

# ZÁKRYTÍ

kdečeho kdečím

aneb

zákrytářský rok 2018

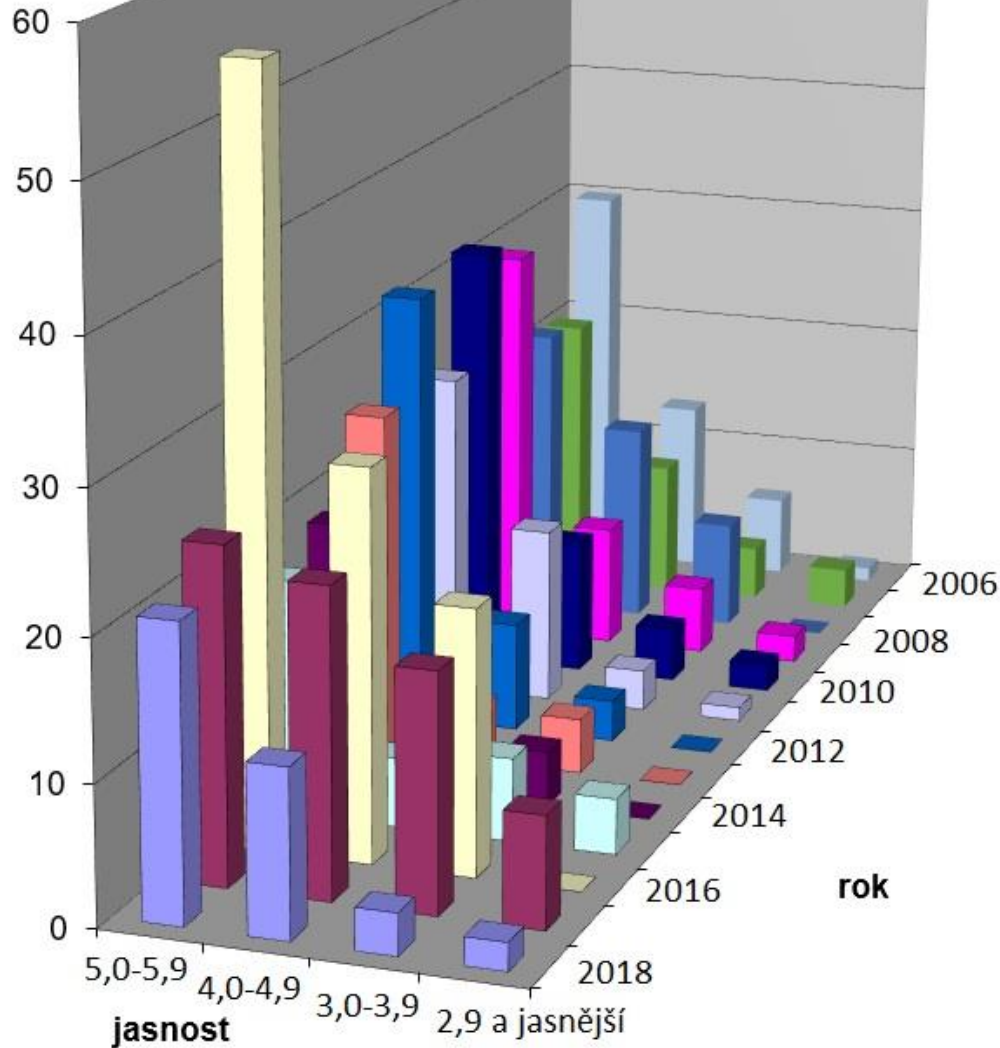
*Karel HALÍŘ*

*Hvězdárna v Rokycanech a Plzni*

*říjen 2017*

## Totální zákryty

počet zákrytů



# Totální zákryty 2018



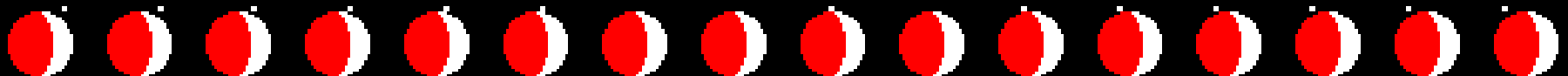
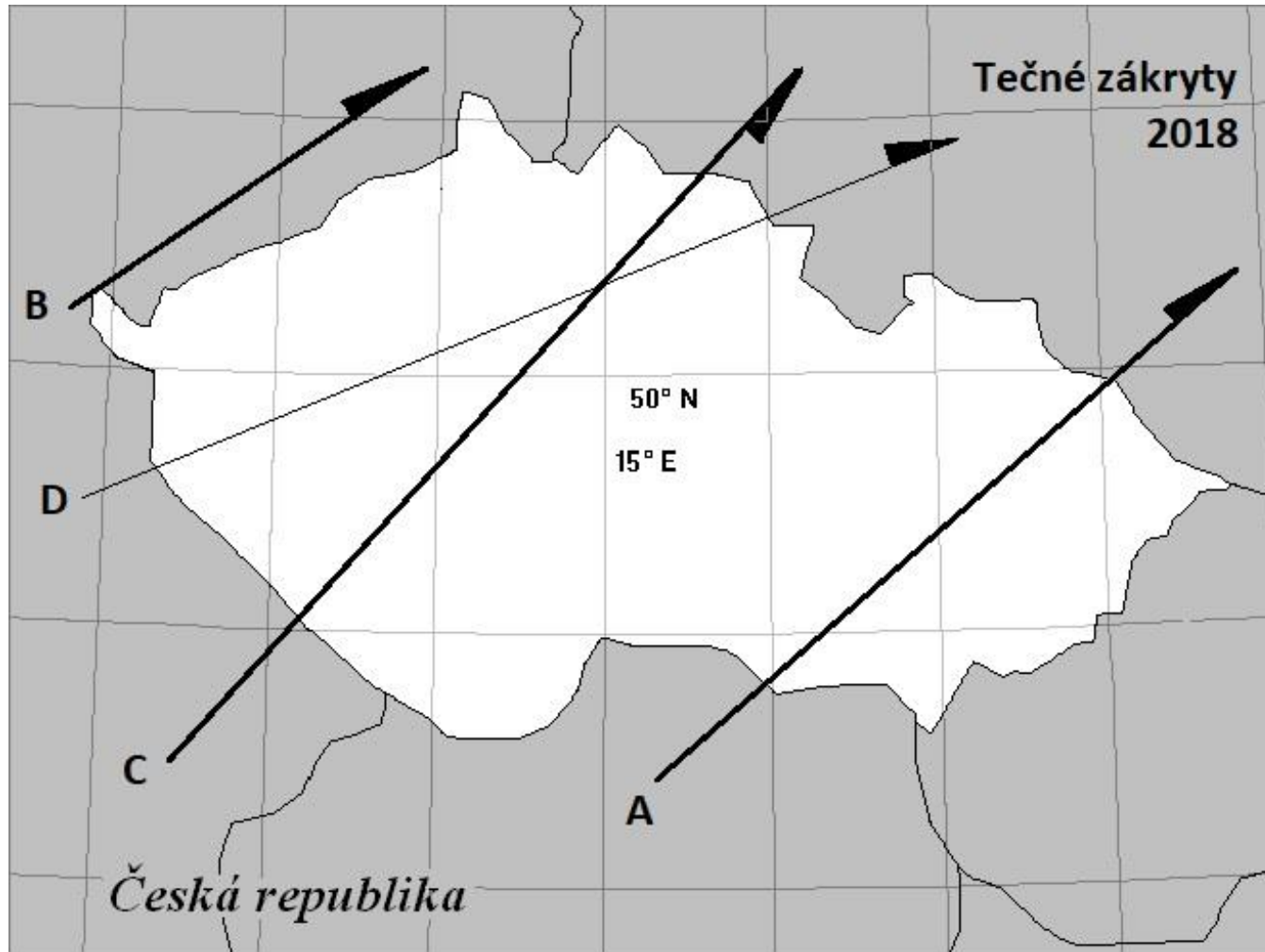
# Totální zákryty 2018

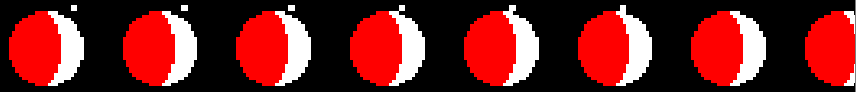
*Occultation prediction for CZ 2018*

*E. Longitude 15 0 0.0, Latitude 50 0 0.0*

day		Time			P	Star	Sp	Mag	%	Elon	Sun	Moon		CA	PA	VA	AA
m	d	h	m	s		No	D	v	ill		Alt	Alt	Az	o	o	o	o
2	8	3	24	12.4	D	2223SK0		3.9	45-	84		20	149	-61S	133	153	120
2	8	4	39	13.7	R	2223SK0		3.9	45-	84		25	168	77S	271	279	258
2	12	5	40	32	M	2759	G8	3.5	12-	40	-6	10	140	7S	184	210	191
2	23	17	2	26.5	D	692SK5		0.9	54+	95	-6	56	171	55S	117	123	124
2	23	18	0	6.5	R	692SK5		0.9	54+	95		56	196	-43S	215	204	222
4	7	0	30	22.5	R	2633SB2		3.8	62-	103		4	129	62S	240	272	243
4	8	2	20	47.9	D	2797SF2		2.9	52-	92		10	141	-88S	85	110	93
4	8	3	41	50.3	R	2797SF2		2.9	51-	92	-7	17	160	75N	277	291	286
6	28	23	6	40.2	R	2779wK0		3.8	99-	172		18	172	66S	233	238	241
7	10	2	9	43	M	635cG8		3.7	13-	42	-7	12	80	-1S	164	205	173
9	18	18	41	36.2	R	2779wK0		3.8	67+	110		18	186	-87N	266	262	275
9	21	21	14	31	M	3171cA7		3.7	90+	143		23	189	-1S	159	152	179

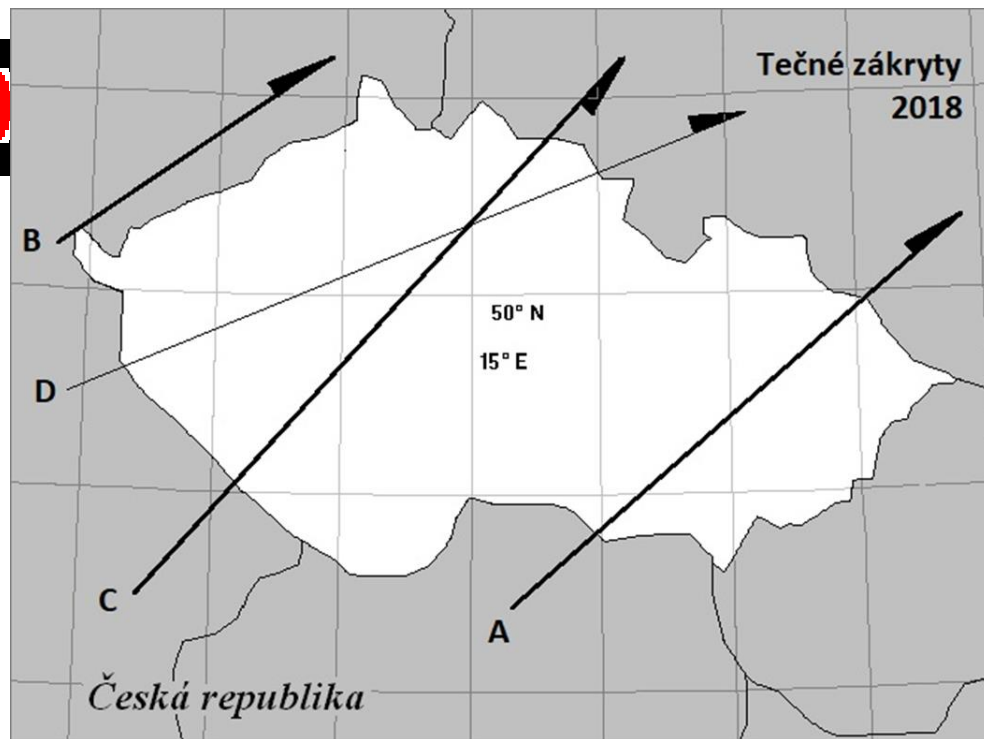
# Tečné zákryty 2018





# Tečné zákryty 2018

*Česká republika*



č.	čas UT 2018	hh:mm	hvězda číslo	mag	Měsíc fáze	h°	A°	CA °	Ø dal mm	oblast
A	08.08.	01:27	895	5.9	16%-	10		5.6N	100	JV M
B	03.09.	00:50	94019	6.7	50%-	32		9.3N	100	SZ Č
C	21.09.	21:12	3171	3.7	90%+	24		-1.0S	100	JZ až V Č
D	30.09.	02:40	90313	7.0	75%-	57		10.7N	150	Z až V Č
E	28.10.	20:42	894	4.4	80%-	17		12.1N	50	Německo

# Tečné zákryty 2018

A

Grazing Occultation of 895cB2 Magnitude 5.9 [Red = 6.0] s

R895 = 57 Orionis

Date: 2018 Aug 08 1h 26m, to 2018 Aug 08 1h 28m

Nominal site altitude 402m

E. Longit.	Latitude	U.T.	Sun Alt	Moon Alt	Az	TanZ	PA	AA	CA
° ' "	° ' "	h m s					°	°	°
12 0 0	46 56 33.2	1 26 25		8	70	6.76	350.3	349.40	5.59N
13 0 0	47 22 59.3	1 26 47		9	71	6.13	350.2	349.38	5.62N
14 0 0	47 49 40.7	1 27 12		10	72	5.61	350.2	349.36	5.64N
15 0 0	48 16 36.3	1 27 39		11	73	5.17	350.2	349.34	5.66N
16 0 0	48 43 45.2	1 28 8		12	73	4.79	350.2	349.32	5.68N

895 is variable:

