

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2040-06-02T17:43:50.900
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 675910793058362368
 2Mass ID (if available) : 08095267+2039466

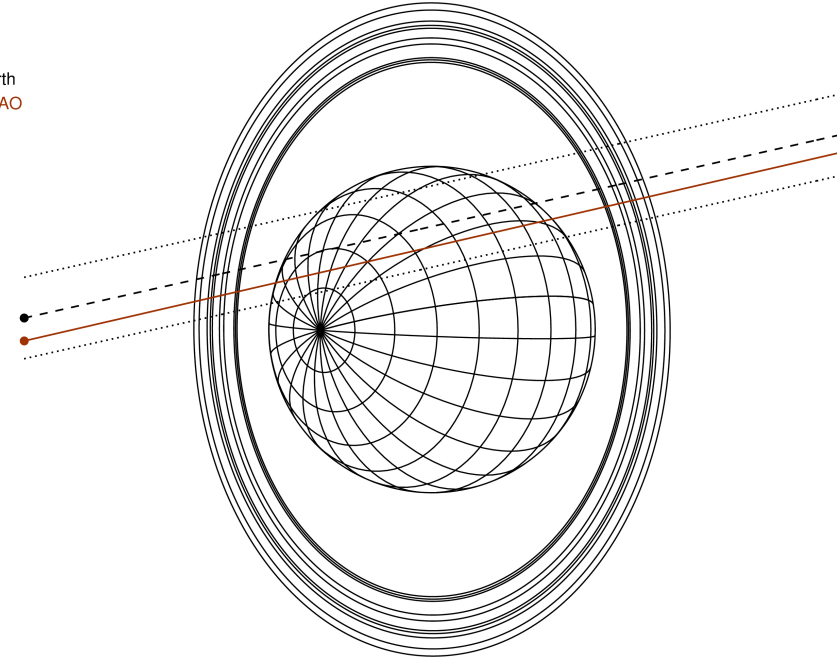
Uranus 2040-06-02T17:43:50 K14.71 G16.69 PgtRgt

ICRS Star Coord at Epoch: 08h 09m 52.66063s +20:39:45.97616s
 RUWE (>1.4 is poor) : 0.98
 K magnitude : 14.714
 G magnitude : 16.687
 RP magnitude : 16.061
 BP magnitude : 17.145
 DUPflag : 0
 Distance (au) : 19.233
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.50
 Sun-Target sep (deg) : 47.92
 Sun-Moon sep (deg) : 129.63
 B (ring opening deg) : 46.82
 PA of pole (deg) : 90.40



2040-06-02T17:43:50.9000 ex: 08 09 52.6606 s: +20 39 45.976 C/A 1.137° PA 192.65 deg v_sky +26.50 km/s D 19.23 AU
 Credit: Styled after SORA/Lucky Star

