

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:15:26.900
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046

ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s

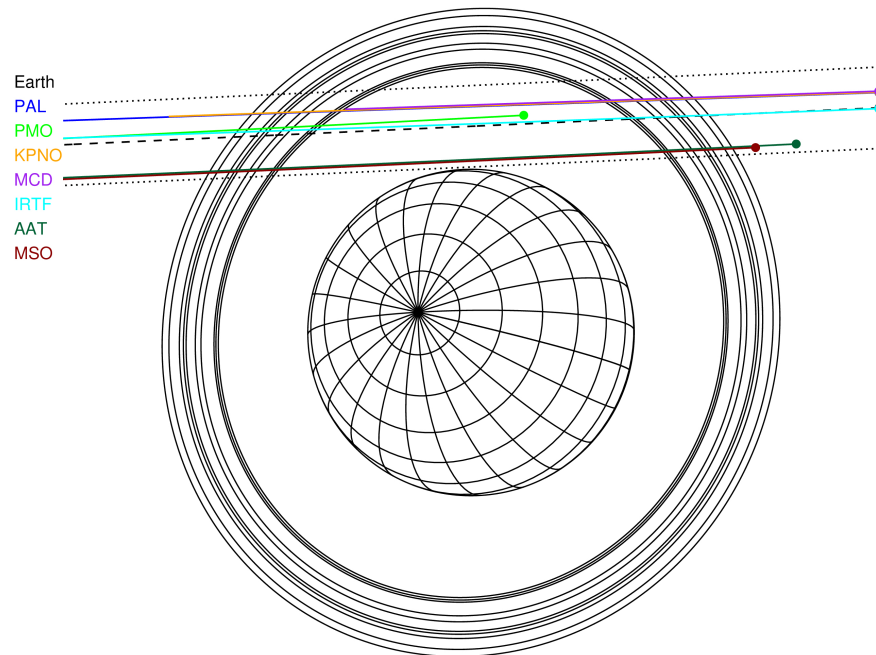
RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 83.65
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07

#	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



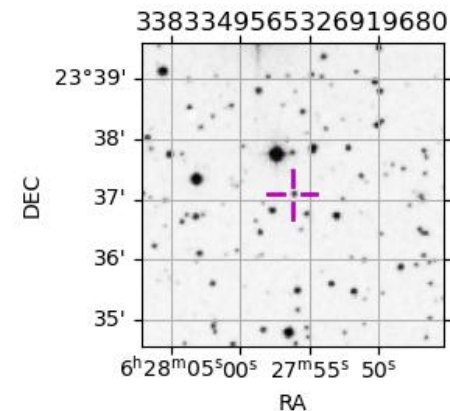
2035-02-12T10:15:26.9000 α: 06 27 56.2191 s: +23 37 04.713 C/A 2.452° PA 182.60 deg v_sky -14.05 km/s D 18.19 AU
 Credit: Styled after SORA/Lucky Star

Uranus 2035-02-12T10:15:26 K13.50 G15.96 XRgt

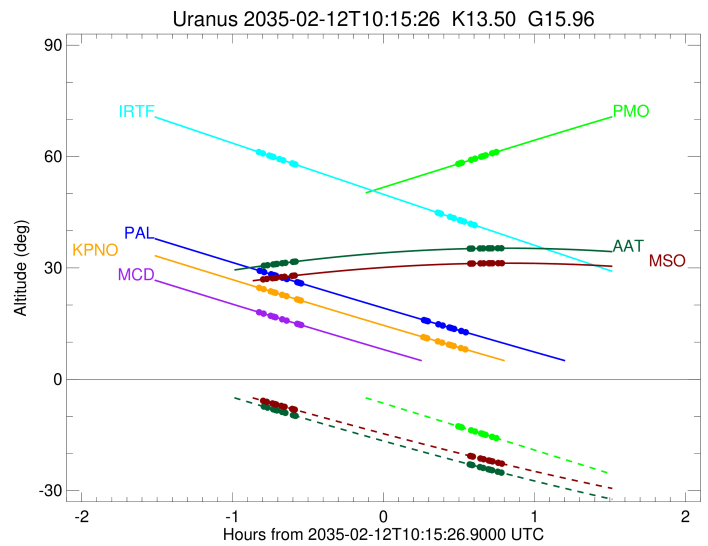
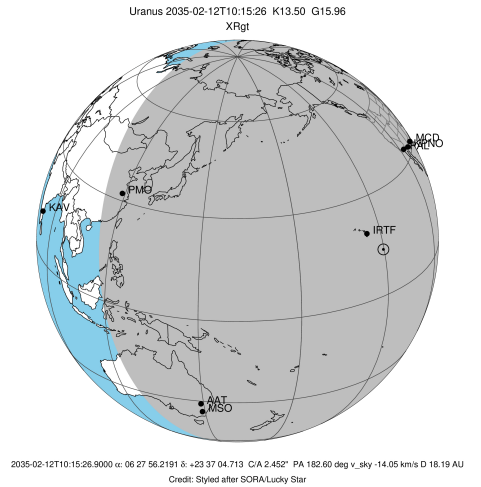