895 = NSV 2722, 5.90, Type B CEP

895 is double

Illumination of moon 16%-

Elongation of Moon 47

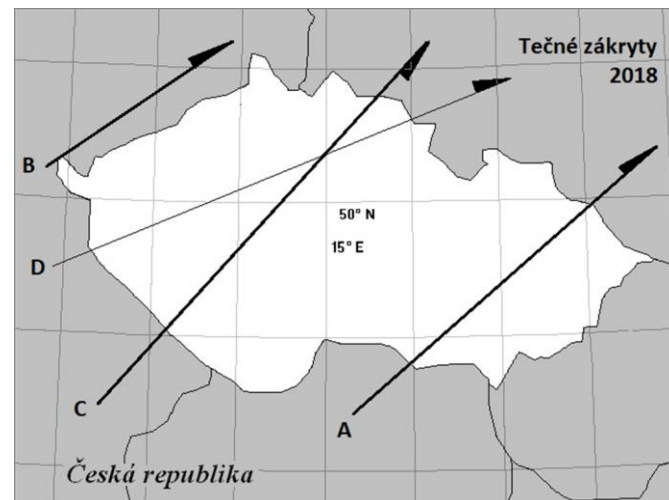
Vertical Profile Scale 2.94 km/arcsec

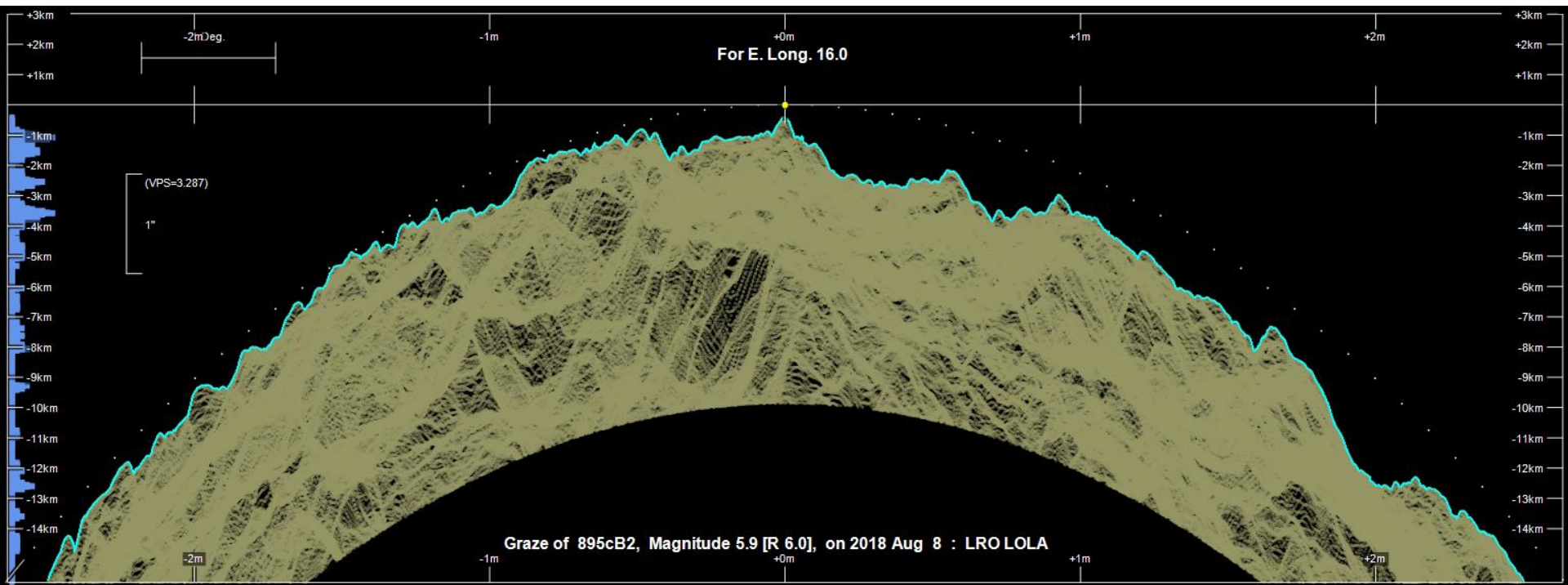
Horizontal Scale Factor 2.23 deg/min

At longitude 13.50:

Limiting Magnitudes for various telescope apertures

CA\Tdia	5	10	15	20	25	30	35
1.6	4.7	6.1	6.8	7.2	7.5	7.7	7.8
3.6	4.7	6.1	6.8	7.3	7.6	7.7	7.9
5.6	4.8	6.2	6.9	7.3	7.6	7.8	8.0
7.6	4.8	6.2	6.9	7.4	7.7	7.9	8.0
9.6	5.8	7.3	8.1	8.6	8.9	9.2	9.4







# Tečné zákryty 2018

B

Grazing Occultation of 94019pK5 Magnitude 6.7 [Red = 5.8] s  
 Date: 2018 Sep 03 0h 47m, to 2018 Sep 03 0h 54m

Nominal site altitude 402m

E. Longit.	Latitude			U.T.			Sun Alt	Moon Alt Az	TanZ	PA	AA	CA			
	o	'	"	o	'	"							h	m	s
12	0	0	50	16	3.6	0	48	13		30	100	1.70	342.5	349.77	9.37N
13	0	0	50	47	29.5	0	49	35		31	101	1.65	342.5	349.79	9.35N
14	0	0	51	18	47.0	0	50	58		32	102	1.61	342.5	349.82	9.33N
15	0	0	51	49	53.3	0	52	22		33	104	1.56	342.6	349.85	9.29N
16	0	0	52	20	46.1	0	53	46		33	106	1.52	342.6	349.89	9.26N

94019 is double

Illumination of moon 50%-

Elongation of Moon 91

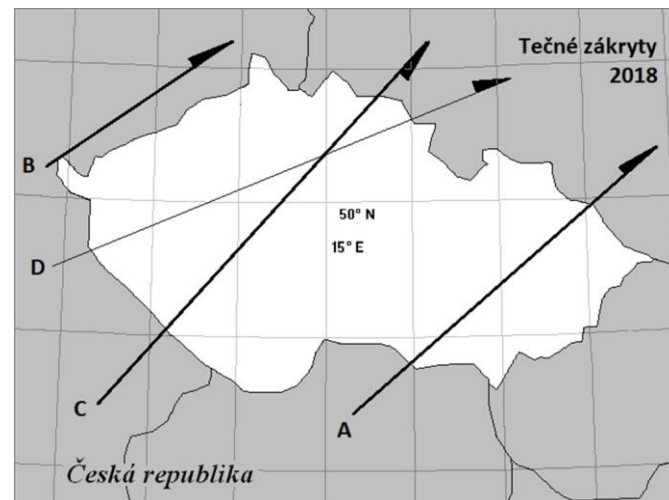
Vertical Profile Scale 2.79 km/arcsec

Horizontal Scale Factor 1.82 deg/min

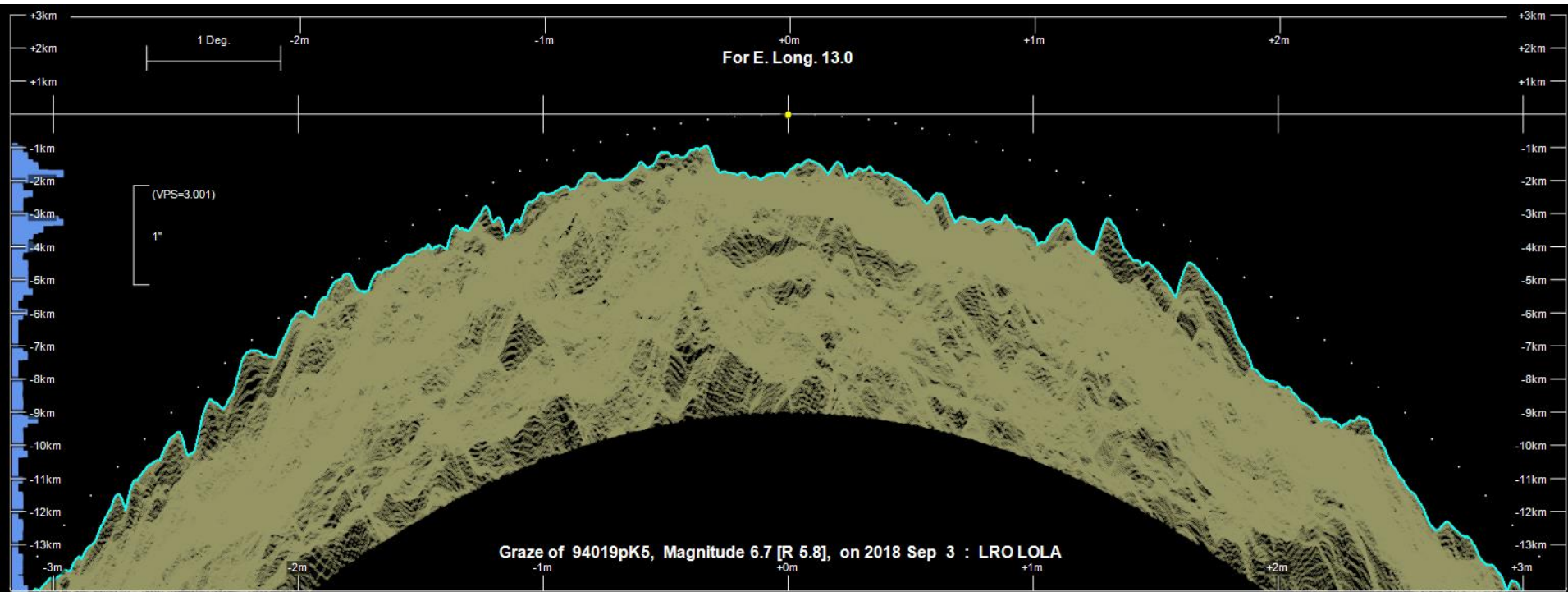
At longitude 13.50:

Limiting Magnitudes for various telescope apertures

CA\Tdia	5	10	15	20	25	30	35
5.3	5.6	7.1	7.8	8.3	8.7	8.9	9.1
7.3	5.6	7.1	7.9	8.4	8.7	8.9	9.1
9.3	5.6	7.1	7.9	8.4	8.7	9.0	9.1
11.3	5.7	7.1	7.9	8.4	8.7	9.0	9.2
13.3	5.7	7.1	7.9	8.4	8.7	9.0	9.2







# Tečné zákryty 2018

C

Grazing Occultation of 93913cF6 Magnitude 7.0 [Red = 6.7]

Date: 2018 Sep 30 2h 36m, to 2018 Sep 30 2h 44m

Nominal site altitude 402m

E. Longit.	Latitude	U.T.	Sun Alt	Moon Alt	Moon Az	TanZ	PA	AA	CA
° ' "	° ' "	h m s					°	°	°
12 0 0	49 37 25.0	2 37 25		57	169	0.64	342.5	350.80	11.00N
13 0 0	49 53 36.5	2 39 1		57	171	0.64	342.7	350.99	10.81N
14 0 0	50 09 09.8	2 40 36		57	174	0.65	342.9	351.17	10.63N
15 0 0	50 24 05.4	2 42 09		57	176	0.65	343.0	351.35	10.45N
16 0 0	50 38 23.8	2 43 41		57	179	0.66	343.2	351.54	10.26N

895 is double

Illumination of moon 75%-

Elongation of Moon 119

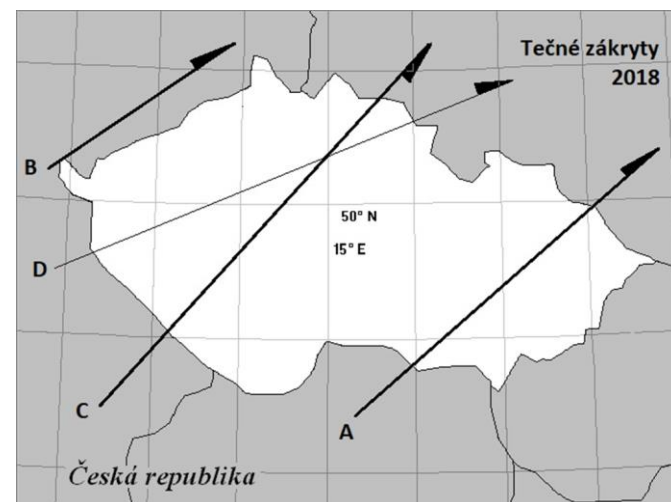
Vertical Profile Scale 2.21 km/arcsec

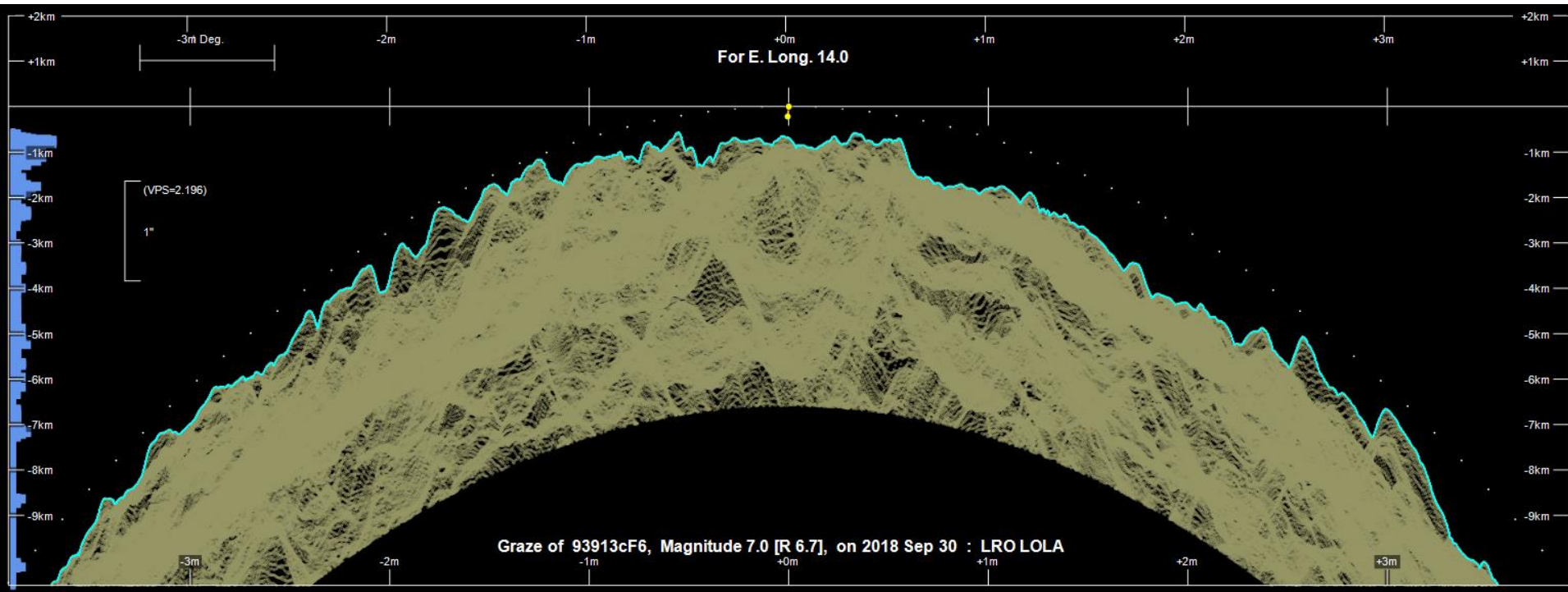
Horizontal Scale Factor 1.48 deg/min

At longitude 13.50:

