

target : Uranus
target radius (km) : 25559.00
C/A epoch : 2031-12-16T04:12:16.050
Event type : XRT
: No Uranus occs
: Ring occs: topocentric, not geocentric
Gaia source ID : 3404585769124337280
2Mass ID (if available) : 05372539+2329276

ICRS Star Coord at Epoch: 05h 37m 25.40006s +23:29:27.45782s

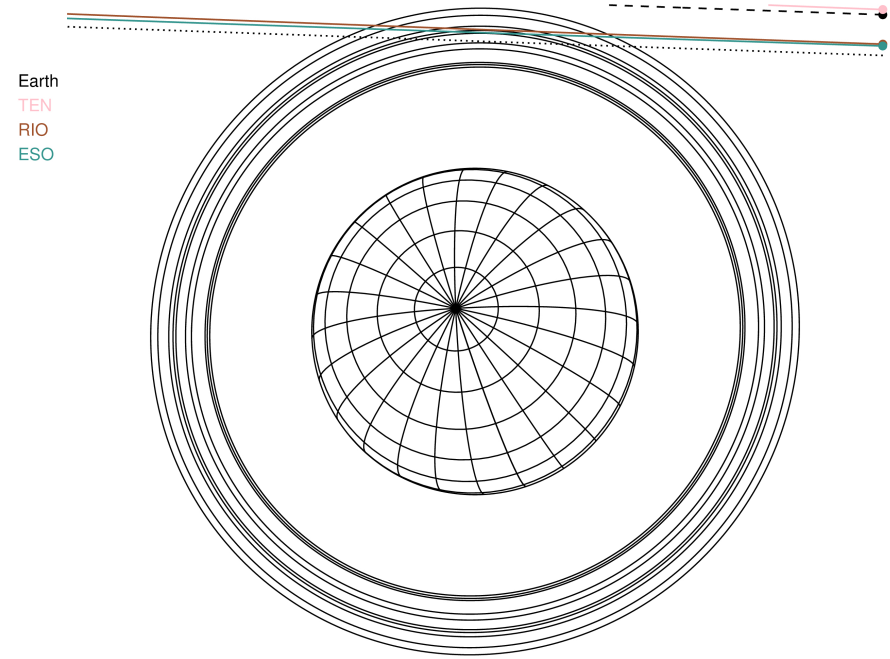
RUWE (>1.4 is poor) : 0.99
K magnitude : 14.700
G magnitude : 18.255
RP magnitude : 17.222
BP magnitude : 19.379
DUPflag : 0
Distance (au) : 18.103
f0 (km) : 0.000
g0 (km) : 0.000
skyplane vel. (km/s) : -23.45
Sun-Target sep (deg) : 178.71
Sun-Moon sep (deg) : 155.81
B (ring opening deg) : 79.36
PA of pole (deg) : 39.87

#	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



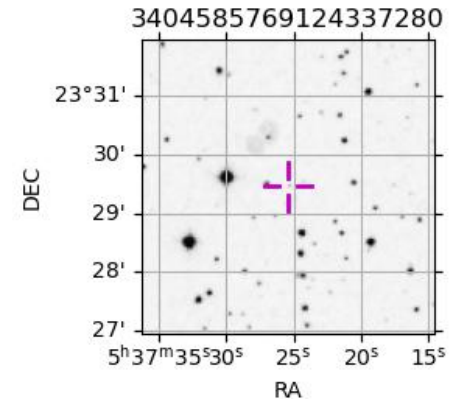
2031-12-16T04:12:16.0500 cc: 05 37 25.4001 s: +23 29 27.458 C/A 3.954" PA 177.98 deg v_sky -23.45 km/s D 18.10 AU
Credit: Styled after SORA/Lucky Star

