

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2040-05-26T21:09:51.350
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 670660247078757632
 2Mass ID (if available) : 08083787+2043376

ICRS Star Coord at Epoch: 08h 08m 37.88250s +20:43:37.44289s

RUWE (>1.4 is poor) : 0.96
 K magnitude : 11.835
 G magnitude : 13.388
 RP magnitude : 12.850
 BP magnitude : 13.766
 DUPflag : 0
 Distance (au) : 19.144
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.96
 Sun-Target sep (deg) : 54.20
 Sun-Moon sep (deg) : 131.20
 B (ring opening deg) : 47.11
 PA of pole (deg) : 90.22

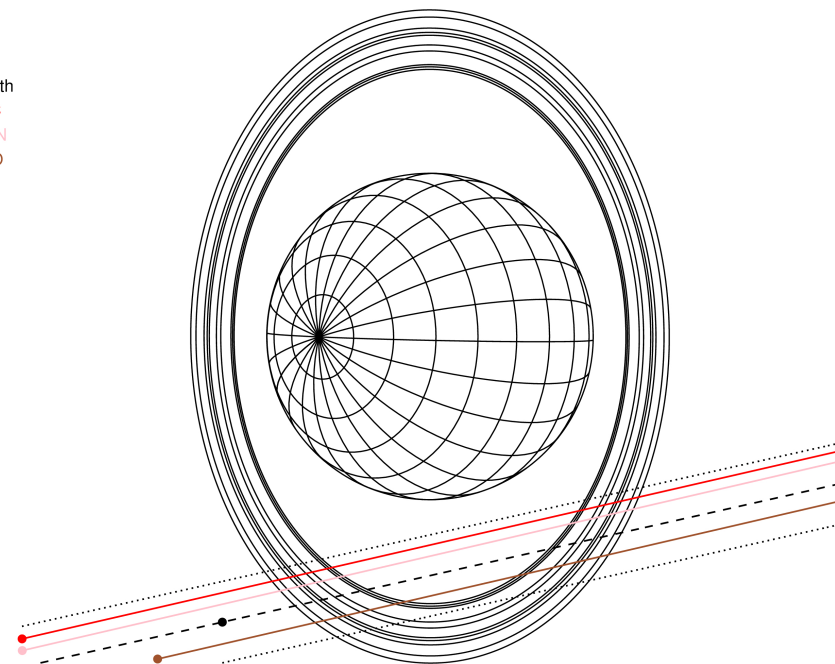
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2040-05-26T21:09:51.3500 or: 08 08 37.8825 s: +20 43 37.443 C/A 2.623° PA 12.63 deg v_sky +23.96 km/s D 19.14 AU
 Credit: Styled after SORA/Lucky Star

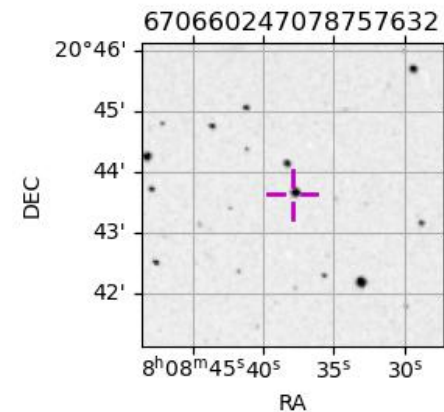
Uranus 2040-05-26T21:09:51 K11.84 G13.39 XRgt

Earth
 PIC
 TEN
 RIO

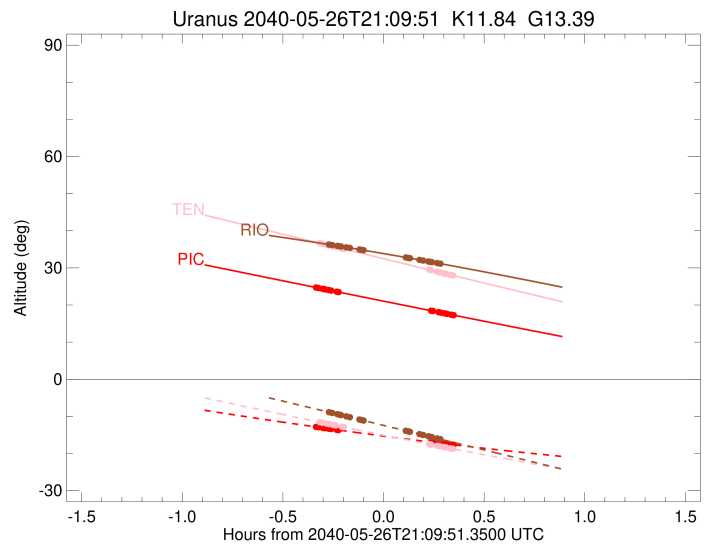
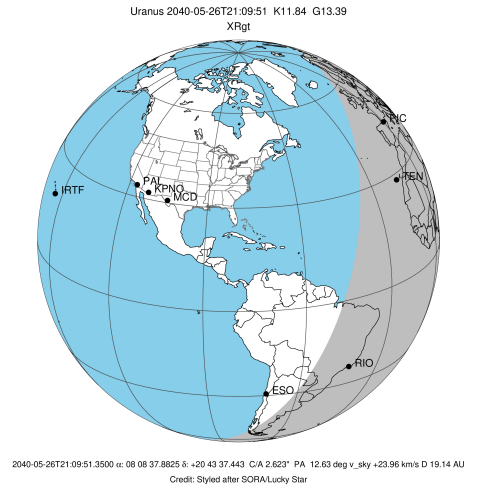