Limiting Magnitudes for various telescope apertures

CA\Tdia	5	10	15	20	25	30	35
6.7	5.4	6.8	7.6	8.1	8.5	8.8	8.9
8.7	5.7	7.1	7.9	8.4	8.8	9.1	9.3
10.7	5.7	7.1	7.9	8.5	8.8	9.1	9.3
12.7	5.7	7.1	8.0	8.5	8.8	9.1	9.3
14.7	5.7	7.2	8.0	8.5	8.9	9.1	9.3





# Zákryty hvězd planetkami 2018

Celkem předpověď 2013 zákrytů v 8 regionech

březen 2017

číslo	oblasti	úkazů	oblast
1		470	Severní a Střední Amerika
2		387	Jižní Amerika
3		326	Evropa, severní Afrika a Střední východ
4		131	Jižní Afrika
5		123	Rusko
6		148	Pakistán, Indie a jihovýchodní Asie
7		283	Japonsko, Čína a Taiwan
8		482	Austrálie a Nový Zéland

Edwin Goffin

Aartselaarstraat 14  
B-2660 Hoboken

Belgium

**Nominální předpovědi REGION 3**

**Evropa, severní Afriky, střední východ**

Region 3 předpověď **326** zákrytů

# Zákryty – střední Evropa 2018

datum	čas UT	planetka	hvězda	trv.	pok	h	h Sl	
mm dd	hh mm	jméno	prům km	mag	s	mag	°	°
01 04	04 35	Huberta	101	10,8	8,2	4,8	37	-23
01 04	17 02	Helio	147	12,2	8,5	1,6	68	-16
01 05	01 39	Goto	50	12,5	3,5	2,5	52	-50
01 11	20 30	Ulla	120	10,3	11,4	4,2	40	-47
01 13	18 16	Flora	141	8,1	17,2	1,0	37	-26
01 26	02 13	Hippo	134	12,0	11,7	1,4	22	-43
02 10	18 05	Perepadin	52	11,0	4,8	3,2	43	-18
02 13	22 40	Brixia	103	12,3	8,0	0,7	59	-52
02 18	02 32	Lilium	48	12,2	4,3	3,3	24	-35
02 21	01 44	Flora	141	12,0	38,4	0,1	16	-41
02 21	21 55	Katja	45	11,2	3,9	3,2	47	-47
02 23	19 33	Antigone	113	9,8	10,5	3,2	47	-29
04 11	19 17	Bohemia	57	12,2	7,9	1,2	33	-13
07 26	01 11	Hedwig	121	11,9	5,8	2,1	39	-16
08 18	00 31	Gotho	58	11,3	4,2	4,0	46	-25
09 18	17 41	Ninina	110	10,1	15,1	4,1	21	-5
10 17	01 01	Tchaikovsky	54	12,1	4,5	3,8	41	-41
10 22	00 06	Dike	54	12,1	8,3	2,8	55	-51
11 07	01 16	Kleopatra	113	12,0	10,8	0,5	38	-45
11 18	04 36	Leda	120	10,7	13,8	1,2	35	-17
12 18	02 48	Berbericia	121	11,8	8,9	0,5	46	-39
12 21	02 00	Schalen	50	11,4	5,2	3,2	28	-47
12 25	04 19	Arethusa	145	12,4	11,8	0,6	24	-25
12 28	00 00	Arethusa	145	11,5	11,6	1,0	50	-62

# 260 Huberta & HSOY 576302327

2018 jan 4 4<sup>h</sup>36.8<sup>m</sup> U.T.

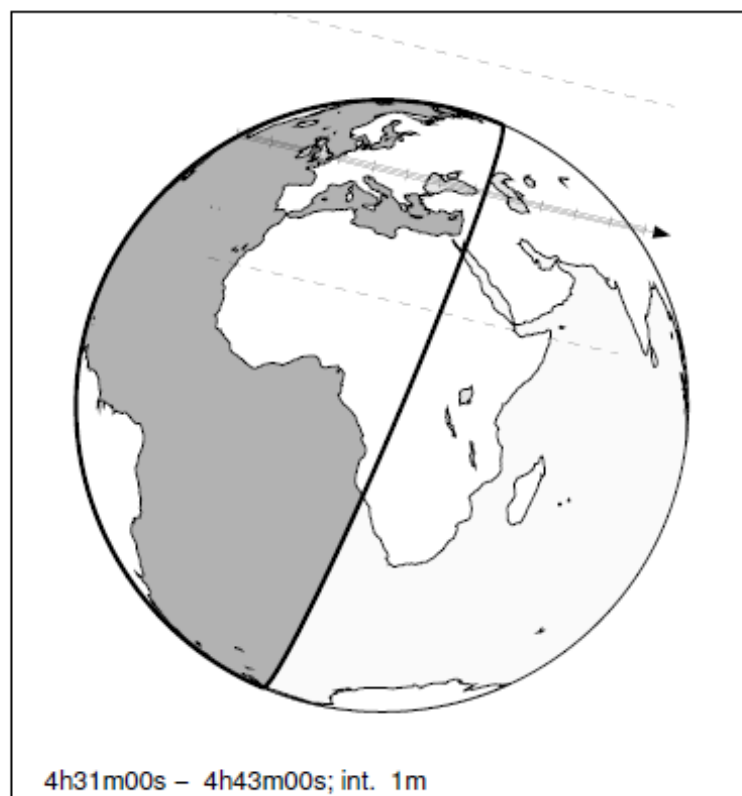
## Zákryty hvězd planetkami 2018

**Planet:** a = 3.44, e = 0.13  
V. mag. = 15.53 Diam. = 101.0 km = 0.04"  
 $\mu$  = 16.66"/h  $\pi$  = 2.41" Ref. = EG2016

**Star:** Source cat. HSOY  
 $\alpha$  = 12<sup>h</sup>38<sup>m</sup>59.721<sup>s</sup>  $\delta$  = - 2°56'09.65"  
Vmag = 10.79 Bmag = 11.89

$\Delta m$  = 4.8 Max. dur. = 8.2s

Sun : 93° Moon : 57° , 94%





# 895 Helio & UCAC4-590-002843

2018 jan 4 17<sup>h</sup> 3.4<sup>m</sup> U.T.

## Zákryty hvězd planetkami

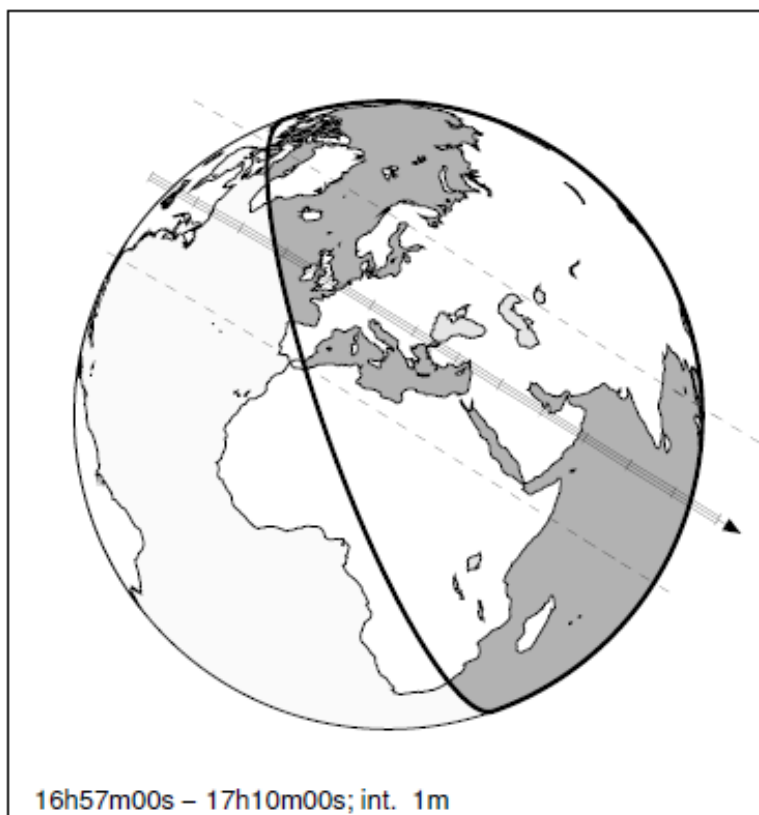
### 2018

**Planet:**  $a = 3.20, e = 0.15$   
V. mag. = 13.49 Diam. = 147.0 km = 0.08"  
 $\mu = 35.09''/h$   $\pi = 3.60''$  Ref. = EG2016

**Star:** Source cat. UCAC4  
 $\alpha = 1^{\text{h}}07^{\text{m}}47.743^{\text{s}}$   $\delta = +27^{\circ}56'08.06''$   
Vmag = 12.19 Bmag = 12.83

$\Delta m = 1.6$  Max. dur. = 8.5s

Sun : 101° Moon : 112° , 90%





# 2621 Goto & PPMX 5062157

2018 jan 5 1<sup>h</sup>40.7<sup>m</sup> U.T.

## Zákryty hvězd planetkami

2018

**Planet:**  $a = 3.09, e = 0.17$   
V. mag. = 14.83 Diam. = 50.1 km = 0.03"  
 $\mu = 34.38''/h$   $\pi = 4.28''$  Ref. = EG2016

**Star:** Source cat. PPMX  
 $\alpha = 6^h59^m36.763^s$   $\delta = +25^\circ28'49.17''$   
Vmag = 12.50 mag =

$\Delta m = 2.5$  Max. dur. = 3.5s

Sun : 177° Moon : 42°, 87%



1h34m00s - 1h47m00s; int. 1m

# 909 Ulla & TYC 4735–00554–1

2018 jan 11 20<sup>h</sup>25.1<sup>m</sup> U.T.

**Planet:**  $a = 3.54$ ,  $e = 0.10$   
V. mag. = 14.42 Diam. = 120.0 km = 0.06"  
 $\mu = 19.97''/h$   $\pi = 3.36''$  Ref. = EG2016

