

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2034-09-23T18:51:39.390
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3379729659512102400
 2Mass ID (if available) : 06430071+2322129

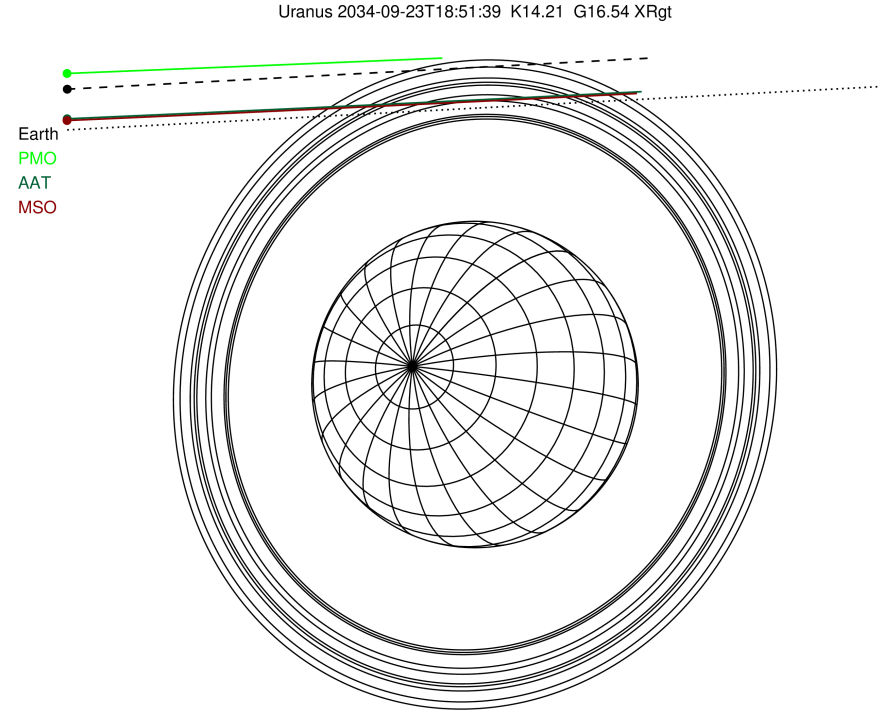
ICRS Star Coord at Epoch: 06h 43m 00.72481s +23:22:12.93931s

RUWE (>1.4 is poor) : 1.03
 K magnitude : 14.214
 G magnitude : 16.541
 RP magnitude : 15.835
 BP magnitude : 17.107
 DUPflag : 0
 Distance (au) : 19.046
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 11.33
 Sun-Target sep (deg) : 80.48
 Sun-Moon sep (deg) : 154.67
 B (ring opening deg) : 66.44
 PA of pole (deg) : 73.88

#	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

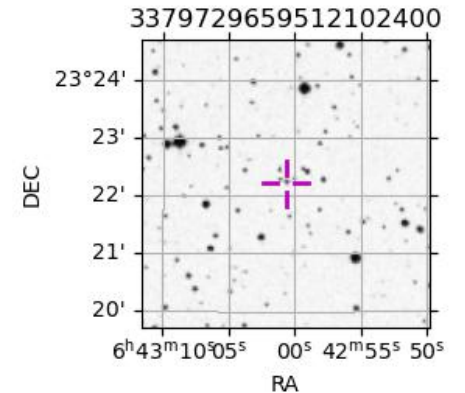


2034-09-23T18:51:39.3900 ex: 06 43 00.7248 s: +23 22 12.939 C/A 3.592" PA 183.05 deg v_sky +11.33 km/s D 19.05 AU
 Credit: Styled after SORA/Lucky Star

