

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2037-11-03T22:57:16.100
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 674770530781059456
 2Mass ID (if available) : 07422506+2149501

ICRS Star Coord at Epoch: 07h 42m 25.04337s +21:49:50.12374s

RUWE (>1.4 is poor) : 1.13
 K magnitude : 13.842
 G magnitude : 15.290
 RP magnitude : 14.811
 BP magnitude : 15.606
 DUPflag : 0
 Distance (au) : 18.390
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -2.56
 Sun-Target sep (deg) : 107.69
 Sun-Moon sep (deg) : 58.34
 B (ring opening deg) : 53.18
 PA of pole (deg) : 86.30

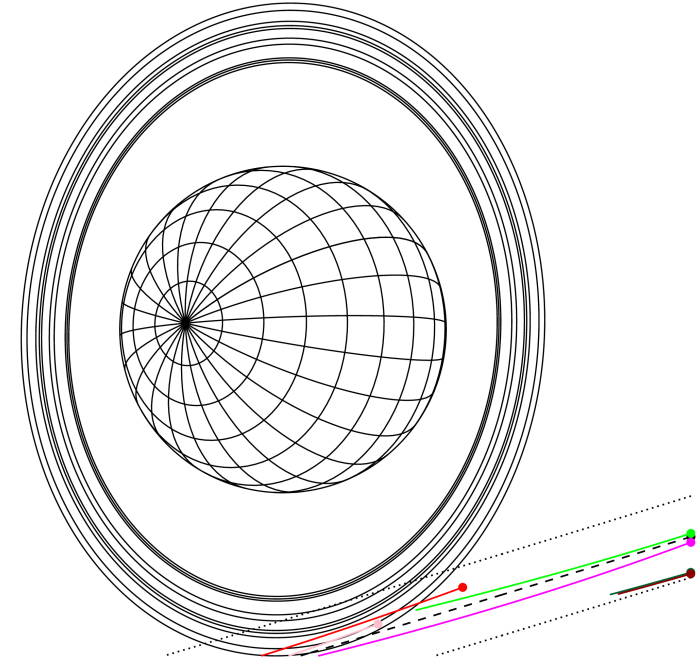
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2037-11-03T22:57:16.1000 α: 07 42 25.0434 δ: +21 49 50.124 C/A 3.693° PA 14.70 deg v_sky - 2.56 km/s D 18.39 AU
 Credit: Styled after SORA/Lucky Star

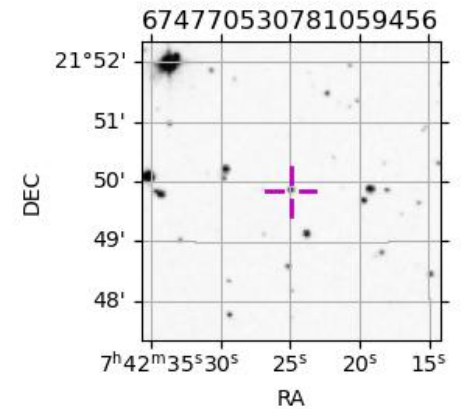
Uranus 2037-11-03T22:57:16 K13.84 G15.29 XRgt

