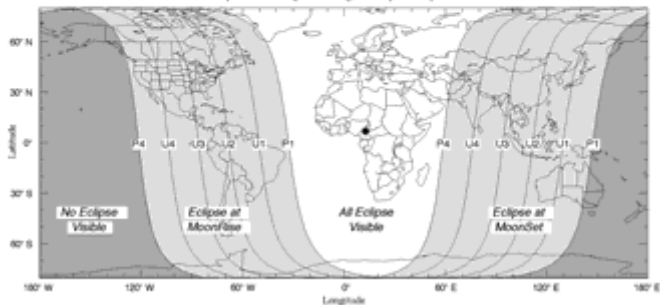
ΔT = 65.0 s

Eclipse Contacts

P1 = 20:18:11 UT
 U1 = 21:30:22 UT
 U2 = 22:44:13 UT
 U3 = 23:57:37 UT
 U4 = 01:11:28 UT
 P4 = 02:23:44 UT

F. Espenak, NASA's GSFC - 2006 Apr 20

<http://solarsystem.nasa.gov/eclipse/eclipse.html>



L U N A R E C L I P S E

3 března 2007

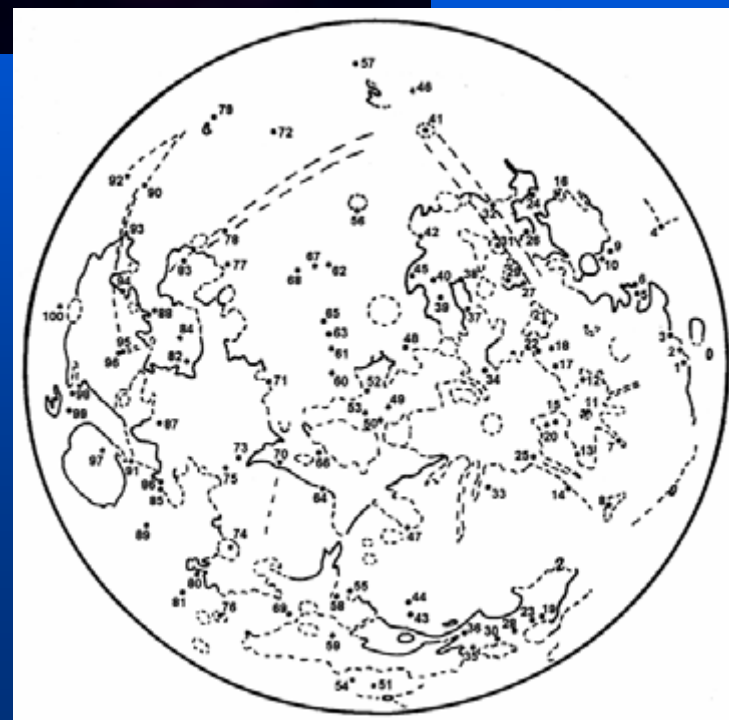
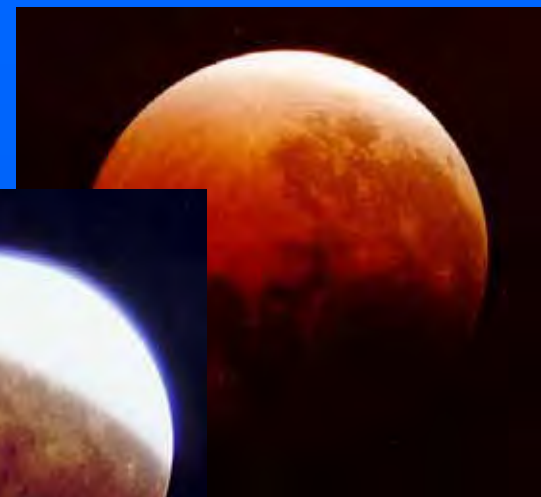
Event	U.T.	P.A.	Overhead at	
			Long	Lat
	h m s	o	o	o
[1] Moon Enters Penumbra	20 16 26	130	+58	+8
[2] Moon Enters Umbra	21 30 0	137	+40	+7
[3] Total Eclipse Starts	22 43 47	344	+22	+7
[4] Maximum Eclipse	23 20 52		+13	+7
[5] Total Eclipse Ends	23 57 57	73	+4	+7
[6] Moon Leaves Umbra	1 11 42+	280	-14	+7
[7] Moon Leaves Penumbra	2 25 22+	287	-32	+6