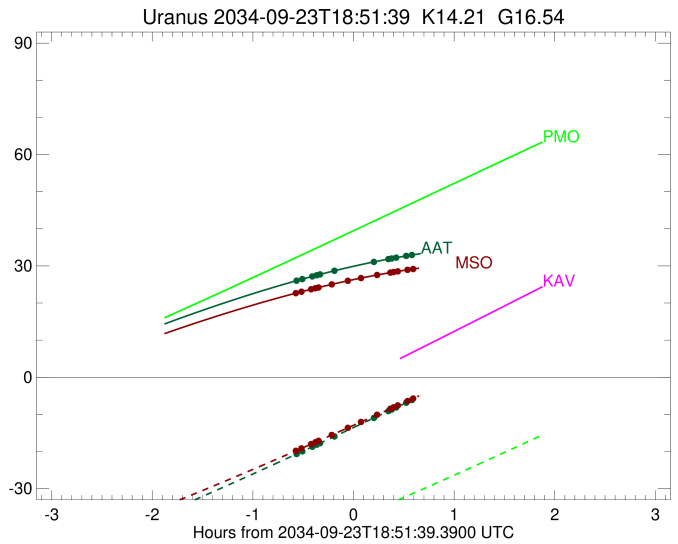
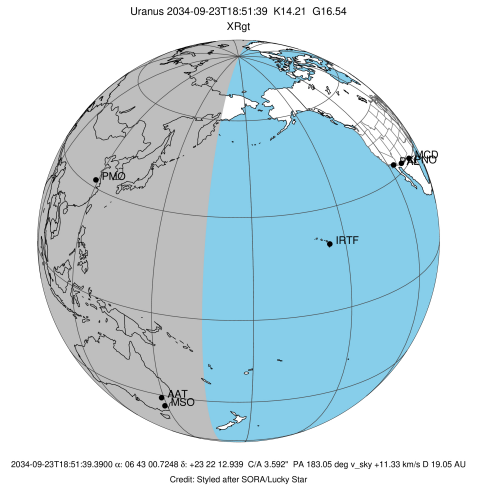


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++		+++++	SEP 23 18:18 - SEP 23 19:25	PnnRie
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0	+++++		+++++	SEP 23 18:18 - SEP 23 19:26	PnnRie



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2034-09-23T18:48:42.040
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : AAT
 Location : Siding Spring (AAT)
 Latitude (deg) : -31.27703
 E. Longitude (deg) : 149.06608
 Altitude (km) : 1.164
 Gaia source ID : 3379729659512102400
 2Mass ID (if available) : 06430071+2322129
 ICRS Star Coord at Epoch: 06h 43m 00.72481s +23:22:12.93931s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 14.214
 G magnitude : 16.541
 RP magnitude : 15.835
 BP magnitude : 17.107
 DUPflag : 0
 Distance (au) : 19.046
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 11.33
 Sun-Target sep (deg) : 80.48
 Sun-Moon sep (deg) : 155.01
 B (ring opening deg) : 66.44
 PA of pole (deg) : 73.88
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.222
 C/A sky separation (km) : 44504.8
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 ural11.bsp
 IAU_URANUS_for_RINGFIT.tpc
 vgr2.ural11.bsp
 ural61.bsp
 vgr2.ural61.bsp
 peph.ural60.bsp
 earthstns_itrff93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk



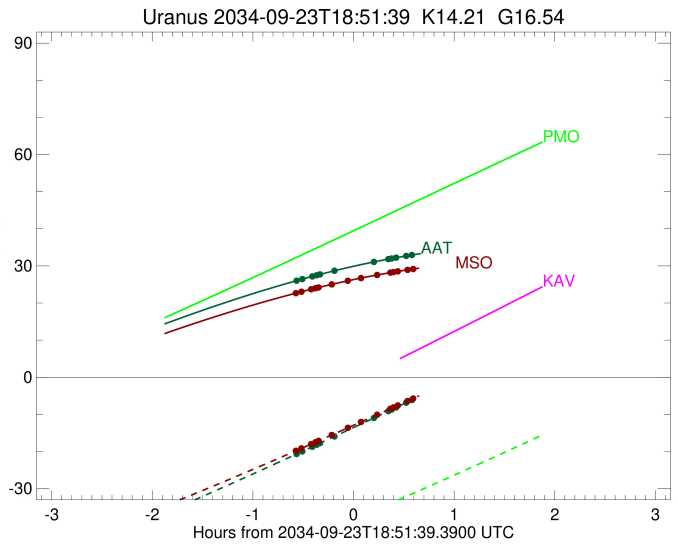
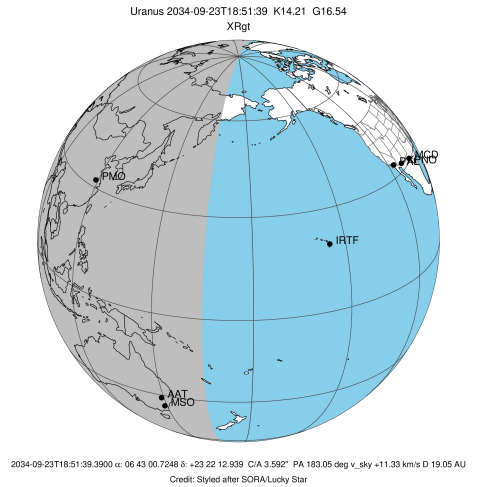
Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2034-09-23T18:18:38.170		26.13	-20.48	50855.11	-5.55		
lambda	I	2034-09-23T18:21:10.644		26.45	-19.95	50026.71	-5.26		
delta	I	2034-09-23T18:27:07.735		27.17	-18.71	48300.35	-4.39		
gamma	I	2034-09-23T18:29:48.038		27.49	-18.15	47629.23	-3.98		
eta	I	2034-09-23T18:31:46.741		27.72	-17.74	47176.12	-3.66		
beta	I	2034-09-23T18:40:33.551		28.72	-15.89	45643.74	-2.14		