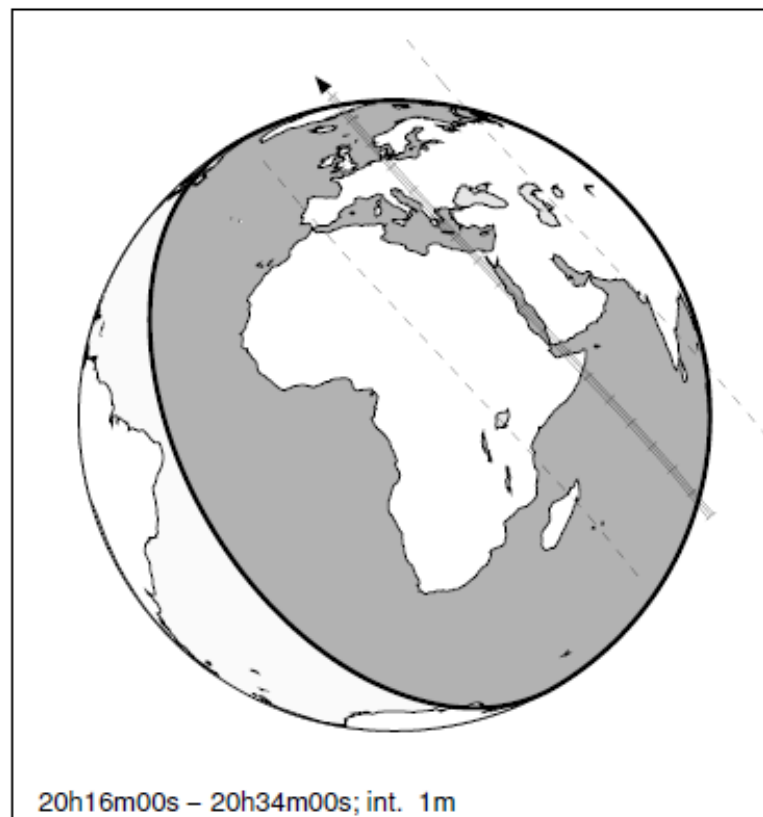
$\Delta m = 4.2$  Max. dur. = 11.4s

## Zákryty hvězd planetkami

2018

**Star:** Source cat. TGAS  
 $\alpha = 4^h41^m02.971^s$   $\delta = -0^\circ23'53.29''$   
Vmag = 10.25 Bmag = 11.81

Sun : 132° Moon : 158° , 23%



20h16m00s – 20h34m00s; int. 1m



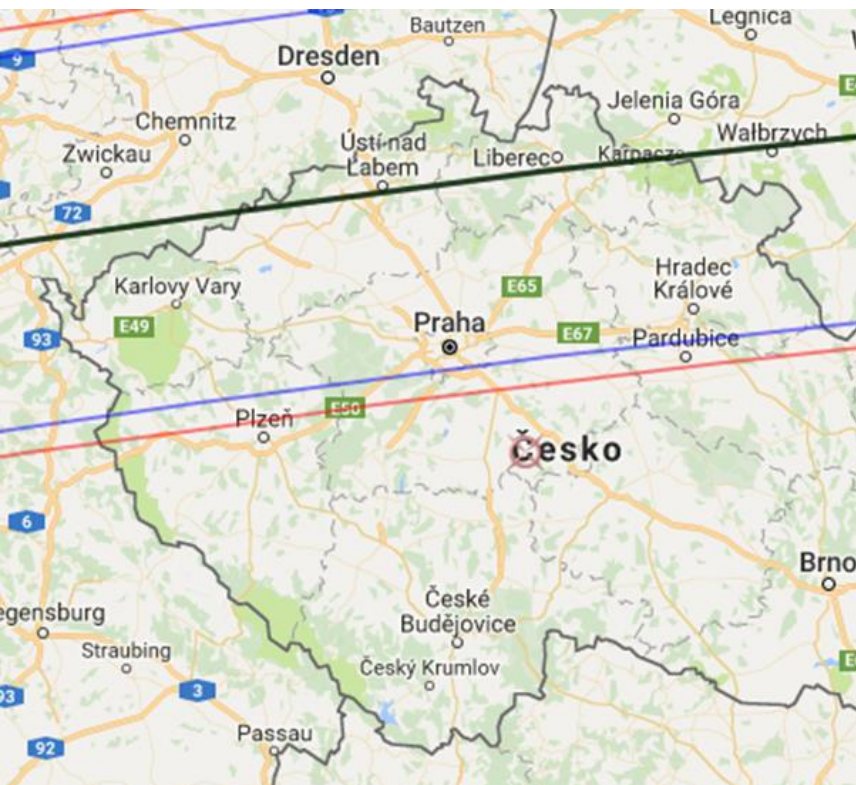
# 8 Flora & HSOY 546310576

2018 jan 13 18<sup>h</sup> 7.3<sup>m</sup> U.T.

## Zákryty hvězd planetkami 2018

**Planet:**  $a = 2.20, e = 0.16$   
V. mag. = 8.60 Diam. = 141.0 km = 0.18"  
 $\mu = 38.07''/h$   $\pi = 8.23''$  Ref. = EG2016  
 $\Delta m = 1.0$  Max. dur. = 17.2s

**Star:** Source cat. HSOY  
 $\alpha = 6^h 39^m 26.274^s$   $\delta = +22^\circ 08' 52.10''$   
Vmag = 8.09 Bmag = 9.73  
Sun : 165° Moon : 158° , 10%



# 426 Hippo & HSOY 574956319

2018 jan 26 2<sup>h</sup>21.7<sup>m</sup> U.T.

## Zákryty hvězd planetkami

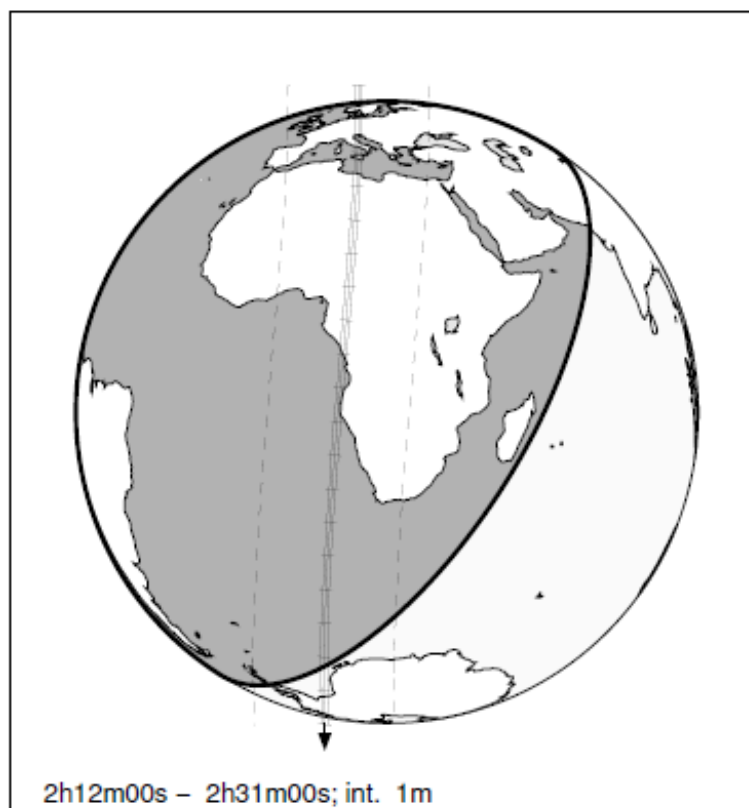
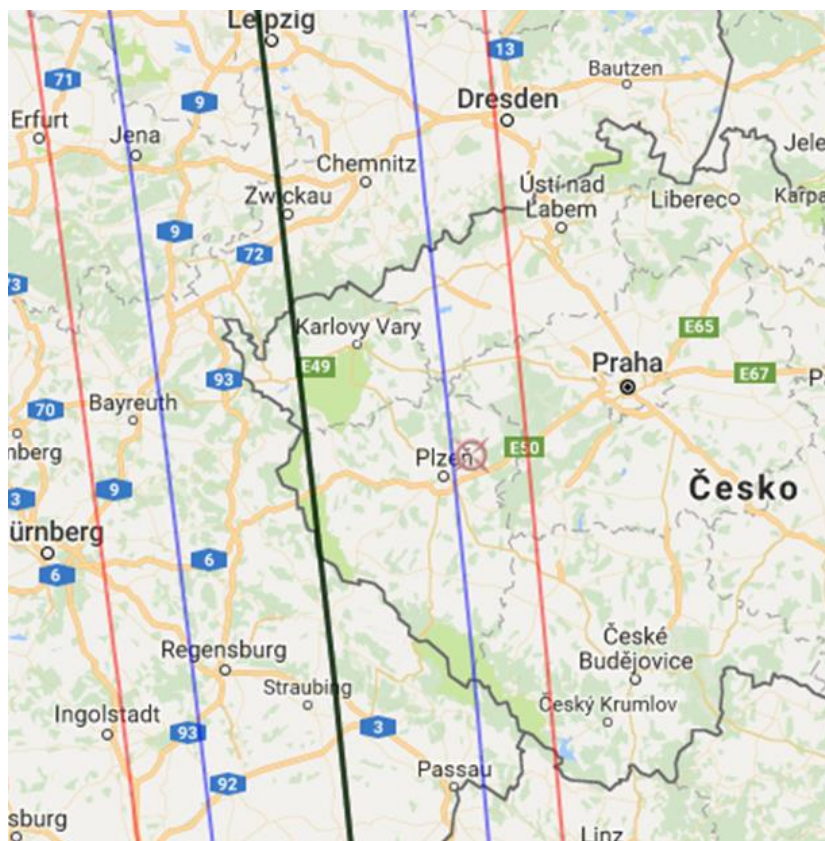
### 2018

**Planet:**  $a = 2.89, e = 0.11$   
V. mag. = 12.99 Diam. = 134.0 km = 0.09"  
 $\mu = 28.55"/h$   $\pi = 4.40''$  Ref. = EG2016

**Star:** Source cat. HSOY  
 $\alpha = 12^{\text{h}}05^{\text{m}}30.586^{\text{s}}$   $\delta = -17^{\circ}38'07.88''$   
Vmag = 12.01 Bmag = 14.22

$\Delta m = 1.4$  Max. dur. = 11.7s

Sun : 116° Moon : 133° , 63%





# 2951 Perepadin & TYC 2983-01396-1

2018 feb 10 17<sup>h</sup>58.9<sup>m</sup> U.T.

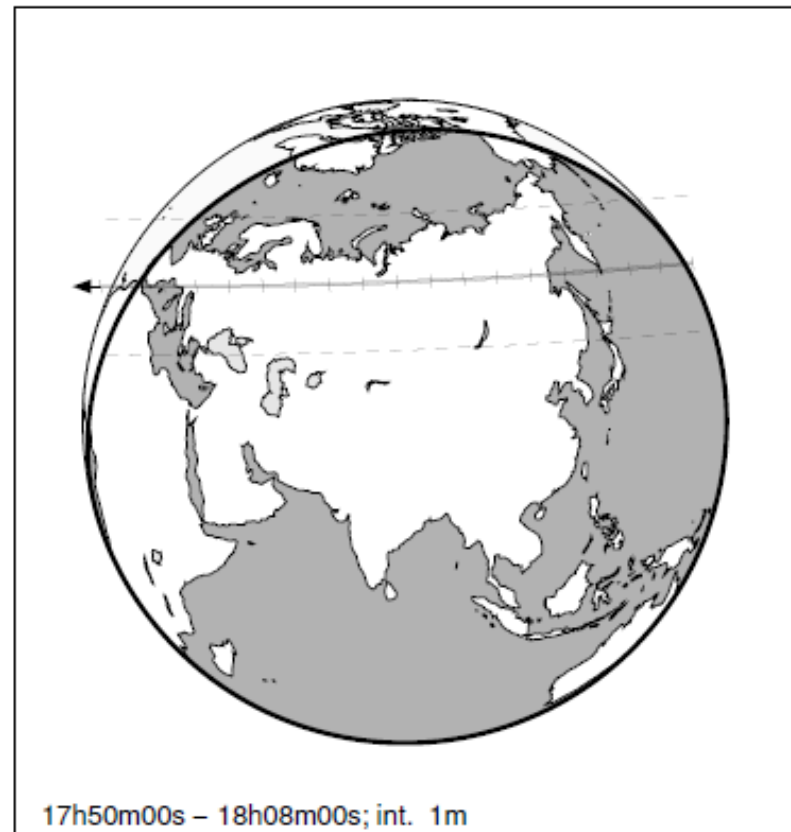
**Planet:**  $a = 3.13, e = 0.13$   
V. mag. = 14.20 Diam. = 52.1 km = 0.04"  
 $\mu = 29.01''/h$   $\pi = 4.70''$  Ref. = EG2016

$\Delta m = 3.2$  Max. dur. = 4.8s

## Zákryty hvězd planetkami 2018

**Star:** Source cat. TGAS  
 $\alpha = 8^h53^m58.584^s$   $\delta = +39^\circ49'10.40''$   
Vmag = 11.03 Bmag = 11.89

Sun : 152° Moon : 134° , 22%



# 521 Brixia & TYC 1977-01111-1

2018 feb 13 22<sup>h</sup>36.2<sup>m</sup> U.T.

**Planet:**  $a = 2.74, e = 0.28$   
V. mag. = 12.26 Diam. = 103.0 km = 0.08"  
 $\mu = 36.74"/h$   $\pi = 5.05''$  Ref. = EG2016

$\Delta m = 0.7$  Max. dur. = 8.0s

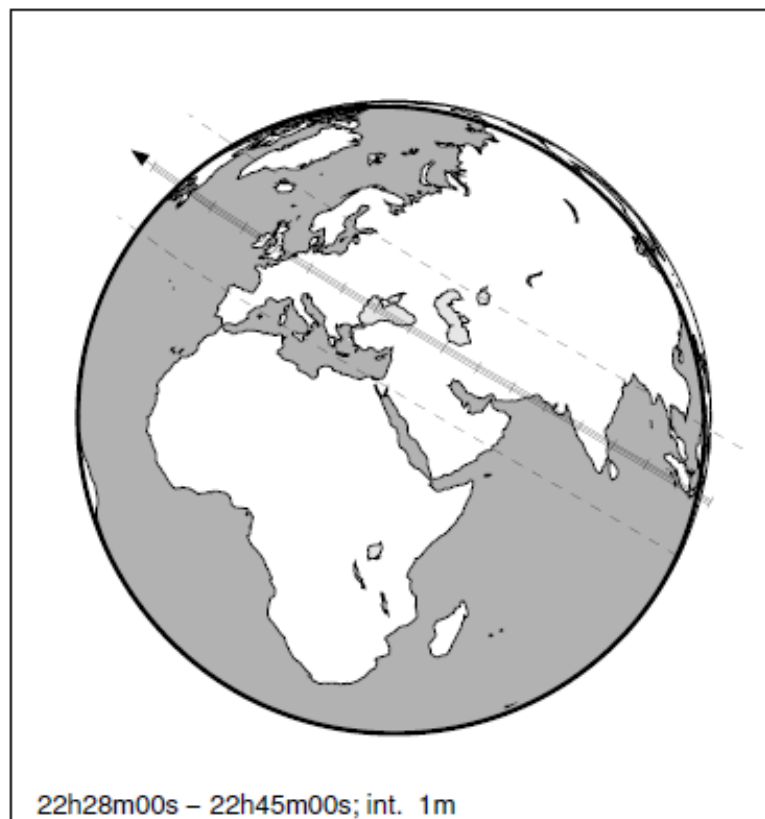
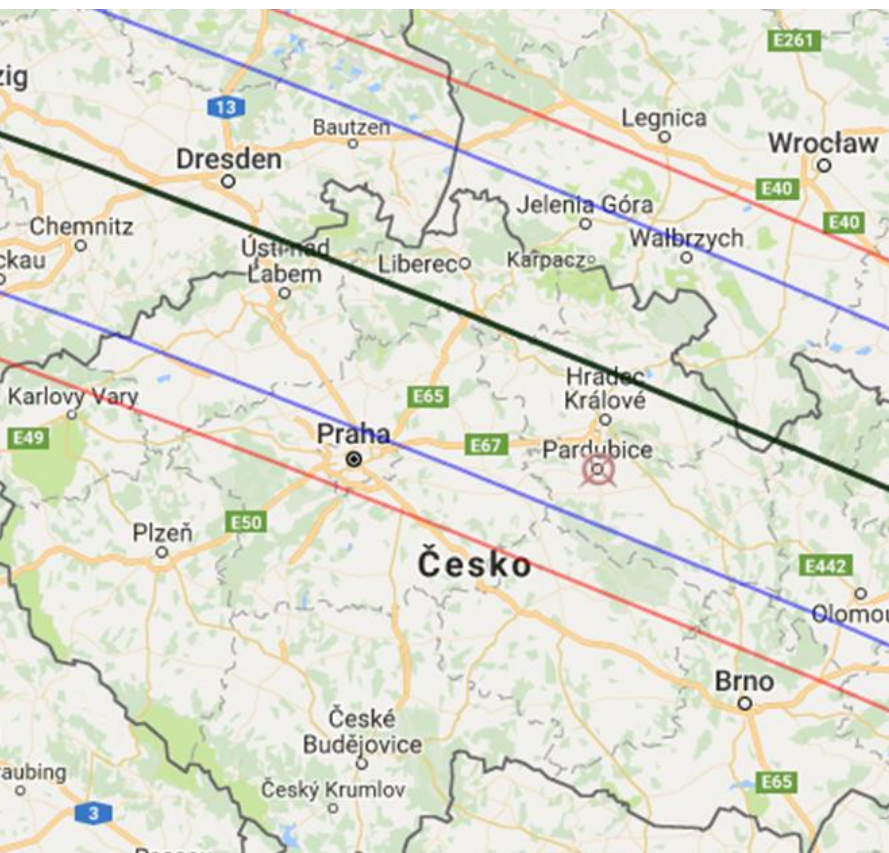
## Zákryty hvězd planetkami

**Star:** Source cat. TGAS **2018**

$\alpha = 10^{\text{h}}36^{\text{m}}36.590^{\text{s}}$   $\delta = +24^{\circ}12'48.97''$

Vmag = 12.27 Bmag = 13.05

Sun : 164° Moon : 148° , 3%





# 8 Flora & HSOY 546005573

2018 feb 21 1<sup>h</sup>19.1<sup>m</sup> U.T.