Magnitude of Umbral Eclipse = 1,237



Vstupy a výstupy kráterů

UT vstup	jméno kráteru	UT výstup	jméno kráteru
21:35	Grimaldi	00:06	Grimaldi
21:37	Billy	00:06	Aristarchus
21:43	Campanus	00:13	Kepler
21:49	Kepler	00:13	Billy
21:49	Tycho	00:17	Plato
21:54	Aristarchus	00:19	Pytheas
21:57	Copernicus	00:22	Timocharis
22:02	Pytheas	00:22	Copernicus
22:08	Timocharis	00:26	Campanus
22:13	Dionysius	00:28	Aristoteles
22:13	Manilius	00:30	Eudoxus
22:17	Menelaus	00:36	Tycho
22:21	Plinius	00:37	Manilius
22:22	Goclenius	00:41	Menelaus
22:23	Plato	00:45	Dionysius
22:27	Taruntius	00:45	Plinius
22:27	Langrenus	00:56	Proclus
22:28	Eudoxus	00:59	Taruntius
22:31	Aristoteles	01:01	Goclenius
22:31	Proclus	01:07	Langrenus



Zákryty hvězd Měsícem v čase kolem úplného zatmění



day			Time		P	Star	Sp	Mag	%	Elon	Sun	Moon		CA	PA	VA	WA	Libration			
y	m	d	h	m	s	No	D	V	ill		Alt	Alt	Az	o	o	o	o	L	B	m/o	m/o
07	03	03	0	15	3	d	1501	G5	7,2	99+	169	46	217	73N	98	74	79	+3,7	-1,1	+1,6	-1,2
07	03	03	22	32	40	D	X 16442	F0	10,2	9E	180	46	166	34U	156	165	136	+3,0	+0,1	+0,8	-1,8
07	03	03	22	38	27	d	X119916		11,8	3E	180	46	168	48U	113	121	92	+3,0	+0,1	+1,6	-0,5
07	03	03	22	47	29	R	X119830		10,5	0E	180	46	172	85U	285	291	265	+3,0	+0,1	+1,7	-0,3
07	03	03	22	49	48	D	X119869		11,5	0E	180	46	172	28U	193	198	172	+3,0	+0,2	-0,8	-4,3
07	03	03	23	5	30	D	X119928		10,2	0E	180	46	177	30U	145	147	124	+2,9	+0,2	+1,0	-1,5
07	03	03	23	7	11	d	X119892		11,9	0E	180	46	178	8U	185	186	164	+2,9	+0,2	-0,2	-3,3
07	03	03	23	17	23	r	X210261		12,4	0E	180	47	182	77U	342	341	321	+2,9	+0,2	+0,6	-2,1
07	03	03	23	17	28	R	X 16430	G5	10,7	0E	180	47	182	64U	306	304	285	+2,9	+0,2	+1,3	-1,1
07	03	03	23	22	5	d	X119919		11,7	0E	180	46	184	24U	176	173	155	+2,9	+0,2	+0,2	-2,7
07	03	03	23	24	7	R	X119869		11,5	0E	180	46	185	22U	244	241	224	+2,9	+0,2	+3,4	+1,6
07	03	03	23	29	24	R	X119874		11,3	0E	180	46	186	48U	292	288	272	+2,8	+0,2	+1,6	-0,9
07	03	03	23	30	54	d	X210263		11,8	0E	180	46	187	25U	189	185	168	+2,8	+0,2	-0,5	-3,6
07	03	03	23	38	5	R	X 16454	G0	10,8	0E	180	46	189	60U	322	316	301	+2,8	+0,2	+1,0	-1,6
07	03	03	23	43	2	R	X 16442	F0	10,2	0E	180	46	191	34U	281	274	260	+2,8	+0,3	+1,8	-0,7
07	03	03	23	44	10	r	X119891		11,6	0E	180	46	192	48U	304	296	283	+2,8	+0,3	+1,3	-1,2
07	03	03	23	47	41	d	X210272		11,7	0E	179	45	192	53U	176	168	155	+2,8	+0,3	+0,1	-2,7
07	03	03	23	48	4	R	X 16455	G5	9,9	0E	179	46	193	50U	308	300	287	+2,8	+0,3	+1,2	-1,4
07	03	03	23	49	52	D	X 16494	F5	11,2	0E	179	45	193	69U	153	144	132	+2,8	+0,3	+0,8	-1,9
07	03	03	23	50	33	G	X119910		10,1	0E	179	45	194	28U	219	210	198	+2,8	+0,3	+0,0	+0,0
07	03	03	23	51	17	r	X119892		11,9	0E	179	45	194	18U	253	244	232	+2,8	+0,3	+2,7	+0,4
07	03	03	23	54	36	r	X119916		11,8	0E	179	46	195	60U	325	315	304	+2,8	+0,3	+0,9	-1,7
07	03	04	0	9	59	r	X210263		11,8	9E	179	44	200	36U	249	236	228	+2,7	+0,3	+2,9	+0,4

