

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2033-08-15T05:21:40.930
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3377545891980655360
 2Mass ID (if available) : 06183790+2335577

Uranus 2033-08-15T05:21:40 K13.84 G16.15 XRgt

ICRS Star Coord at Epoch: 06h 18m 37.90646s +23:35:57.74141s

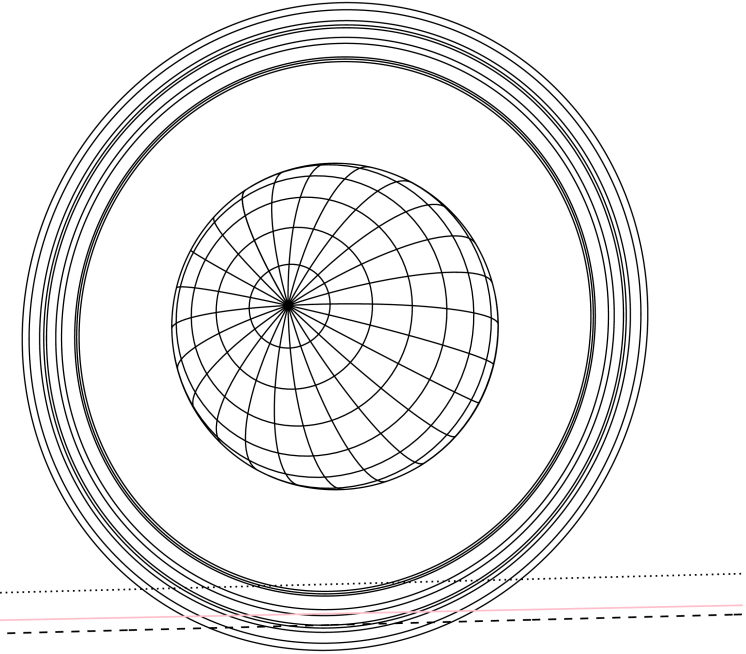
RUWE (>1.4 is poor) : 0.98
 K magnitude : 13.844
 G magnitude : 16.151
 RP magnitude : 15.374
 BP magnitude : 16.767
 DUPflag : 0
 Distance (au) : 19.640
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.33
 Sun-Target sep (deg) : 47.98
 Sun-Moon sep (deg) : 70.78
 B (ring opening deg) : 71.62
 PA of pole (deg) : 65.87

Uranus 2033-08-15T05:21:40 K13.84 G16.15 XRgt



2033-08-15T05:21:40.9300 α: 06 18 37.9065 δ: +23 35 57.741 C/A 3.274" PA 1.47 deg v_sky +26.33 km/s D 19.64 AU
 Credit: Styled after SORA/Lucky Star