Uranus 2031-12-16T04:12:16 K14.70 G18.26 XRT



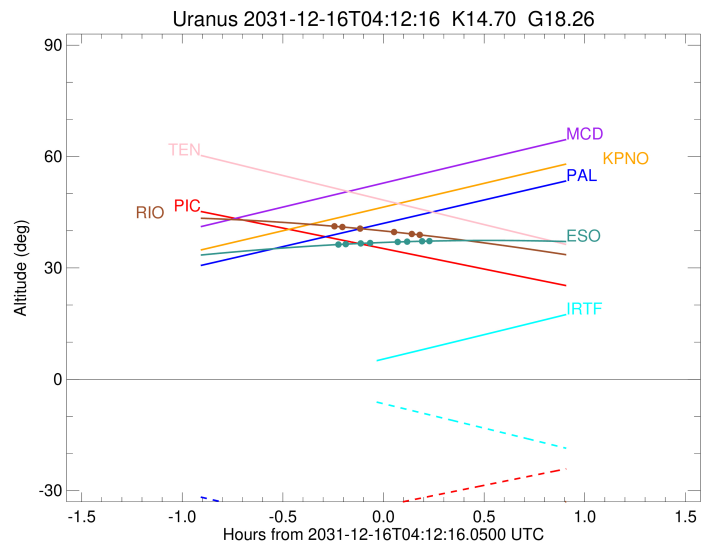
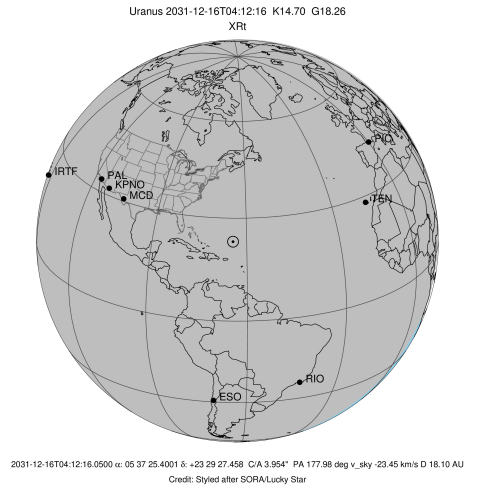
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEncode
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	+++		+++	DEC 16 03:58 - DEC 16 04:22	PnnRie
ESO	European Southern Obs	-29.3	289.3	++++		++++	DEC 16 03:59 - DEC 16 04:25	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



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target                : Uranus
target radius (km)    : 25559.00
C/A epoch             : 2031-12-16T04:10:55.650
Event type           : XRt
: No Uranus occs
: Ring occs: topocentric, not geocentric
Observer code        : RIO
Location             : Rio de Janeiro
Latitude (deg)       : -22.89506
E. Longitude (deg)   : 316.77708
Altitude (km)        : 0.033
Gaia source ID       : 3404585769124337280
2Mass ID (if available) : 05372539+2329276
ICRS Star Coord at Epoch: 05h 37m 25.40006s +23:29:27.45782s
RUWE (>1.4 is poor) : 0.99
K magnitude          : 14.700
G magnitude          : 18.255
RP magnitude         : 17.222
BP magnitude         : 19.379
DUPflag             : 0
Distance (au)        : 18.103
f0 (km)              : 0.000
g0 (km)              : 0.000
skyplane vel. (km/s) : -23.45
Sun-Target sep (deg) : 178.71
Sun-Moon sep (deg)   : 155.68
B (ring opening deg) : 79.36
PA of pole (deg)     : 39.87
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 3.602
C/A sky separation (km) : 47291.7
NAIF SPICE kernels   : RAJobs_U111+rgf15.spk
URKALLvl1.spk
urall1.bsp
IAU_URANUS_for_RINGFIT.tpc
vgr2.urall1.bsp
ural61.bsp
vgr2.ural61.bsp
peph.ural60.bsp
earthstns_itr93_040916.bsp
earth_720101_070426.bpc
earth_200101_990628_predict.bpc
pg3f0000r.bsp
pg490000r.bsp
naif0012.tls
earth_flat_IAU.spk
  
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Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2031-12-16T03:58:02.520		41.18	-40.92	50958.54	-8.23		
lambda	I	2031-12-16T04:00:02.258		41.02	-40.75	50026.71	-7.16		
delta	I	2031-12-16T04:05:21.433		40.58	-40.28	48300.35	-3.59		

No planet occultations

delta	E	2031-12-16T04:15:21.404		39.67	-39.31	48300.35	3.59		
lambda	E	2031-12-16T04:20:40.701		39.14	-38.76	50026.71	7.16		
epsilon	E	2031-12-16T04:22:18.077		38.98	-38.58	50772.97	8.23		

