

target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2034-04-30T16:57:33.180  
 Event type : XRgt  
 : No Uranus occs  
 : Ring occs: geocentric, topocentric  
 Gaia source ID : 3425424778645906432  
 2Mass ID (if available) : 06114055+2340548

ICRS Star Coord at Epoch: 06h 11m 40.55678s +23:40:54.79544s

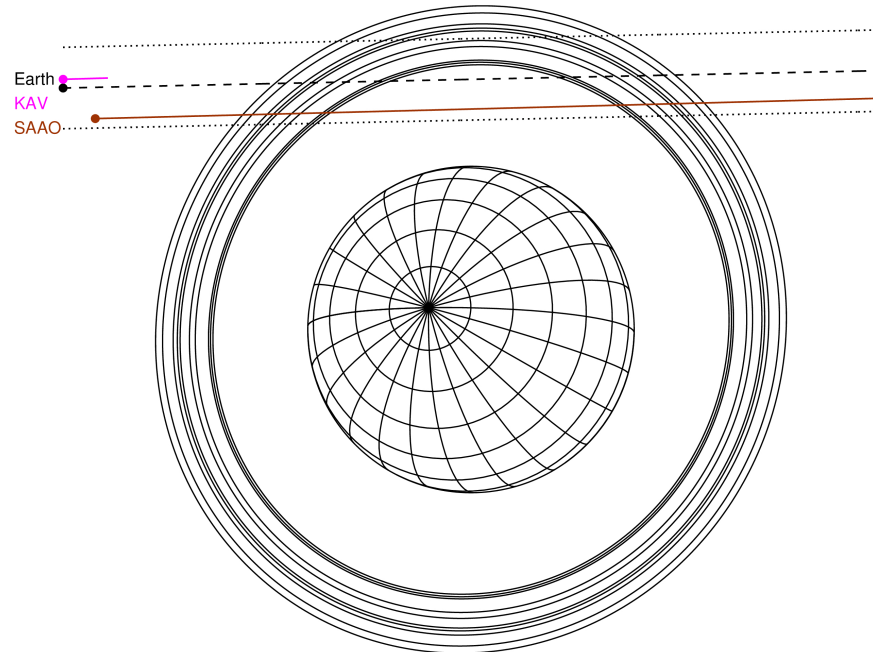
RUWE (>1.4 is poor) : 0.91  
 K magnitude : 10.948  
 G magnitude : 11.889  
 RP magnitude : 11.530  
 BP magnitude : 12.097  
 DUPflag : 0  
 Distance (au) : 19.524  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 24.42  
 Sun-Target sep (deg) : 52.72  
 Sun-Moon sep (deg) : 96.79  
 B (ring opening deg) : 73.02  
 PA of pole (deg) : 62.77

#	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



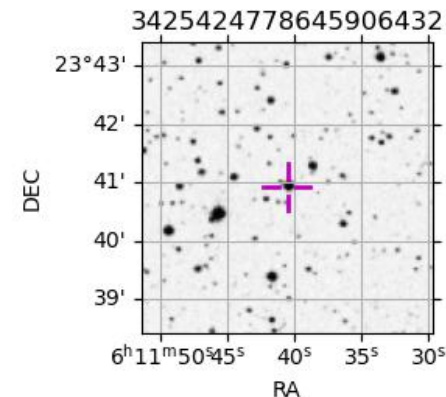
2034-04-30T16:57:33.1800 ex: 06 11 40.5568 s: +23 40 54.795 C/A 2.772" PA 181.22 deg v\_sky +24.42 km/s D 19.52 AU  
 Credit: Styled after SORA/Lucky Star