**Planet:** a = 2.20, e = 0.16  
V. mag. = 9.75 Diam. = 141.0 km = 0.14"  
 $\mu$  = 13.13"/h  $\pi$  = 6.33" Ref. = EG2016

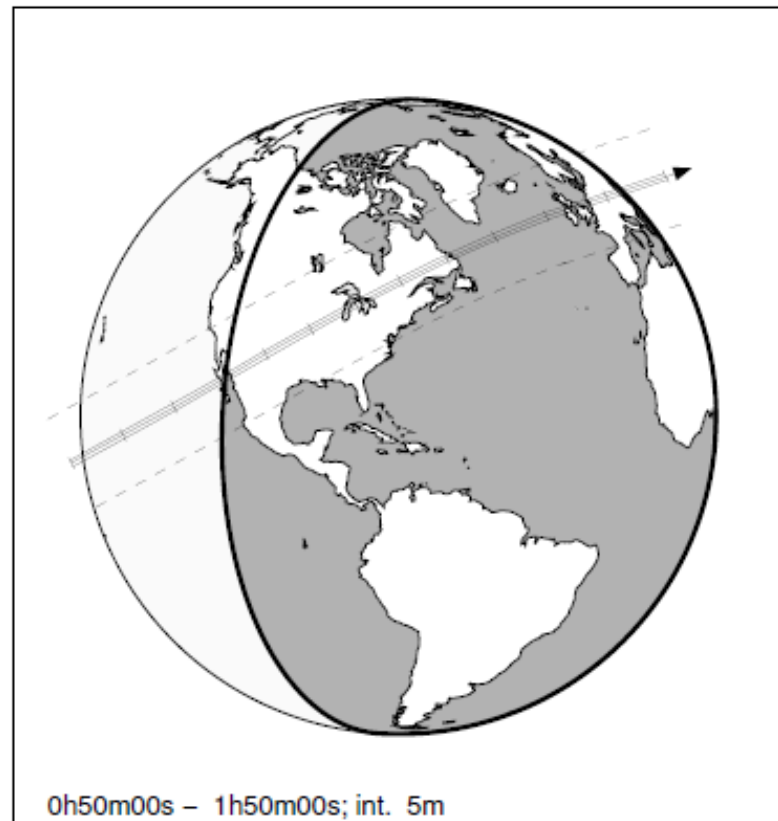
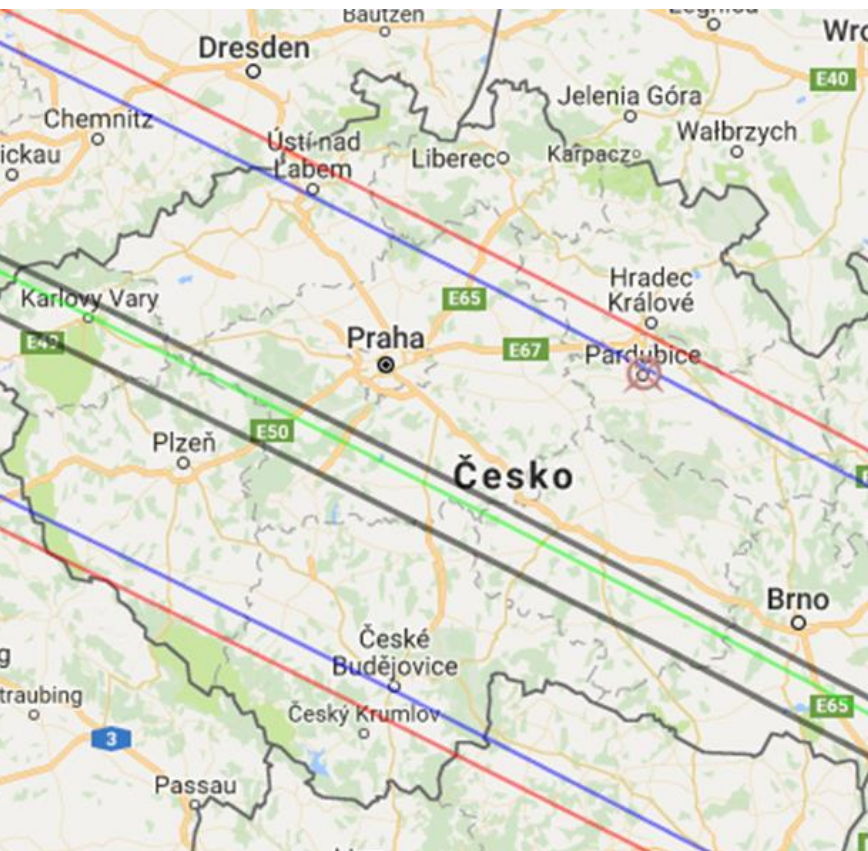
$\Delta m$  = 0.1 Max. dur. = 38.4s

## Zákryty hvězd planetkami

### 2018

**Star:** Source cat. HSOY  
 $\alpha$  = 6<sup>h</sup>25<sup>m</sup>03.898<sup>s</sup>  $\delta$  = +24°32'13.38"  
Vmag = 12.04 Bmag = 13.89

Sun : 123° Moon : 63° , 26%



0h50m00s - 1h50m00s; int. 5m



# 1113 Katja & TYC 2398-00366-1

2018 feb 21 21<sup>h</sup>52.6<sup>m</sup> U.T.

## Zákryty hvězd planetkami

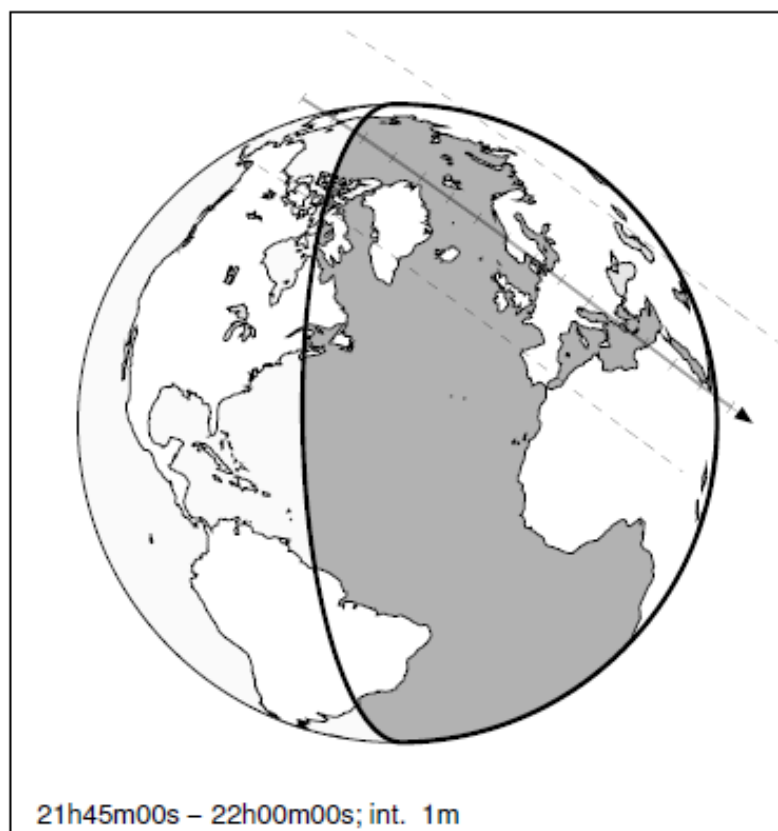
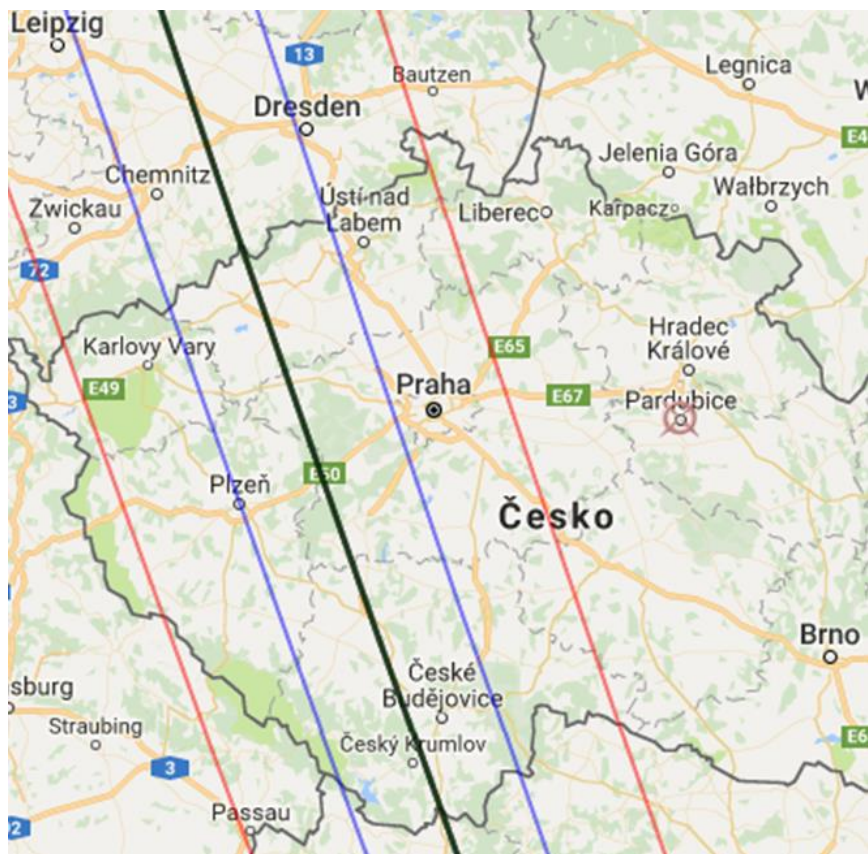
2018

**Planet:**  $a = 3.11, e = 0.15$   
V. mag. = 14.29 Diam. = 44.7 km = 0.03"  
 $\mu = 25.87"/h$   $\pi = 3.96''$  Ref. = EG2016

**Star:** Source cat. TGAS  
 $\alpha = 5^h15^m08.880^s$   $\delta = +34^\circ10'53.91''$   
Vmag = 11.16 Bmag = 12.60

$\Delta m = 3.2$  Max. dur. = 3.9s

Sun : 107° Moon : 39° , 34%



21h45m00s - 22h00m00s; int. 1m

# 129 Antigone & HIP 22583

2018 feb 23 19<sup>h</sup>27.0<sup>m</sup> U.T.