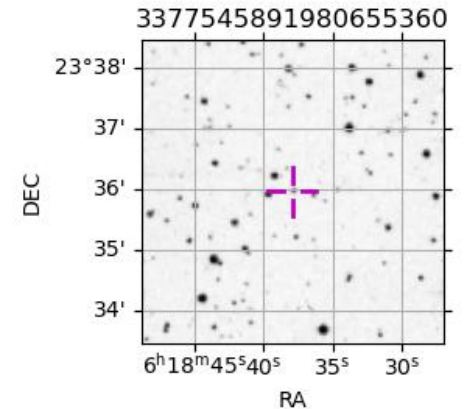
PIC
 TEN



#	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

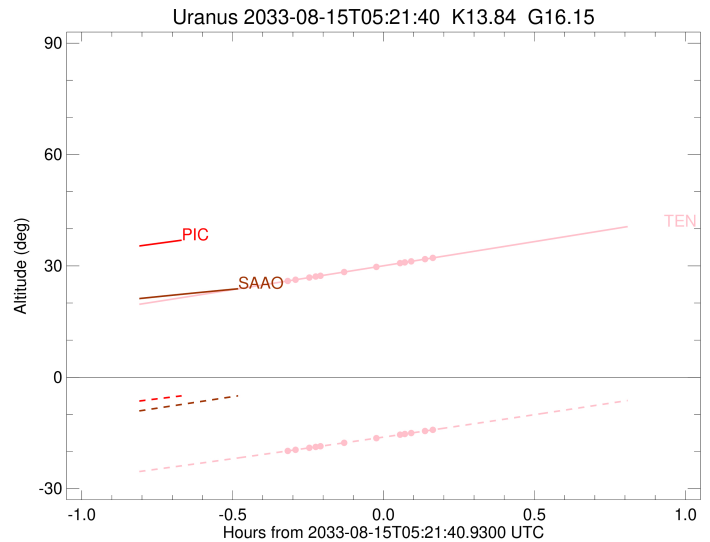
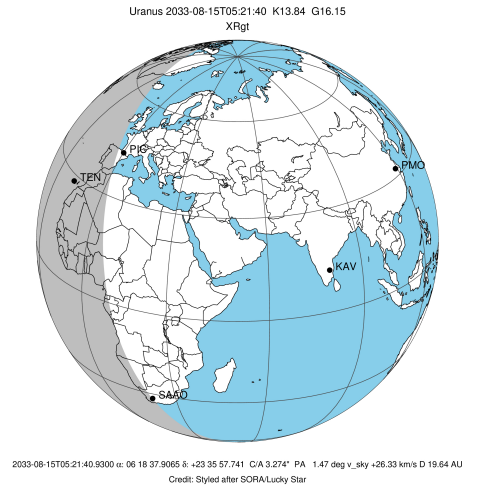
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++		+++++	AUG 15 05:03 - AUG 15 05:31	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            : 2033-08-15T05:18:10.990
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      : 3377545891980655360
2Mass ID (if available) : 06183790+2335577
ICRS Star Coord at Epoch: 06h 18m 37.90646s +23:35:57.74141s
RUWE (>1.4 is poor) : 0.98
K magnitude         : 13.844
G magnitude         : 16.151
RP magnitude        : 15.374
BP magnitude        : 16.767
DUPflag            : 0
Distance (au)       : 19.640
f0 (km)            : 0.000
g0 (km)            : 0.000
skyplane vel. (km/s) : 26.33
Sun-Target sep (deg) : 47.98
Sun-Moon sep (deg)  : 70.99
B (ring opening deg) : 71.62
PA of pole (deg)    : 65.87
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 3.155
C/A sky separation (km) : 44945.1
NAIF SPICE kernels  : RAJobs_U111+rgf15.spk
URKALLvl1.spk
urall11.bsp
IAU_URANUS_for_RINGFIT.tpc
vgr2.urall11.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	2033-08-15T05:03:12.839		26.06	-19.73	50743.67	-12.25		
lambda	I	2033-08-15T05:04:13.156		26.28	-19.54	50026.71	-11.52		
delta	I	2033-08-15T05:06:58.104		26.87	-19.01	48300.35	-9.37		
gamma	I	2033-08-15T05:08:14.937		27.14	-18.76	47621.01	-8.30		
eta	I	2033-08-15T05:09:11.286		27.34	-18.58	47176.12	-7.49		
beta	I	2033-08-15T05:13:59.420		28.38	-17.64	45652.46	-3.01		

No planet occultations

beta	E	2033-08-15T05:20:06.901		29.70	-16.43	45648.71	3.01		
eta	E	2033-08-15T05:24:56.531		30.74	-15.47	47176.12	7.48		
gamma	E	2033-08-15T05:25:53.121		30.94	-15.29	47622.42	8.29		
delta	E	2033-08-15T05:27:09.895		31.22	-15.03	48300.35	9.36		
lambda	E	2033-08-15T05:29:55.131		31.81	-14.48	50026.71	11.50		
epsilon	E	2033-08-15T05:31:09.526		32.08	-14.23	50915.35	12.23		