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+++++		+++++	MAY 26 20:49 - MAY 26 21:30	PnnRie
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	+++++		+++++	MAY 26 20:50 - MAY 26 21:30	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	+++++		+++++	MAY 26 20:53 - MAY 26 21:26	PnnRie
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



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2040-05-26T21:12:31.290
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : PIC
 Location : Pic du Midi
 Latitude (deg) : 42.93656
 E. Longitude (deg) : 0.14231
 Altitude (km) : 2.890
 Gaia source ID : 670660247078757632
 2Mass ID (if available) : 08083787+2043376
 ICRS Star Coord at Epoch: 08h 08m 37.88250s +20:43:37.44289s
 RUWE (>1.4 is poor) : 0.96
 K magnitude : 11.835
 G magnitude : 13.388
 RP magnitude : 12.850
 BP magnitude : 13.766
 DUPflag : 0
 Distance (au) : 19.144
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.96
 Sun-Target sep (deg) : 54.20
 Sun-Moon sep (deg) : 131.85
 B (ring opening deg) : 47.11
 PA of pole (deg) : 90.22
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.293
 C/A sky separation (km) : 31832.9
 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

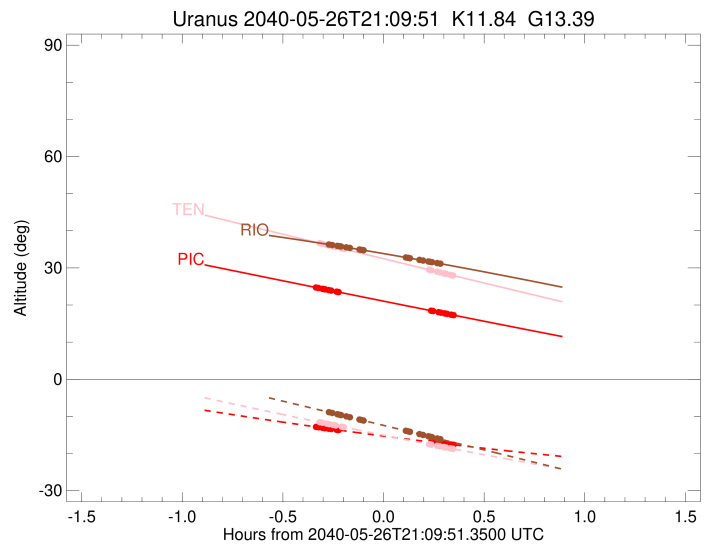
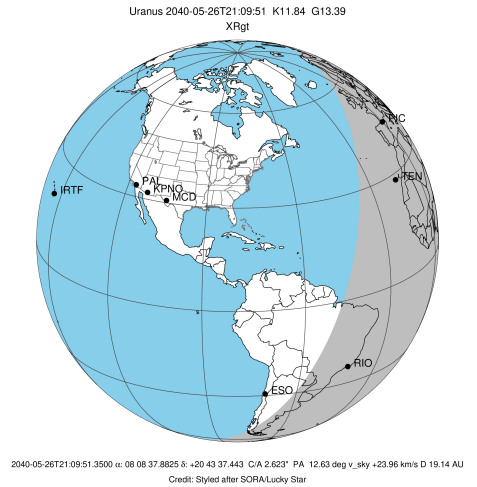