Earth
 PIC
 PMO
 TEN
 KAV
 AAT
 MSO



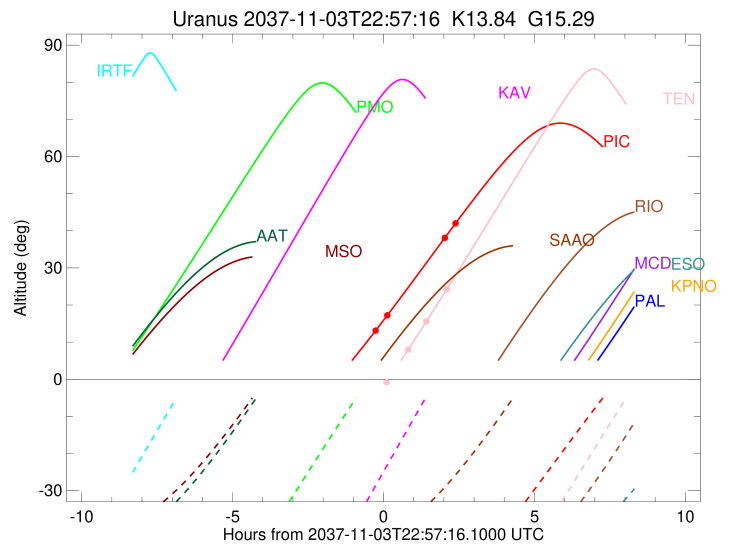
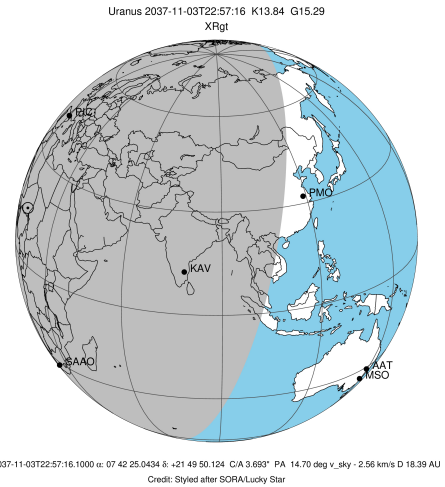
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	++			NOV 03 22:39 - NOV 04 01:18	PnnRie
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl Obs	32.0	248.4					PnnRnn
MCD	McDonald Obs. 2.7m	30.7	256.0					PnnRnn
TEN	Teide Obs./Tenerife	28.3	343.5	+			NOV 03 23:47 - NOV 04 01:01	PnnRie
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
KAV	Kavalur Observatory	12.6	78.8					PnnRnn
RIO	Rio de Janeiro	-22.9	316.8					PnnRnn
ESO	European Southern Obs	-29.3	289.3					PnnRnn
AAT	Siding Spring (AAT)	-31.3	149.1					PnnRnn
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn



