

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2030-10-31T08:23:20.600
 Event type : XRT
 : No Uranus occs
 : Ring occs: topocentric, not geocentric
 Gaia source ID : 3416310480088415872
 2Mass ID (if available) : 05250836+2316529

ICRS Star Coord at Epoch: 05h 25m 08.36455s +23:16:52.87032s

RUWE (>1.4 is poor) : 1.03
 K magnitude : 14.062
 G magnitude : 16.842
 RP magnitude : 15.939
 BP magnitude : 17.644
 DUPflag : 0
 Distance (au) : 18.442
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.93
 Sun-Target sep (deg) : 135.53
 Sun-Moon sep (deg) : 162.31
 B (ring opening deg) : 81.07
 PA of pole (deg) : 25.52

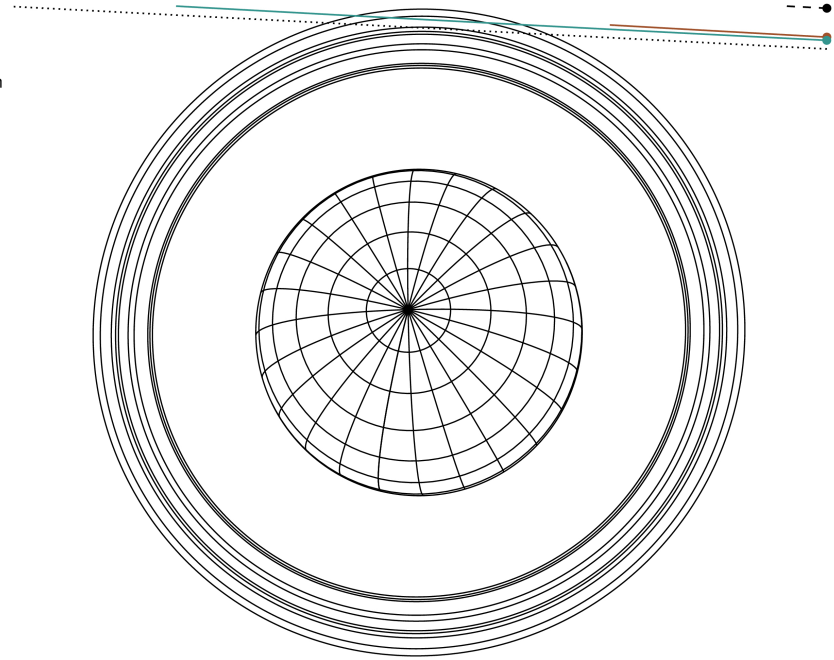
| # | a(km) | ring |
|----|---------|---------|
| 1 | 41837.2 | 6 |
| 2 | 42235.0 | 5 |
| 3 | 42571.2 | 4 |
| 4 | 44718.5 | alpha |
| 5 | 45661.1 | beta |
| 6 | 47176.1 | eta |
| 7 | 47626.3 | gamma |
| 8 | 48300.3 | delta |
| 9 | 50026.7 | lambda |
| 10 | 51149.4 | epsilon |



2030-10-31T08:23:20.6000 cc: 05 25 08.3645 s: +23 16 52.870 C/A 4.046" PA 177.02 deg v_sky -14.93 km/s D 18.44 AU
 Credit: Styled after SORA/Lucky Star