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2040-05-26T20:49:29.808		24.76	-12.80	51527.81	-25.10		
lambda	I	2040-05-26T20:50:30.048		24.58	-12.93	50026.71	-24.67		
delta	I	2040-05-26T20:51:40.941		24.36	-13.08	48300.35	-24.02		
gamma	I	2040-05-26T20:52:09.334		24.28	-13.14	47622.10	-23.75		
eta	I	2040-05-26T20:52:28.189		24.22	-13.18	47176.12	-23.56		
beta	I	2040-05-26T20:53:33.521		24.02	-13.32	45661.80	-22.85		
alpha	I	2040-05-26T20:54:13.429		23.90	-13.40	44751.38	-22.38		
4	I	2040-05-26T20:55:53.097		23.59	-13.61	42598.49	-21.09		
5	I	2040-05-26T20:56:12.296		23.53	-13.65	42202.57	-20.81		
6	I	2040-05-26T20:56:29.293		23.48	-13.68	41819.45	-20.52		

No planet occultations

6	E	2040-05-26T21:24:00.623		18.48	-16.92	41795.98	20.57		
5	E	2040-05-26T21:24:16.685		18.43	-16.95	42157.25	20.86		
4	E	2040-05-26T21:24:35.818		18.38	-16.98	42539.41	21.13		
alpha	E	2040-05-26T21:26:15.321		18.08	-17.16	44711.38	22.43		
beta	E	2040-05-26T21:26:56.130		17.95	-17.24	45641.06	22.90		
eta	E	2040-05-26T21:28:02.131		17.76	-17.36	47176.12	23.62		
gamma	E	2040-05-26T21:28:20.990		17.70	-17.39	47623.34	23.81		
delta	E	2040-05-26T21:28:49.257		17.62	-17.44	48300.35	24.09		
lambda	E	2040-05-26T21:29:59.954		17.40	-17.57	50026.71	24.74		
epsilon	E	2040-05-26T21:30:36.068		17.29	-17.63	50925.64	25.18		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2040-05-26T21:13:08.930
 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 : 670660247078757632
 2Mass ID (if available) : 08083787+2043376
 ICRS Star Coord at Epoch: 08h 08m 37.88250s +20:43:37.44289s
 RUWE (>1.4 is poor) : 0.96
 K magnitude : 11.835
 G magnitude : 13.388
 RP magnitude : 12.850
 BP magnitude : 13.766
 DUPflag : 0
 Distance (au) : 19.144
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.96
 Sun-Target sep (deg) : 54.20
 Sun-Moon sep (deg) : 132.07
 B (ring opening deg) : 47.11
 PA of pole (deg) : 90.22
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.414
 C/A sky separation (km) : 33518.1
 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

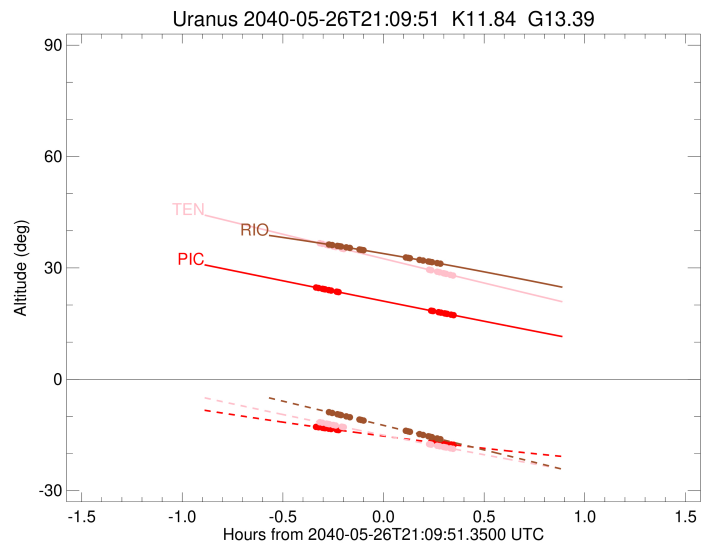
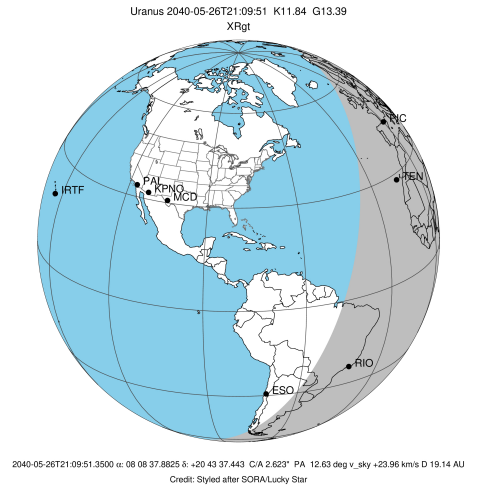