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target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2037-11-03T23:21:01.400
Event type          : XRgt
: No Uranus occs
: Ring occs: geocentric, topocentric
Observer code       : PIC
Location            : Pic du Midi
Latitude (deg)      : 42.93656
E. Longitude (deg)  : 0.14231
Altitude (km)       : 2.890
Gaia source ID      : 674770530781059456
2Mass ID (if available) : 07422506+2149501
ICRS Star Coord at Epoch: 07h 42m 25.04337s +21:49:50.12373s
RUWE (>1.4 is poor) : 1.13
K magnitude         : 13.842
G magnitude         : 15.290
RP magnitude        : 14.811
BP magnitude        : 15.606
DUPflag            : 0
Distance (au)       : 18.389
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : -2.56
Sun-Target sep (deg) : 107.69
Sun-Moon sep (deg)  : 58.98
B (ring opening deg) : 53.18
PA of pole (deg)    : 86.30
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 3.561
C/A sky separation (km) : 47487.7
NAIF SPICE kernels  : RAJobs_U111+rgf15.spk
URKALLvl.spk
ura111.bsp
IAU_URANUS_for_RINGFIT.tpc
vgr2.ura111.bsp
ura161.bsp
vgr2.ura161.bsp
peph.ura160.bsp
earthstns_itrf93_040916.bsp
earth_720101_070426.bpc
earth_200101_990628_predict.bpc
pg3f0000r.bsp
pg490000r.bsp
naif0012.tls
earth_flat_IAU.spk
  
```



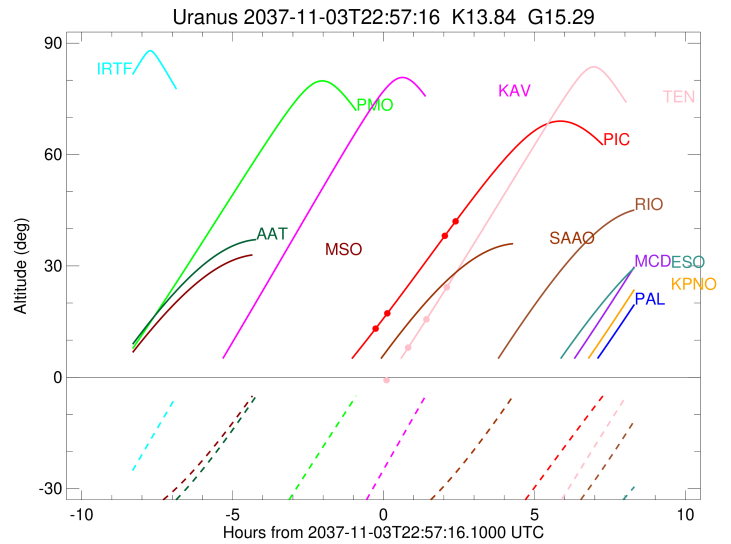
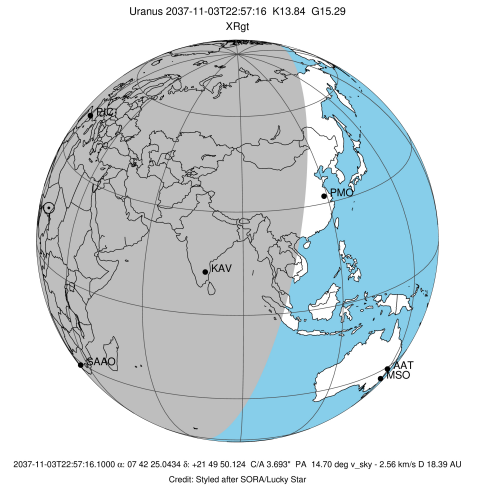
Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2037-11-03T22:39:11.505		12.68	-59.42	51299.89	-0.92		
lambda	I	2037-11-03T23:05:12.774		17.28	-61.48	50026.71	-0.68		

No planet occultations

lambda	E	2037-11-04T00:58:51.618		38.04	-58.20	50026.71	0.73		
epsilon	E	2037-11-04T01:18:37.078		41.66	-55.86	51048.64	1.01		

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target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2037-11-03T23:17:38.810
Event type           : XRgt
: No Uranus occs
: Ring occs: geocentric, topocentric
Observer code        : TEN
Location             : Teide Obs./Tenerife
Latitude (deg)       : 28.30050
E. Longitude (deg)   : 343.48909
Altitude (km)        : 2.395
Gaia source ID       : 674770530781059456
2Mass ID (if available) : 07422506+2149501
ICRS Star Coord at Epoch: 07h 42m 25.04337s +21:49:50.12373s
RUWE (>1.4 is poor) : 1.13
K magnitude           : 13.842
G magnitude           : 15.290
RP magnitude          : 14.811
BP magnitude          : 15.606
DUPflag              : 0
Distance (au)         : 18.389
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : -2.56
Sun-Target sep (deg) : 107.69
Sun-Moon sep (deg)   : 58.78
B (ring opening deg) : 53.18
PA of pole (deg)     : 86.30
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 3.631
C/A sky separation (km) : 48425.2
NAIF SPICE kernels   : RAJobs_U111+rgf15.spk
URKALLvl1.spk
ura111.bsp
IAU_URANUS_for_RINGFIT.tpc
vgr2.ura111.bsp
ura161.bsp
vgr2.ura161.bsp
peph.ura160.bsp
earthstns_itrf93_040916.bsp
earth_720101_070426.bpc
earth_200101_990628_predict.bpc
pg3f0000r.bsp
pg490000r.bsp
naif0012.tls
earth_flat_IAU.spk
  
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2037-11-03T23:00:29.649	-1.33x	-61.77	51274.54	-0.65			
lambda	I	2037-11-03T23:47:21.968	8.21	-70.80	50026.71	-0.20			

No planet occultations

lambda	E	2037-11-04T00:21:30.522	15.37	-75.72	50026.71	0.20			
epsilon	E	2037-11-04T01:01:19.233	23.87	-77.00	51090.17	0.72			