**Planet:**  $a = 2.87, e = 0.21$   
V. mag. = 12.91 Diam. = 113.0 km = 0.05"  
 $\mu = 17.17''/h$   $\pi = 2.81''$  Ref. = EG2016

$\Delta m = 3.2$  Max. dur. = 10.5s

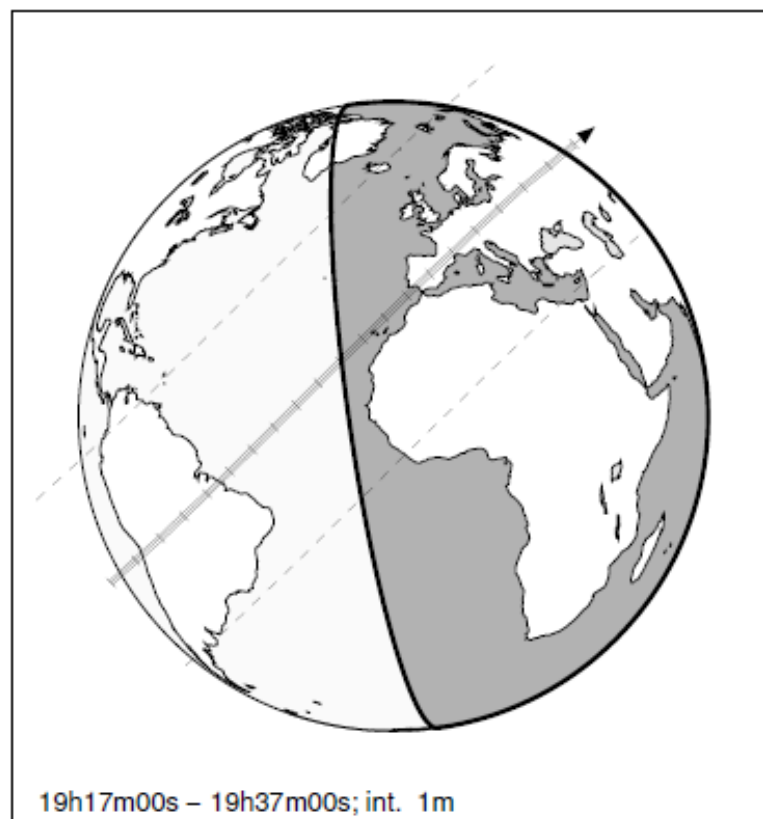
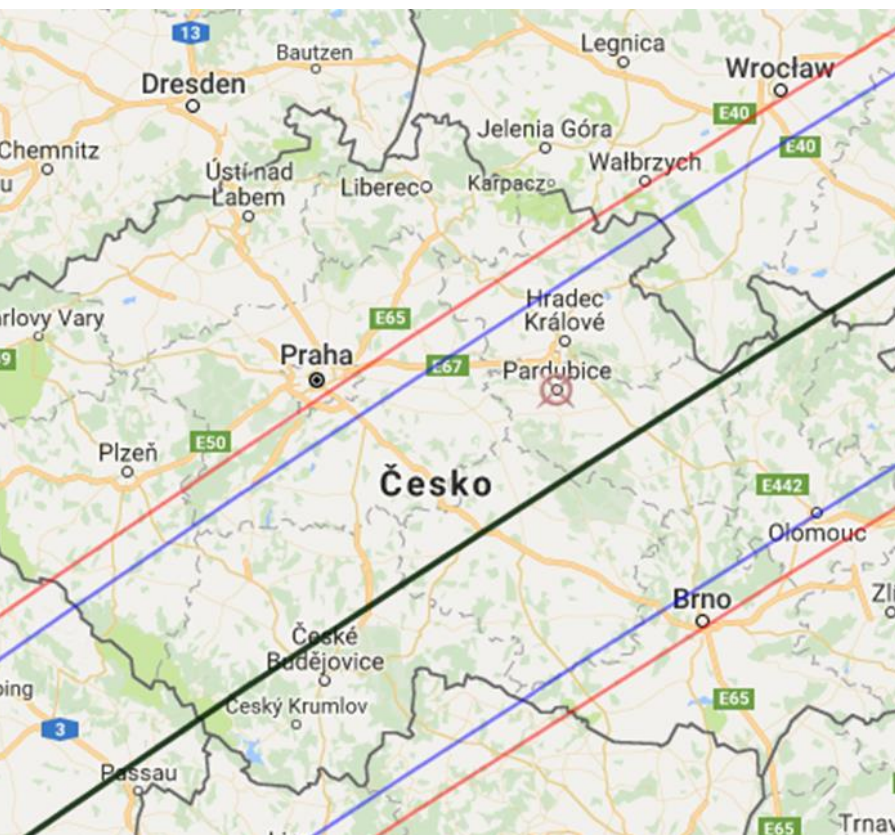
## Zákryty hvězd planetkami

2018

**Star:** Source cat. TGAS  
 $\alpha = 4^h 51^m 36.364^s$   $\delta = +12^\circ 47' 37.99''$   
Vmag = 9.75 Bmag = 10.47

Sun : 98°

Moon : 5° , 55%





# 371 Bohemia & HSOY 567315510

2018 apr 11 19<sup>h</sup> 6.9<sup>m</sup> U.T.

## Zákryty hvězd planetkami

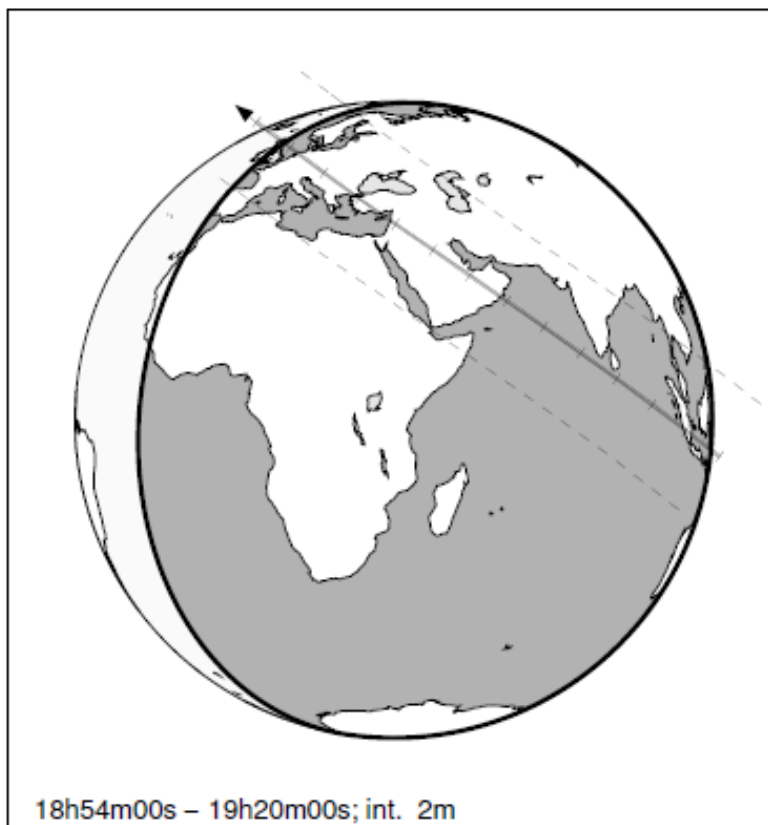
### 2018

**Planet:**  $a = 2.73$ ,  $e = 0.06$   
V. mag. = 12.97    Diam. = 56.7 km = 0.04"  
 $\mu = 19.42''/h$      $\pi = 4.77''$     Ref. = EG2016

**Star:** Source cat. HSOY  
 $\alpha = 10^h 51^m 20.198^s$      $\delta = -4^\circ 07' 11.19''$   
Vmag = 12.16    Bmag = 11.75

$\Delta m = 1.2$     Max. dur. = 7.9s

Sun : 142°    Moon : 160° , 19%



# 357 Ninina & HSOY 094319938

2018 sep 18 17<sup>h</sup>51.2<sup>m</sup> U.T.

## Zákryty hvězd planetkami

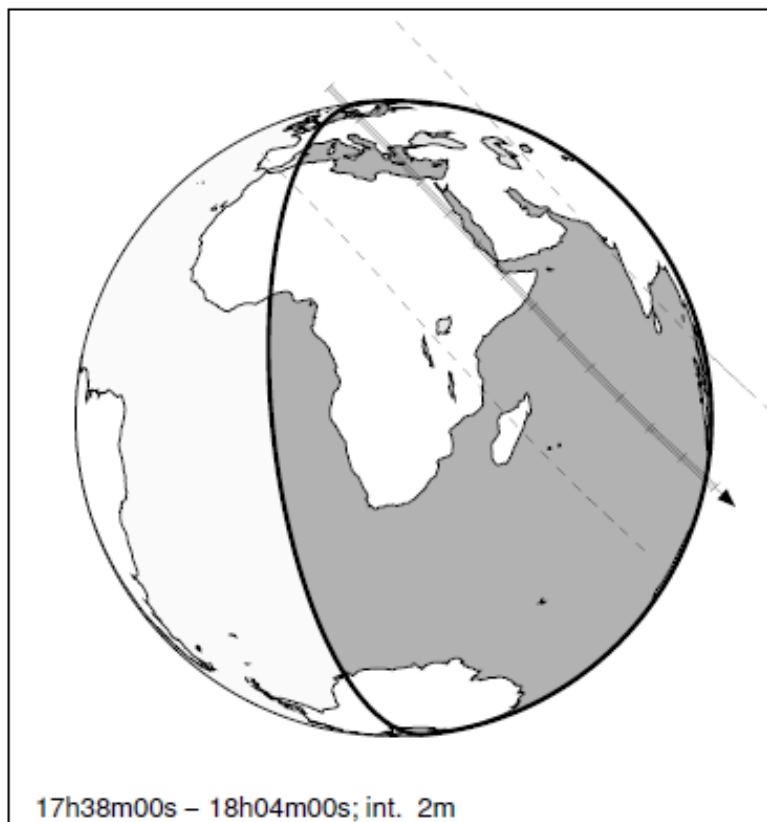
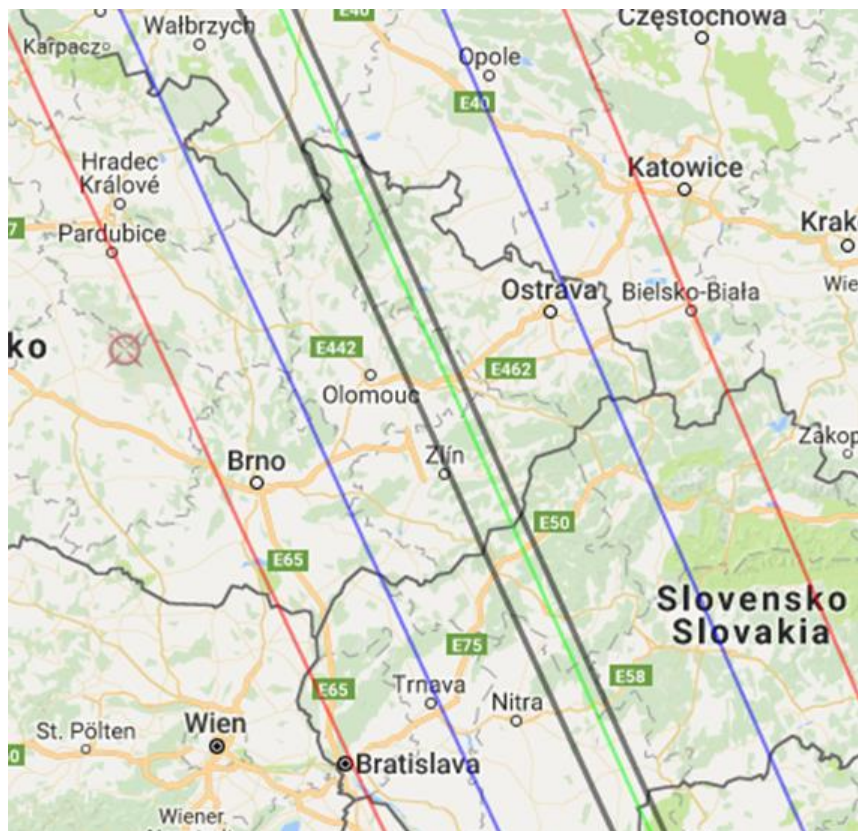
### 2018

**Planet:**             $a = 3.15, e = 0.08$   
 $V. \text{ mag.} = 14.18$      $\text{Diam.} = 110.0 \text{ km} = 0.06''$   
 $\mu = 13.93''/\text{h}$          $\pi = 3.38''$          $\text{Ref.} = \text{EG2016}$

**Star:**                Source cat. HSOY  
 $\alpha = 19^{\text{h}}15^{\text{m}}50.219^{\text{s}}$      $\delta = -18^{\circ}18'39.48''$   
 $V_{\text{mag}} = 10.10$              $B_{\text{mag}} = 11.13$

$\Delta m = 4.1$                  $\text{Max. dur.} = 15.1\text{s}$

Sun : 112°                Moon : 4° , 67%







# 99 Dike & HSOY 531841796

2018 oct 21 23<sup>h</sup>59.0<sup>m</sup> U.T.

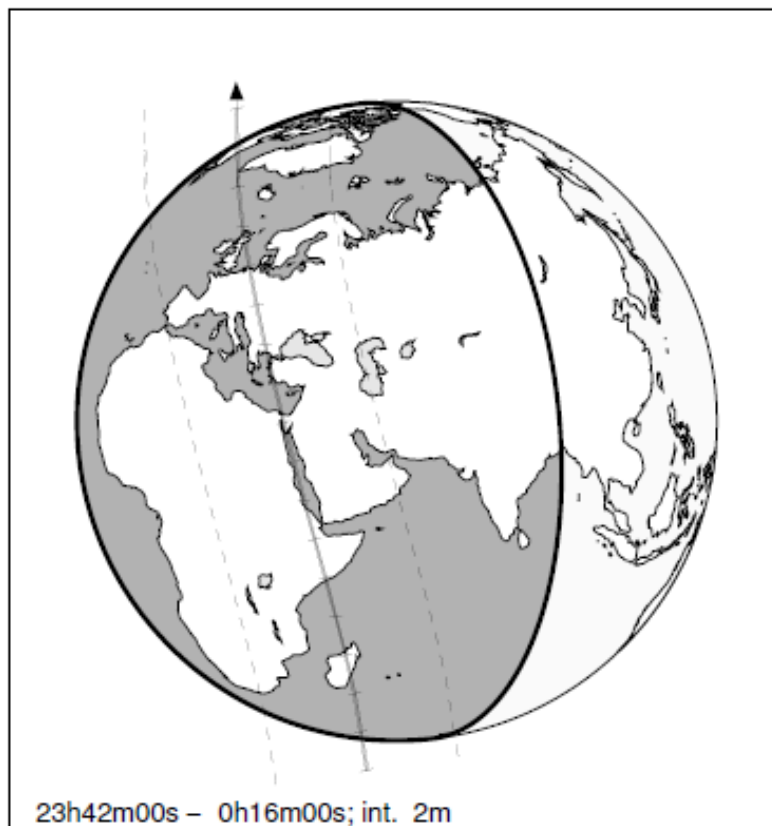
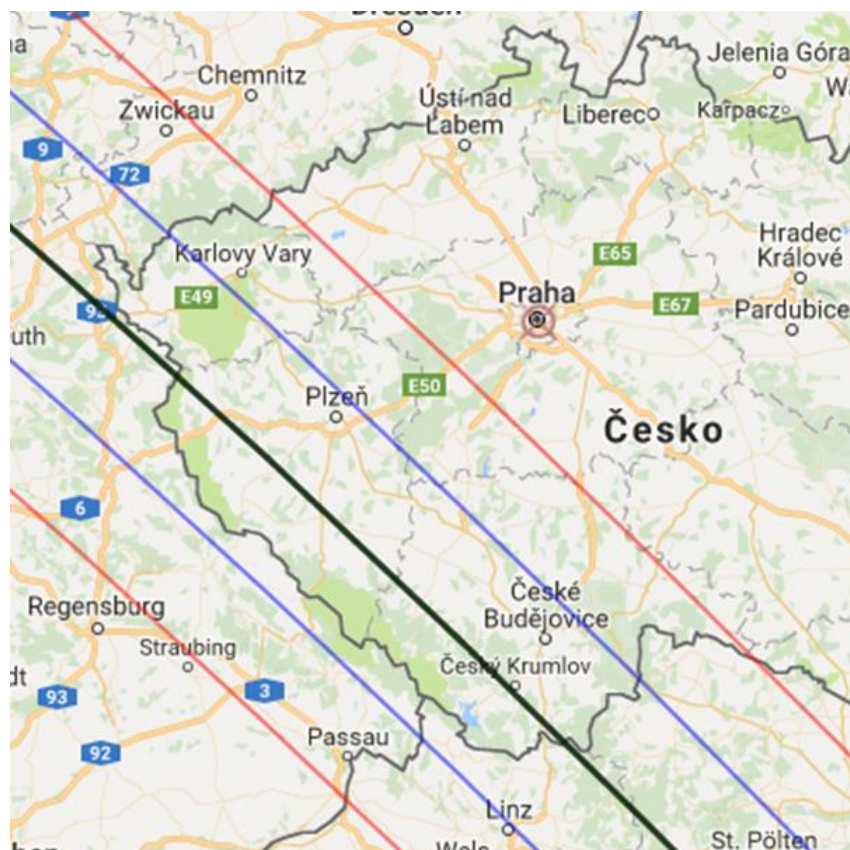
## Zákryty hvězd planetkami 2018