Uranus 2034-04-30T16:57:33 K10.95 G11.89 XRgt

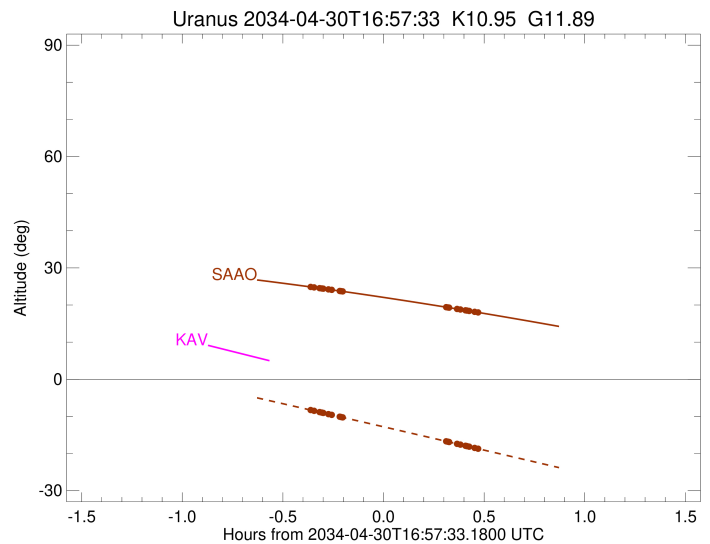
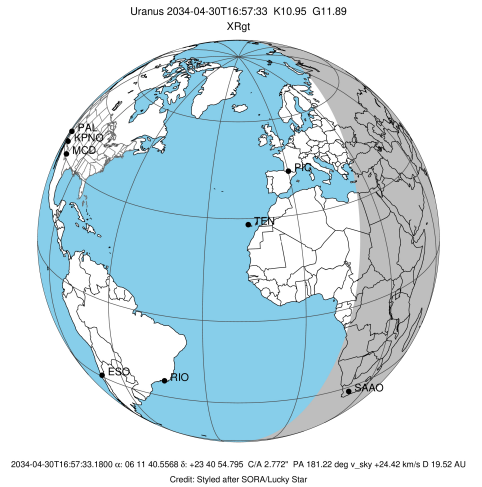


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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					PnnRnn
AAT	Siding Spring (AAT)	-31.3	149.1					PnnRnn
SAAO	So. Afr. Astro. Obs.	-32.4	20.8	+++++		+++++	APR 30 16:35 - APR 30 17:26	PnnRie
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn



target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2034-04-30T16:59:56.560  
 Event type : XRgt  
 : No Uranus occs  
 : Ring occs: geocentric, topocentric  
 Observer code : SAAO  
 Location : So. Afr. Astro. Obs. (Sutherland)  
 Latitude (deg) : -32.37953  
 E. Longitude (deg) : 20.81070  
 Altitude (km) : 1.768  
 Gaia source ID : 3425424778645906432  
 2Mass ID (if available) : 06114055+2340548  
 ICRS Star Coord at Epoch: 06h 11m 40.55678s +23:40:54.79544s  
 RUWE (>1.4 is poor) : 0.91  
 K magnitude : 10.948  
 G magnitude : 11.889  
 RP magnitude : 11.530  
 BP magnitude : 12.097  
 DUPflag : 0  
 Distance (au) : 19.525  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 24.42  
 Sun-Target sep (deg) : 52.72  
 Sun-Moon sep (deg) : 97.19  
 B (ring opening deg) : 73.02  
 PA of pole (deg) : 62.77  
 Pole direction: RA (deg): 257.31100  
 Dec (deg): -15.17500  
 C/A sky separation (") : 2.437  
 C/A sky separation (km) : 34513.3  
 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\_itr93\_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	2034-04-30T16:35:48.424		24.88	-8.28	51190.01	-18.39		
lambda	I	2034-04-30T16:36:52.782		24.74	-8.51	50026.71	-17.89		
delta	I	2034-04-30T16:38:30.992		24.54	-8.84	48300.35	-17.26		
gamma	I	2034-04-30T16:39:10.063		24.46	-8.98	47631.16	-16.99		
eta	I	2034-04-30T16:39:36.993		24.40	-9.07	47176.12	-16.80		
beta	I	2034-04-30T16:41:10.283		24.21	-9.39	45641.06	-16.09		
alpha	I	2034-04-30T16:42:08.413		24.09	-9.60	44721.78	-15.63		
4	I	2034-04-30T16:44:29.481		23.79	-10.08	42601.56	-14.31		
5	I	2034-04-30T16:45:00.698		23.72	-10.19	42155.22	-14.02		
6	I	2034-04-30T16:45:20.596		23.68	-10.26	41878.37	-13.81		

No planet occultations

6	E	2034-04-30T17:16:14.454		19.42	-16.71	41863.02	13.84		
5	E	2034-04-30T17:16:39.530		19.36	-16.80	42213.02	14.04		
4	E	2034-04-30T17:17:03.140		19.30	-16.88	42549.93	14.34		
alpha	E	2034-04-30T17:19:29.880		18.94	-17.40	44752.19	15.67		
beta	E	2034-04-30T17:20:26.890		18.80	-17.59	45658.42	16.13		
eta	E	2034-04-30T17:21:58.871		18.57	-17.92	47176.12	16.84		
gamma	E	2034-04-30T17:22:25.346		18.51	-18.01	47624.56	17.04		
delta	E	2034-04-30T17:23:04.705		18.41	-18.15	48300.35	17.31		
lambda	E	2034-04-30T17:24:42.649		18.17	-18.49	50026.71	17.94		
epsilon	E	2034-04-30T17:26:06.318		17.96	-18.78	51548.13	18.45		