Speciální úkazy 2007

Vzájemné úkazy Uranových měsíců

Typy vzájemných úkazů

Zákryty O occultation zákryt

částečný



P partial částečný

prstencový



A annular prstencový

úplný



T total úplný

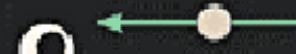
Zatmění

E eclipse zatmění

částečné



prstencové

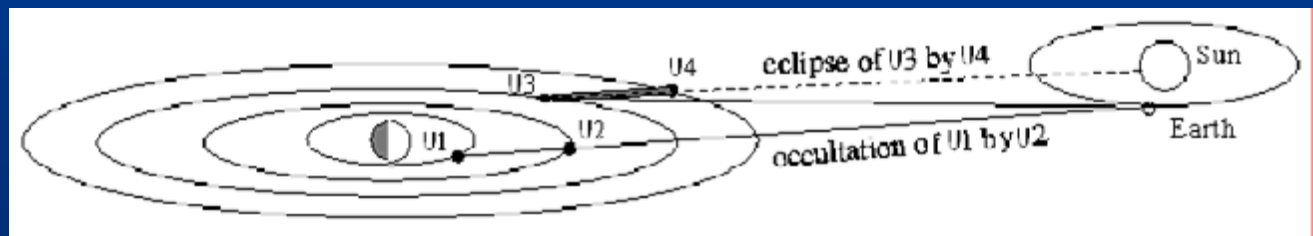
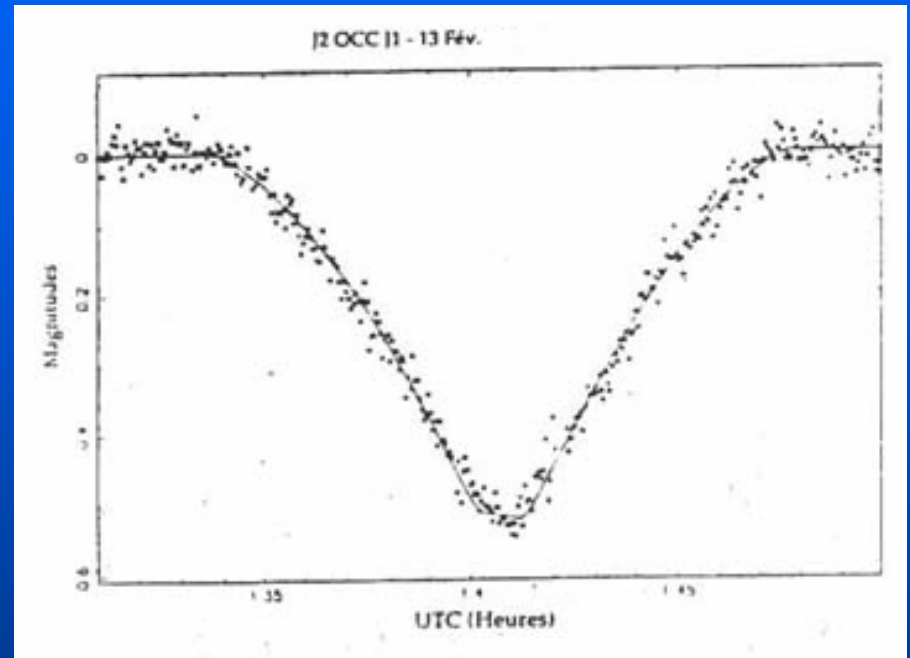