**Planet:**  $a = 2.66$ ,  $e = 0.20$   
V. mag. = 14.81    Diam. = 54.2 km = 0.03"  
 $\mu = 12.77''/h$      $\pi = 3.47''$     Ref. = EG2016

**Star:**    Source cat. HSOY  
 $\alpha = 5^h48^m08.537^s$      $\delta = +32^\circ12'27.86''$   
Vmag = 12.05    Bmag = 11.75

$\Delta m = 2.8$     Max. dur. = 8.3s

Sun : 120°    Moon : 92°, 92%





# 216 Kleopatra & HSOY 543187020

2018 nov 7 1<sup>h</sup>24.2<sup>m</sup> U.T.

## Zákryty hvězd planetkami

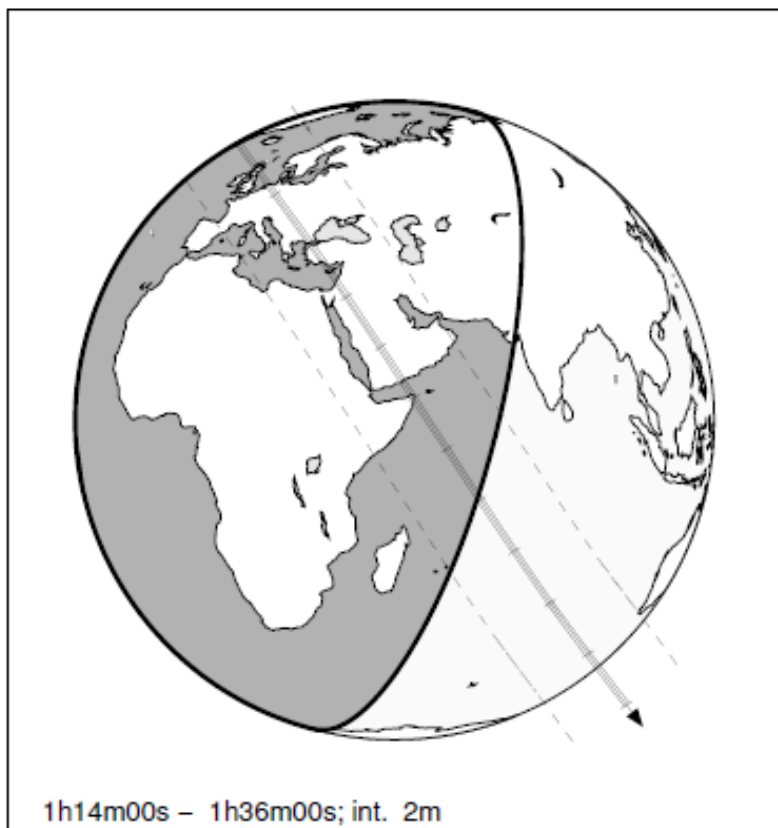
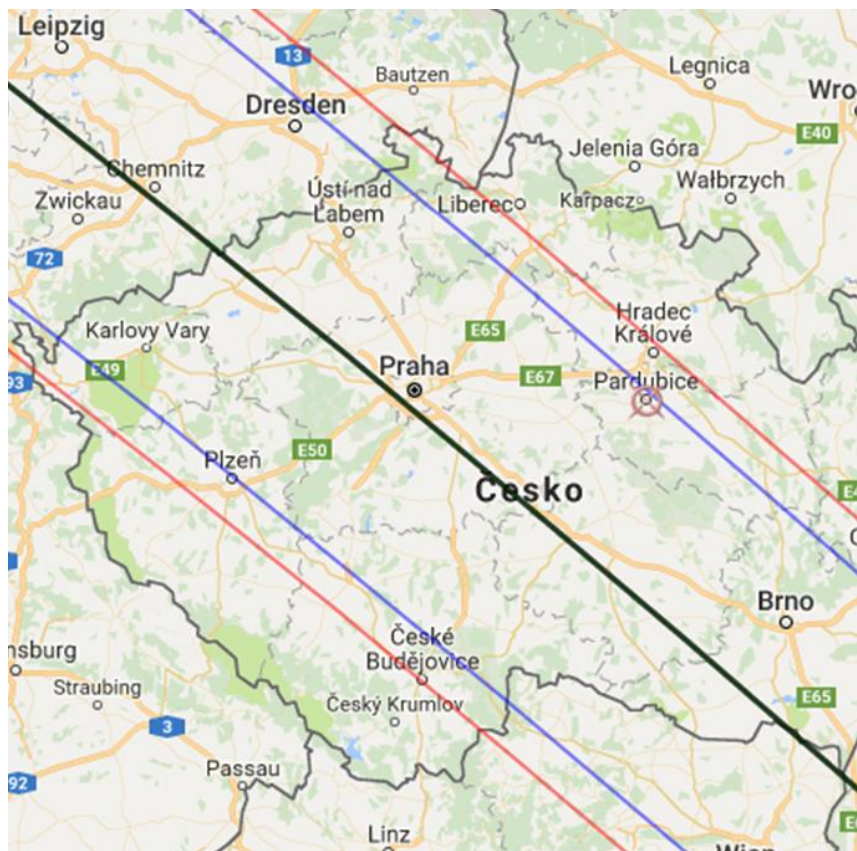
2018

**Planet:**  $a = 2.79, e = 0.25$   
V. mag. = 11.30 Diam. = 112.6 km = 0.09"  
 $\mu = 28.95''/h$   $\pi = 4.94''$  Ref. = EG2016

**Star:** Source cat. HSOY  
 $\alpha = 7^h38^m38.372^s$   $\delta = +7^\circ15'33.07''$   
Vmag = 12.02 Bmag = 13.69

$\Delta m = 0.5$  Max. dur. = 10.8s

Sun : 108° Moon : 102° , 1%





# 38 Leda & TYC 2373-01454-1

2018 nov 18 4<sup>h</sup>44.6<sup>m</sup> U.T.

## Zákryty hvězd planetkami

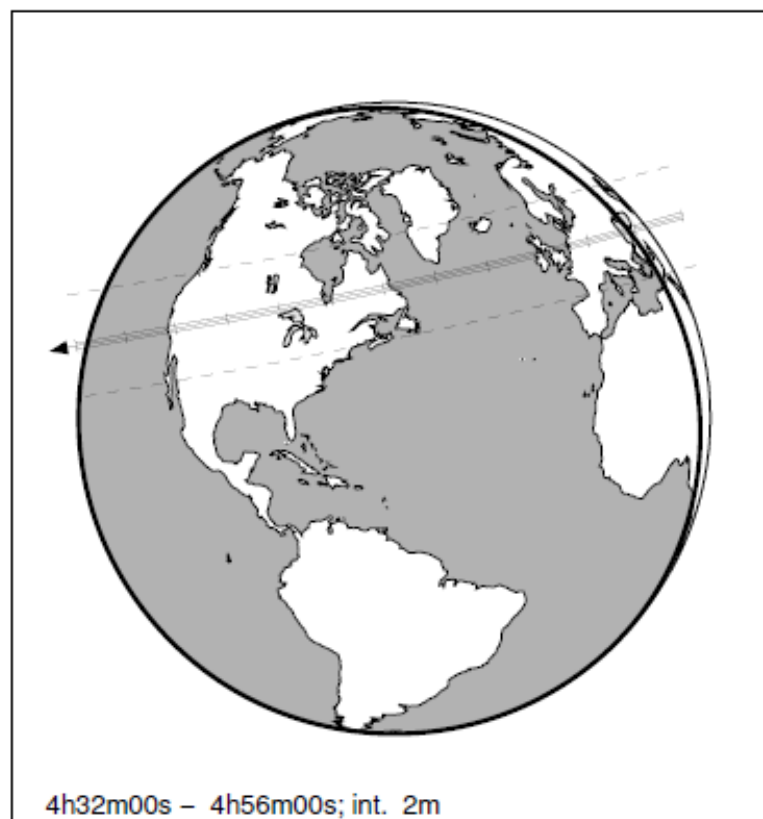
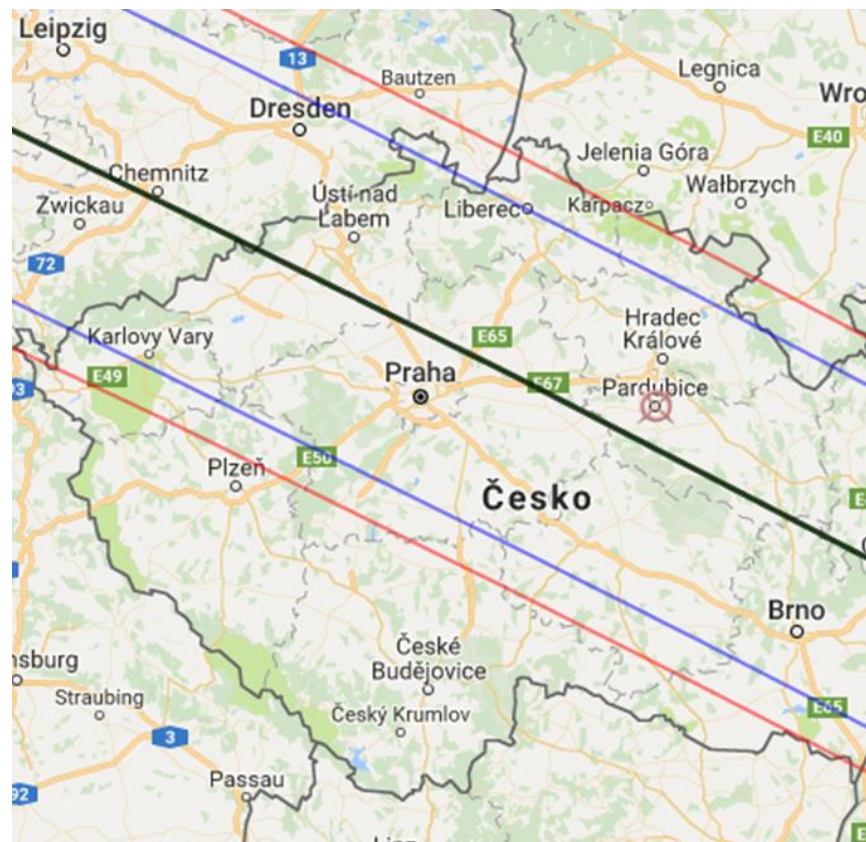
2018

**Planet:**  $a = 2.74$ ,  $e = 0.15$   
V. mag. = 11.53 Diam. = 120.0 km = 0.12"  
 $\mu = 30.23''/h$   $\pi = 6.14''$  Ref. = EG2016

**Star:** Source cat. TGAS  
 $\alpha = 4^{\text{h}}33^{\text{m}}46.369^{\text{s}}$   $\delta = +31^{\circ}07'27.43''$   
Vmag = 10.72 Bmag = 12.20

$\Delta m = 1.2$  Max. dur. = 13.8s

Sun : 161° Moon : 78° , 74%



4h32m00s - 4h56m00s; int. 2m

# 1542 Schalen & HSOY 522961845

2018 dec 21 2<sup>h</sup> 7.7<sup>m</sup> U.T.