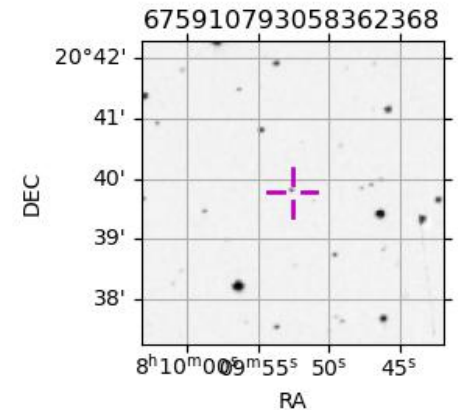
Earth
 SAAO



#	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

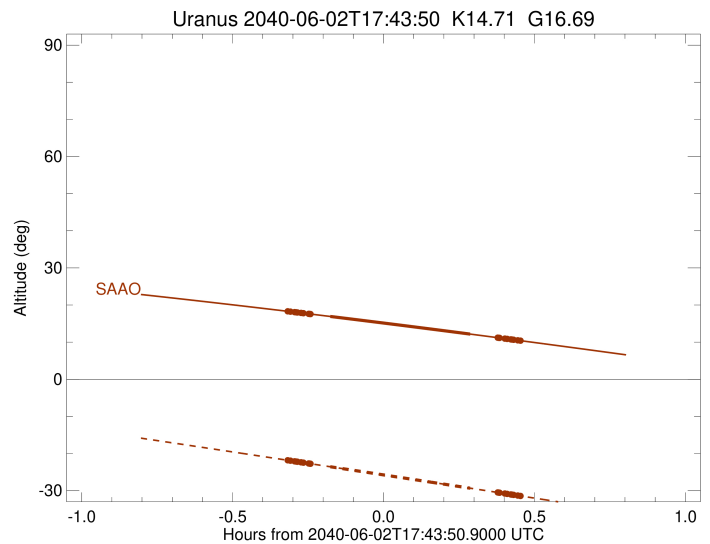
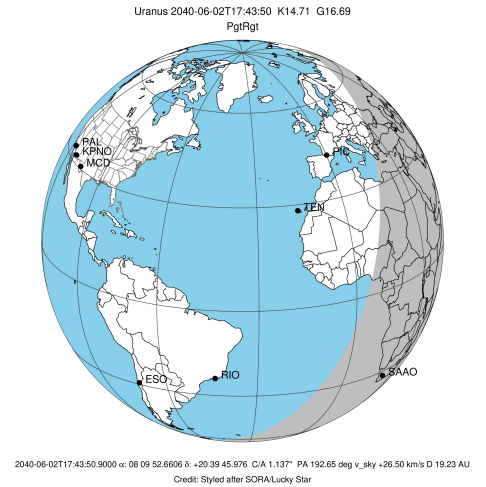
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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					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	+++++	++	+++++	JUN 02 17:24 - JUN 02 18:10	PieRie
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn



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target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2040-06-02T17:47:08.720
Event type           : PgtRgt
: Uranus occs: geocentric, topocentric
: 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       : 675910793058362368
2Mass ID (if available) : 08095267+2039466
ICRS Star Coord at Epoch: 08h 09m 52.66063s +20:39:45.97616s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 14.714
G magnitude           : 16.687
RP magnitude          : 16.061
BP magnitude          : 17.145
DUPflag              : 0
Distance (au)        : 19.233
f0 (km)              : 0.000
g0 (km)              : 0.000
skyplane vel. (km/s) : 26.50
Sun-Target sep (deg) : 47.92
Sun-Moon sep (deg)   : 129.35
B (ring opening deg) : 46.82
PA of pole (deg)     : 90.40
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 0.905
C/A sky separation (km) : 12619.5
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_itrf93_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	2040-06-02T17:24:40.456		18.33	-21.79	51452.44	-34.45		
lambda	I	2040-06-02T17:25:21.824		18.22	-21.94	50026.71	-34.43		
delta	I	2040-06-02T17:26:12.024		18.08	-22.11	48300.35	-34.34		
gamma	I	2040-06-02T17:26:31.613		18.03	-22.17	47627.94	-34.31		
eta	I	2040-06-02T17:26:44.787		17.99	-22.22	47176.12	-34.28		
beta	I	2040-06-02T17:27:28.547		17.87	-22.37	45680.71	-34.20		
alpha	I	2040-06-02T17:27:55.866		17.80	-22.46	44733.71	-34.12		
4	I	2040-06-02T17:28:58.730		17.63	-22.68	42609.91	-33.98		
5	I	2040-06-02T17:29:08.562		17.60	-22.71	42305.77	-33.99		
6	I	2040-06-02T17:29:18.976		17.57	-22.75	41874.90	-33.89		
Uranus	I	2040-06-02T17:33:15.957		16.92	-23.57	25276.24		40.78	42.09
Uranus	E	2040-06-02T18:01:05.655		12.17	-29.35	25388.66		-30.35	-31.52
6	E	2040-06-02T18:06:33.094		11.20	-30.49	41817.95	33.98		
5	E	2040-06-02T18:06:42.400		11.18	-30.52	42198.77	34.08		
4	E	2040-06-02T18:06:52.526		11.15	-30.55	42526.01	34.07		
alpha	E	2040-06-02T18:07:56.619		10.96	-30.78	44689.21	34.21		
beta	E	2040-06-02T18:08:24.198		10.87	-30.87	45647.05	34.29		
eta	E	2040-06-02T18:09:08.828		10.74	-31.03	47176.12	34.38		
gamma	E	2040-06-02T18:09:21.949		10.70	-31.08	47627.43	34.41		
delta	E	2040-06-02T18:09:41.494		10.65	-31.14	48300.35	34.45		
lambda	E	2040-06-02T18:10:31.543		10.50	-31.32	50026.71	34.54		
epsilon	E	2040-06-02T18:10:52.560		10.43	-31.39	50752.99	34.56		