No planet occultations

beta	E	2034-09-23T19:03:33.155		31.05	-11.02	45641.32	2.13		
eta	E	2034-09-23T19:12:22.482		31.83	-9.14	47176.12	3.64		
gamma	E	2034-09-23T19:14:22.222		32.00	-8.72	47631.34	3.96		
delta	E	2034-09-23T19:17:02.747		32.21	-8.15	48300.35	4.37		
lambda	E	2034-09-23T19:23:01.829		32.68	-6.87	50026.71	5.23		
epsilon	E	2034-09-23T19:25:16.716		32.85	-6.39	50752.14	5.51		

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target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2034-09-23T18:48:52.240
Event type          : XRgt
: No Uranus occs
: Ring occs: geocentric, topocentric
Observer code       : MSO
Location            : Mt. Stromlo Observatory
Latitude (deg)      : -35.32000
E. Longitude (deg)  : 149.00833
Altitude (km)       : 0.770
Gaia source ID      : 3379729659512102400
2Mass ID (if available) : 06430071+2322129
ICRS Star Coord at Epoch: 06h 43m 00.72481s +23:22:12.93931s
RUWE (>1.4 is poor) : 1.03
K magnitude         : 14.214
G magnitude         : 16.541
RP magnitude        : 15.835
BP magnitude        : 17.107
DUPflag            : 0
Distance (au)       : 19.046
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : 11.33
Sun-Target sep (deg) : 80.48
Sun-Moon sep (deg)  : 154.97
B (ring opening deg) : 66.44
PA of pole (deg)    : 73.88
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 3.204
C/A sky separation (km) : 44254.6
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
  
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2034-09-23T18:18:10.078		22.76	-19.64	50858.12	-5.66		
lambda	I	2034-09-23T18:20:39.719		23.05	-19.14	50026.71	-5.39		
delta	I	2034-09-23T18:26:26.517		23.70	-18.00	48300.35	-4.55		
gamma	I	2034-09-23T18:29:00.596		23.99	-17.48	47629.16	-4.16		
eta	I	2034-09-23T18:30:53.704		24.20	-17.11	47176.12	-3.85		
beta	I	2034-09-23T18:38:56.365		25.05	-15.50	45644.03	-2.47		
alpha	I	2034-09-23T18:48:37.462		26.02	-13.55	44719.68	-0.69		

No planet occultations

alpha	E	2034-09-23T18:55:52.629		26.70	-12.09	44723.59	0.69		
beta	E	2034-09-23T19:05:28.424		27.54	-10.15	45641.23	2.47		
eta	E	2034-09-23T19:13:33.546		28.18	-8.51	47176.12	3.84		
gamma	E	2034-09-23T19:15:27.673		28.33	-8.12	47631.37	4.14		
delta	E	2034-09-23T19:18:01.948		28.52	-7.60	48300.35	4.53		
lambda	E	2034-09-23T19:23:50.667		28.93	-6.41	50026.71	5.36		
epsilon	E	2034-09-23T19:26:02.702		29.08	-5.96	50753.03	5.63		