## Zákryty hvězd planetkami

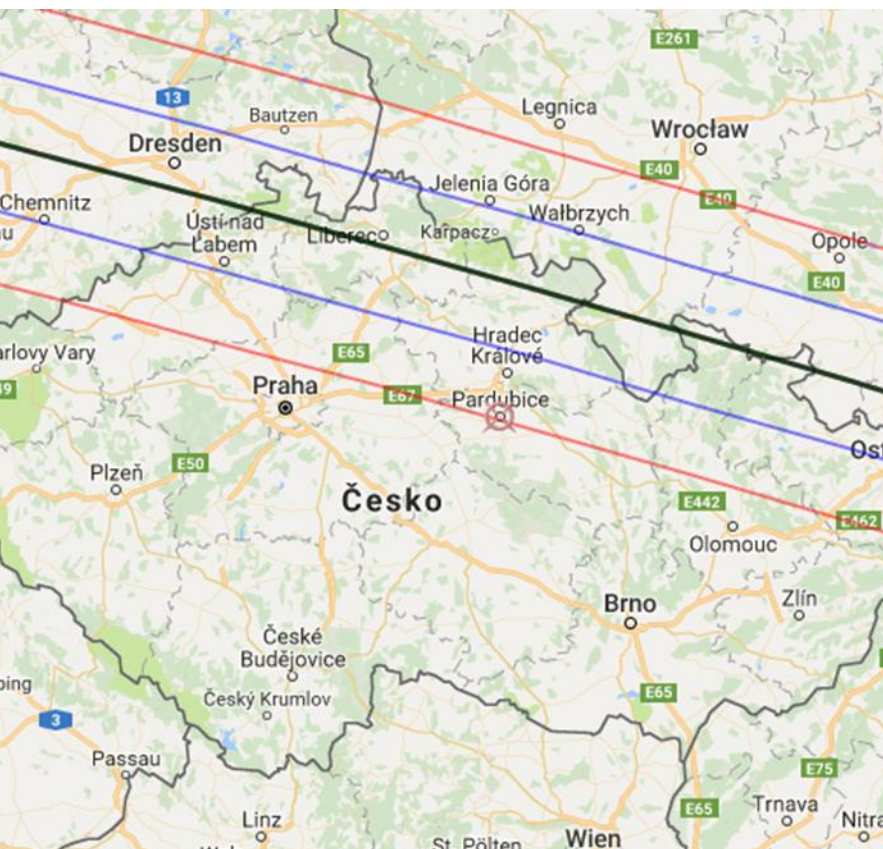
2018

**Planet:** a = 3.10, e = 0.11  
V. mag. = 14.59 Diam. = 50.1 km = 0.04"  
 $\mu$  = 24.46"/h  $\pi$  = 4.52" Ref. = EG2016

**Star:** Source cat. HSOY  
 $\alpha$  = 4<sup>h</sup>16<sup>m</sup>33.726<sup>s</sup>  $\delta$  = +18°33'04.43"  
Vmag = 11.42 Bmag = 11.67

$\Delta m$  = 3.2 Max. dur. = 5.2s

Sun : 156° Moon : 2° , 96%





# 95 Arethusa & HSOY 542572453

2018 dec 25 4<sup>h</sup>24.9<sup>m</sup> U.T.

## Zákryty hvězd planetkami

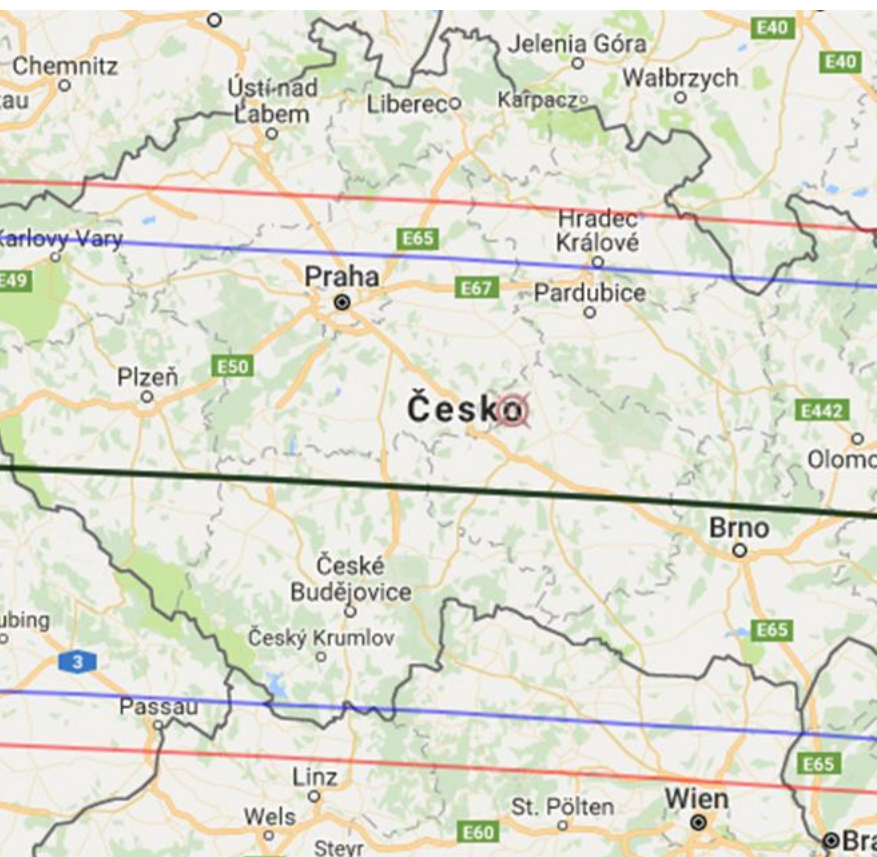
## 2018

**Planet:**  $a = 3.07, e = 0.14$   
V. mag. = 11.97 Diam. = 145.0 km = 0.11"  
 $\mu = 32.43"/h$   $\pi = 4.68''$  Ref. = EG2016

**Star:** Source cat. HSOY  
 $\alpha = 7^{\text{h}}12^{\text{m}}50.289^{\text{s}}$   $\delta = +9^{\circ}32'03.69''$   
Vmag = 12.43 Bmag = 12.56

$\Delta m = 0.6$  Max. dur. = 11.8s

Sun : 160° Moon : 23°, 92%



# Předpovědi a upřesnění

Asteroid Occultation Updates

Updated: 2006 Jan 04, 21:07 UT

[HELP/FAQ](#)  
[All Events](#)

Upcoming Events:

January 2006

Event Date/Time	Rank	Asteroid	Star	Visibility	AMD A	Details
04 Jan , 05:07 UT	94	(113) Amalthea mag 11.6	TYC 1337-00431-1 mag 11.6	Caribbean, S Tx, Mexico	0.8m 4.0s 86°	<a href="#">Dec 23 00:24</a>
04 Jan , 05:16 UT	47	(1347) Patria mag 16.3	ZUCAC 34767145 mag 11.5	N Canada, Alaska	4.8m 2.0s 41°	<a href="#">Dec 23 00:25</a>
04 Jan , 08:00 UT	73	(178) Belisana mag 12.9	TYC 1390-00967-1 mag 9.5	Venezuela, Colomb		
04 Jan , 09:55 UT	94	(598) Octavia mag 12.7	TYC 1917-02019-1 mag 10.0	Colombia, Mexico,		
04 Jan , 11:06 UT	94	(140) Siwa mag 13.4	UCAC2 34216407 mag 12.0	Taiwan, Japan		
04 Jan , 11:06 UT	94	(814) Tauris	ZUCAC 41510812	Taiwan, Japan		

<http://asteroidoccultation.com/>

S. Preston

## UPŘESNĚNÍ

### Occultations on January 2006

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 an 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 <i>With data of Preston of December 14</i>
03	21h21>21h35	466 Tisiphone *	Coord	Turkey, Russia <i>With data of Preston of December 14</i>
04	20h51>21h16	1238 Predappia (!)	Coord	Romania, Yugoslavia, Croatia, Slovenia, Italy, F
04	20h59>21h12	33 Polyhymnia *	Coord	Russia, Sweden, Norway, United Kingdom <i>With data of Preston of December 14</i>
06	04h04>04h17	348 Mau (!)	Coord	Spain, France <i>With data of Preston of December 14</i>

EAON  
J. Schwaenen

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

E. Frappa

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

euraster.net  
Occultations astéroïdales pour la France en 2005-2006  
2005-2006 Asteroidal Occultations for France

Cartes produites avec WinOccult 3.1.18, astorb.dat du 19 septembre 2005 et les catalogues Hipparcos, Tycho and UCAC2. Critères: diamètre d'au moins 15 km, durée max d'occultation d'au moins 1 sec, étoile d'au moins mag 12 et chute de magnitude d'au moins 0.5 mag. Les fichiers sont sous la forme: aaaaammj-Astéroïde-magnitude de l'étoile.gif

Produced with WinOccult 3.1.18, 2005/09/19 astorb.dat and Hipparcos, Tycho and UCAC2 catalogues for a minimum diameter of 15 km, a maximum duration of at least 1 sec, a star of at least mag 12 and a magnitude drop of at least 0.5 mag.  
Map files: yyyymmdd-Asteroid-star magnitude.gif

Pour comprendre les informations données sur chaque carte, lire la [partie concernée](#) du guide de l'observateur.

Ces cartes sont destinées à donner une meilleure vue d'ensemble des occultations en France ou à proximité. Tous les événements ne sont pas forcément intéressants, vous devez donc faire votre propre sélection... ;)

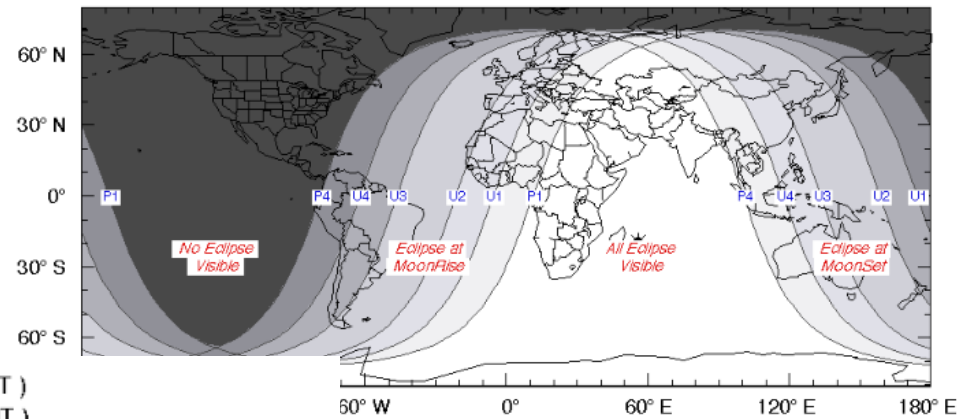
*These maps have been produced only to give a better overview for observers in or near France. Note that some events are not really interesting, so you have to make your own choice... ;)*

ATTENTION ! NE PLUS UTILISER CES CARTES si une mise à jour est disponible sur les pages de [Jan Mané](#), ou de [Steve Preston](#). Ces mises à jour sont beaucoup plus fiables parce réalisées avec un jeu de données sélectionnées.

TAKE CARE ! DON'T USE THESE MAPS if an update is available on [Jan Mané](#), or [Steve Preston](#) pages. These updates are far better because made with a selected set of data.

Mis à jour le/Updated: 2005 septembre 25 [tfappo@euraster.net](mailto:tfappo@euraster.net)

# Úplné zatmění Měsíce 27. 7. 2018



Ecliptic Conjunction = 20:21:30.3 TD (= 20:20:19.6 UT)  
 Greatest Eclipse = 20:22:54.3 TD (= 20:21:43.5 UT)

Penumbral Magnitude = 2.6792    P. Radius = 1.1738°    Gamma = 0.1168  
 Umbral Magnitude = 1.6087    U. Radius = 0.6488°    Axis = 0.1051°

Saros Series = 129    Member = 38 of 71

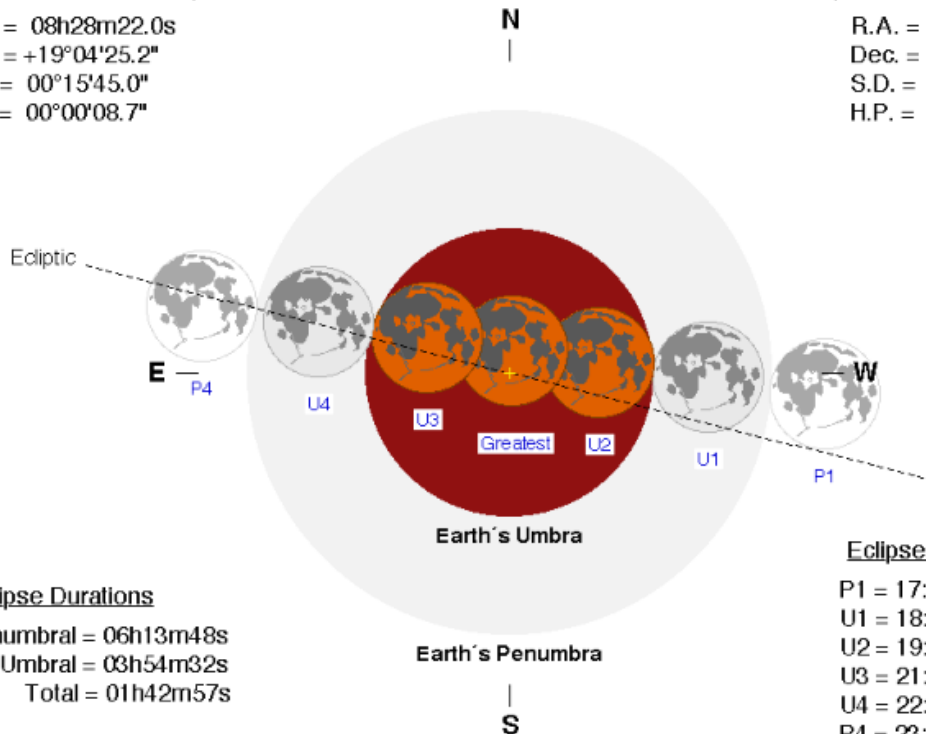
## Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 08h28m22.0s  
 Dec. = +19°04'25.2"  
 S.D. = 00°15'45.0"  
 H.P. = 00°00'08.7"

## Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 20h28m18.2s  
 Dec. = -18°58'10.6"  
 S.D. = 00°14'42.7"  
 H.P. = 00°53'59.7"

**v Evropě  
pozorovatelné**



## Eclipse Durations

Penumbral = 06h13m48s  
 Umbral = 03h54m32s  
 Total = 01h42m57s

## Eclipse Contacts

P1 = 17:14:49 UT  
 U1 = 18:24:27 UT  
 U2 = 19:30:15 UT  
 U3 = 21:13:12 UT  
 U4 = 22:19:00 UT  
 P4 = 23:28:37 UT