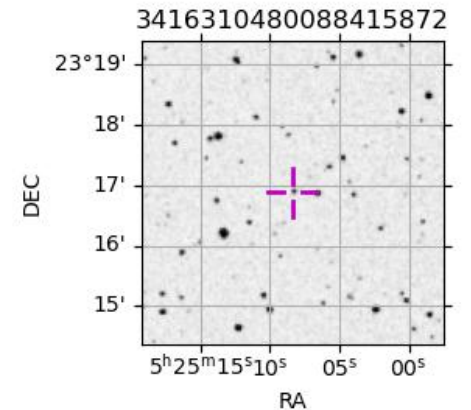
Earth
 RIO
 ESO

Uranus 2030-10-31T08:23:20 K14.06 G16.84 XRT



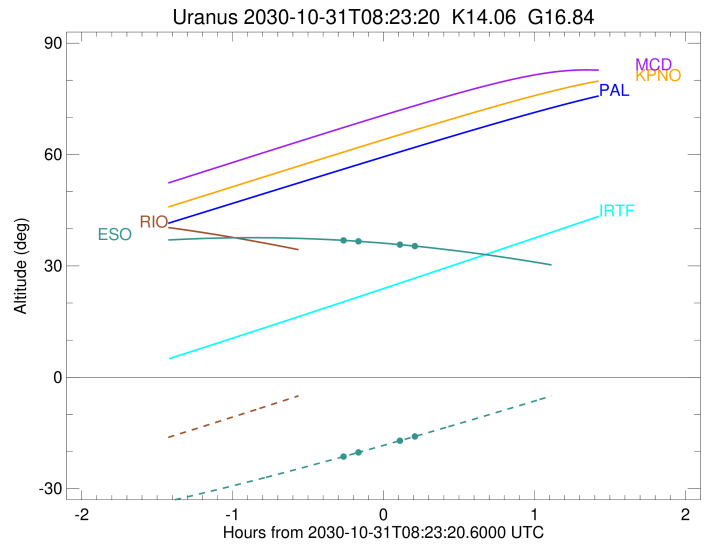
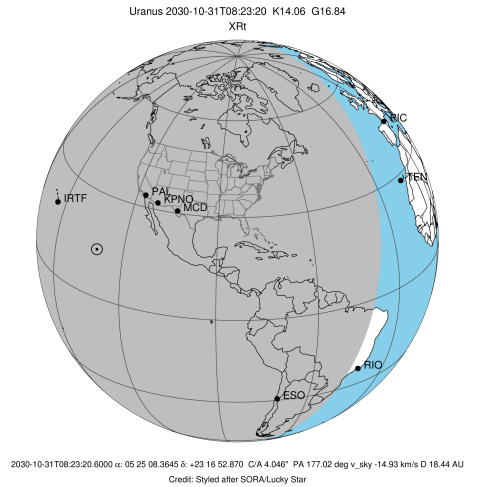
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

| Obs | Location | lat | Elon | Rings I | Planet | Rings E | Observed Events Interval | OEcode |
|------|-----------------------|-------|-------|---------|--------|---------|-----------------------------|--------|
| PIC | Pic du Midi | 42.9 | 0.1 | | | | | PnnRnn |
| 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 | | | | | PnnRnn |
| 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 | ++ | | ++ | OCT 31 08:06 - OCT 31 08:37 | PnnRie |
| 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 |



```

target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2030-10-31T08:22:11.210
Event type          : XRt
                    : No Uranus occs
                    : Ring occs: topocentric, not geocentric
Observer code       : ESO
Location            : European Southern Obs. (3.6m)
Latitude (deg)      : -29.26097
E. Longitude (deg)  : 289.26831
Altitude (km)       : 2.400
Gaia source ID      : 3416310480088415872
2Mass ID (if available) : 05250836+2316529
ICRS Star Coord at Epoch: 05h 25m 08.36455s +23:16:52.87032s
RUWE (>1.4 is poor) : 1.03
K magnitude         : 14.062
G magnitude         : 16.842
RP magnitude        : 15.939
BP magnitude        : 17.644
DUPflag            : 0
Distance (au)       : 18.442
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : -14.93
Sun-Target sep (deg) : 135.53
Sun-Moon sep (deg)  : 162.20
B (ring opening deg) : 81.07
PA of pole (deg)    : 25.52
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 3.662
C/A sky separation (km) : 48983.6
NAIF SPICE kernels  : RAJobs_U111+rgf15.spk
URKALLvl1.spk
urall1.bsp
IAU_URANUS_for_RINGFIT.tpc
vgr2.urall1.bsp
ural161.bsp
vgr2.ural161.bsp
peph.ural160.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 | 2030-10-31T08:06:12.960 | | 36.93 | -21.60 | 51470.03 | -4.33 | | |
| lambda | I | 2030-10-31T08:13:30.504 | | 36.62 | -20.23 | 50026.71 | -2.31 | | |

No planet occultations

| | | | | | | | | | |
|---------|---|-------------------------|--|-------|--------|----------|------|--|--|
| lambda | E | 2030-10-31T08:29:46.158 | | 35.73 | -17.12 | 50026.71 | 2.31 | | |
| epsilon | E | 2030-10-31T08:37:23.216 | | 35.23 | -15.63 | 51553.68 | 4.33 | | |