úplné



U umbral plný stín

p penumbral polostín

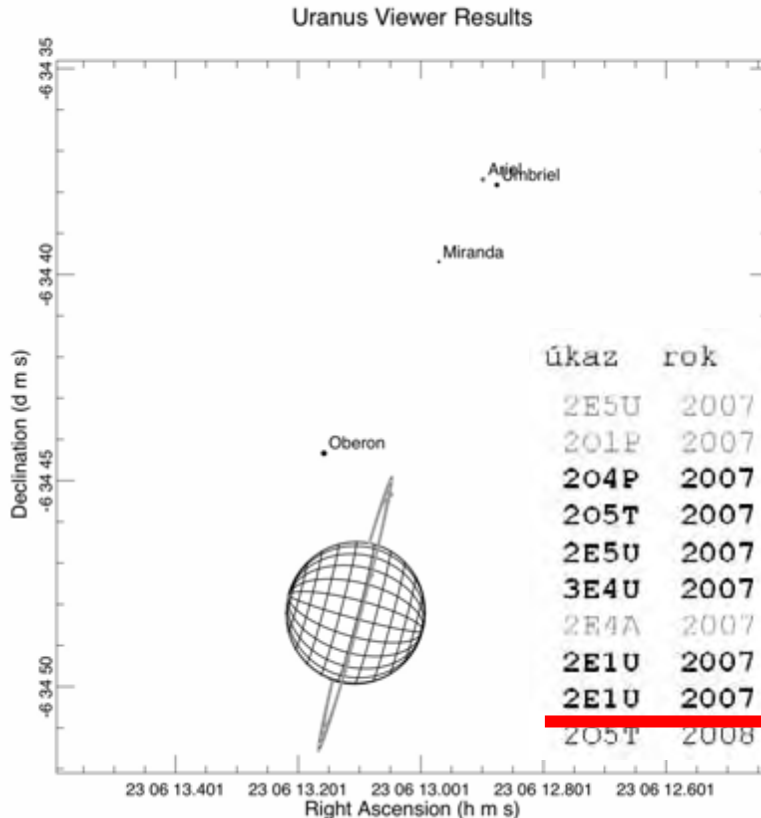


Speciální úkazy 2007

Vzájemné úkazy Uranových měsíců



- 1 Ariel
- 2 Umbriel
- 3 Titania
- 4 Oberon
- 5 Miranda



úkaz	rok	m	d	zač.část.	střed	kon.část.	vel.zák	vzd.pl.
2E5U	2007	JUL	03	23:36:14	23:37:32	23:38:51	0.292	3.0
2O1P	2007	AUG	06	21:17:28	21:21:06	21:24:42	0.270	6.3
2O4P	2007	AUG	14	01:27:58	01:31:28	01:34:57	0.262	7.4
2O5T	2007	AUG	14	22:54:26	22:56:11	22:57:56	0.292	3.4
2E5U	2007	OCT	07	17:59:34	18:00:42	18:01:49	0.282	2.1
3E4U	2007	NOV	30	18:33:27	18:45:31	18:57:30	0.358	16.1
2E4A	2007	DEC	12	16:30:30	16:32:58	16:35:27	0.410	1.7
2E1U	2007	DEC	16	17:30:06	17:31:55	17:33:46	0.365	3.2
2E1U	2007	DEC	25	16:58:35	17:23:05	17:44:21	0.574	5.4
2O5T	2008	JAN	31	17:21:34	17:22:48	17:24:02	0.292	1.1

Time (UTC): 2007 - DEC - 25 17:23:05
 Ephemeris: #4 (URA027 + URA039 + DE405)
 Viewpoint: (49.75, 13.6 east, 400)
 Moon selection: Miranda-Oberon
 Ring selection: All

Generated by the Uranus Viewer Tool, PDS Rings Node, Sun-Mar 19 02:02:44 2006

zatmění měsíce Umbriel stínem měsíce Ariel

Kompletní tabulka předpovědí:

<http://www.arm.ac.uk/~aac/uranus/index.html>

Zákryty hvězd tělesy sluneční soustavy (a příbuzné úkazy)

=

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