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2040-05-26T20:50:36.844		36.70	-11.52	51520.84	-24.07		
lambda	I	2040-05-26T20:51:39.465		36.47	-11.72	50026.71	-23.57		
delta	I	2040-05-26T20:52:53.844		36.20	-11.95	48300.35	-22.83		
gamma	I	2040-05-26T20:53:23.764		36.09	-12.04	47621.93	-22.51		
eta	I	2040-05-26T20:53:43.663		36.02	-12.10	47176.12	-22.29		
beta	I	2040-05-26T20:54:52.984		35.76	-12.32	45660.68	-21.46		
alpha	I	2040-05-26T20:55:35.578		35.61	-12.45	44750.84	-20.91		
4	I	2040-05-26T20:57:23.052		35.22	-12.78	42596.08	-19.39		
5	I	2040-05-26T20:57:44.012		35.14	-12.85	42197.77	-19.06		
6	I	2040-05-26T20:58:02.763		35.07	-12.90	41816.87	-18.72		

No planet occultations

6	E	2040-05-26T21:23:24.568		29.51	-17.48	41795.40	18.76		
5	E	2040-05-26T21:23:42.374		29.45	-17.53	42156.15	19.10		
4	E	2040-05-26T21:24:03.293		29.37	-17.59	42541.48	19.43		
alpha	E	2040-05-26T21:25:50.526		28.98	-17.91	44713.23	20.96		
beta	E	2040-05-26T21:26:34.023		28.83	-18.04	45641.12	21.52		
eta	E	2040-05-26T21:27:43.993		28.57	-18.24	47176.12	22.35		
gamma	E	2040-05-26T21:28:03.892		28.50	-18.30	47623.13	22.57		
delta	E	2040-05-26T21:28:33.675		28.39	-18.38	48300.35	22.90		
lambda	E	2040-05-26T21:29:47.838		28.12	-18.60	50026.71	23.65		
epsilon	E	2040-05-26T21:30:26.182		27.98	-18.71	50940.22	24.15		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2040-05-26T21:13:04.750
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : RIO
 Location : Rio de Janeiro
 Latitude (deg) : -22.89506
 E. Longitude (deg) : 316.77708
 Altitude (km) : 0.033
 Gaia source ID : 670660247078757632
 2Mass ID (if available) : 08083787+2043376
 ICRS Star Coord at Epoch: 08h 08m 37.88250s +20:43:37.44289s
 RUWE (>1.4 is poor) : 0.96
 K magnitude : 11.835
 G magnitude : 13.388
 RP magnitude : 12.850
 BP magnitude : 13.766
 DUPflag : 0
 Distance (au) : 19.144
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.96
 Sun-Target sep (deg) : 54.20
 Sun-Moon sep (deg) : 132.07
 B (ring opening deg) : 47.11
 PA of pole (deg) : 90.22
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.852
 C/A sky separation (km) : 39604.2
 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_itrf93_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	2040-05-26T20:53:19.488		36.33	-8.81	51486.79	-19.89		
lambda	I	2040-05-26T20:54:34.197		36.15	-9.08	50026.71	-19.07		
delta	I	2040-05-26T20:56:07.818		35.92	-9.42	48300.35	-17.79		
gamma	I	2040-05-26T20:56:46.613		35.83	-9.56	47621.39	-17.21		
eta	I	2040-05-26T20:57:12.785		35.77	-9.66	47176.12	-16.81		
beta	I	2040-05-26T20:58:47.559		35.53	-10.00	45656.05	-15.25		
alpha	I	2040-05-26T20:59:49.048		35.38	-10.22	44747.30	-14.16		
4	I	2040-05-26T21:02:42.456		34.95	-10.85	42583.57	-10.75		
5	I	2040-05-26T21:03:21.695		34.85	-11.00	42177.34	-9.90		
6	I	2040-05-26T21:04:00.272		34.75	-11.14	41805.72	-9.03		

No planet occultations

6	E	2040-05-26T21:16:24.647		32.83	-13.86	41795.29	9.04		
5	E	2040-05-26T21:17:02.303		32.73	-13.99	42155.58	9.91		
4	E	2040-05-26T21:17:41.626		32.62	-14.14	42553.11	10.76		
alpha	E	2040-05-26T21:20:34.658		32.16	-14.77	44721.67	14.18		
beta	E	2040-05-26T21:21:37.101		31.99	-15.00	45642.05	15.28		
eta	E	2040-05-26T21:23:12.553		31.73	-15.35	47176.12	16.84		
gamma	E	2040-05-26T21:23:38.737		31.66	-15.45	47622.32	17.24		
delta	E	2040-05-26T21:24:17.413		31.55	-15.59	48300.35	17.82		
lambda	E	2040-05-26T21:25:50.863		31.30	-15.93	50026.71	19.11		
epsilon	E	2040-05-26T21:26:41.149		31.16	-16.12	51003.81	19.93		