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++		+++++	FEB 12 09:25 - FEB 12 10:48	PnnRie
PMO	Purple Mtn Obs. Nanki	32.1	118.8			+++++	FEB 12 10:45 - FEB 12 11:00	PnnRne
KPNO	Kitt Peak Natl Obs	32.0	248.4	+++++		+++++	FEB 12 09:25 - FEB 12 10:48	PnnRie
MCD	McDonald Obs. 2.7m	30.7	256.0	+++++			FEB 12 09:25 - FEB 12 09:42	PnnRin
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+++++		+++++	FEB 12 09:25 - FEB 12 10:52	PnnRie
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	+++++		+++++	FEB 12 09:27 - FEB 12 11:02	PnnRie
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0	+++++		+++++	FEB 12 09:27 - FEB 12 11:02	PnnRie



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:08:55.280
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : PAL
 Location : Palomar Mt (200")
 Latitude (deg) : 33.35622
 E. Longitude (deg) : 243.13601
 Altitude (km) : 1.706
 Gaia source ID : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046
 ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 84.05
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.679
 C/A sky separation (km) : 35347.0
 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

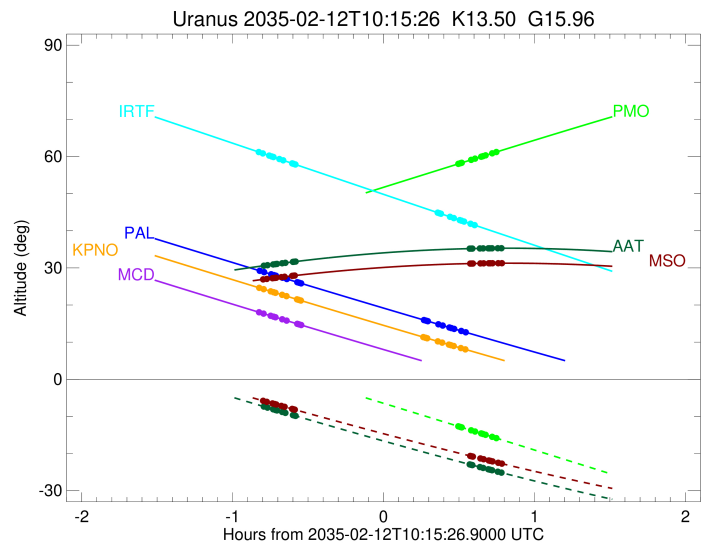
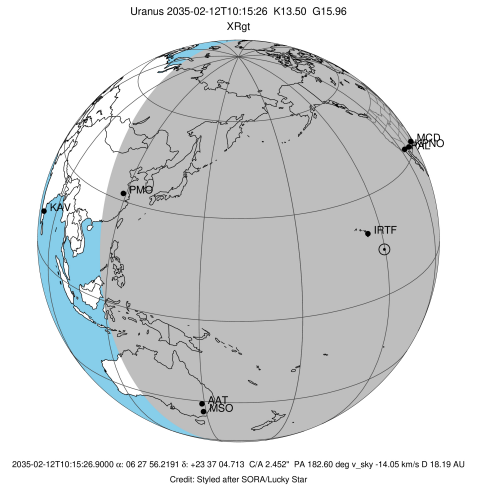


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-02-12T09:25:48.352		29.31	-62.68	51446.18	-10.86		
lambda	I	2035-02-12T09:28:01.527		28.85	-62.32	50026.71	-10.51		
delta	I	2035-02-12T09:30:49.001		28.28	-61.87	48300.35	-10.10		
gamma	I	2035-02-12T09:31:56.483		28.05	-61.68	47624.65	-9.92		
eta	I	2035-02-12T09:32:41.961		27.89	-61.56	47176.12	-9.80		
beta	I	2035-02-12T09:35:21.451		27.34	-61.11	45649.34	-9.34		
alpha	I	2035-02-12T09:37:03.469		26.99	-60.83	44713.31	-9.01		
4	I	2035-02-12T09:41:17.143		26.13	-60.11	42534.29	-8.15		
5	I	2035-02-12T09:41:48.832		26.02	-60.02	42277.48	-8.00		
6	I	2035-02-12T09:42:47.794		25.82	-59.85	41812.12	-7.81		

No planet occultations

6	E	2035-02-12T10:31:33.951		15.95	-50.77	41856.25	7.75		
5	E	2035-02-12T10:32:16.613		15.81	-50.63	42191.80	7.95		
4	E	2035-02-12T10:33:03.641		15.65	-50.48	42580.09	8.09		
alpha	E	2035-02-12T10:37:10.600		14.83	-49.67	44684.88	8.94		
beta	E	2035-02-12T10:38:58.877		14.47	-49.31	45674.35	9.26		
eta	E	2035-02-12T10:41:37.236		13.95	-48.79	47176.12	9.71		
gamma	E	2035-02-12T10:42:22.795		13.80	-48.64	47621.05	9.83		
delta	E	2035-02-12T10:43:31.326		13.57	-48.41	48300.35	10.00		
lambda	E	2035-02-12T10:46:20.584		13.01	-47.85	50026.71	10.39		
epsilon	E	2035-02-12T10:48:32.077		12.58	-47.41	51412.06	10.74		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:20:01.190
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : PMO
 Location : Purple Mtn Obs. Nanking
 Latitude (deg) : 32.06667
 E. Longitude (deg) : 118.82089
 Altitude (km) : 0.364
 Gaia source ID : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046
 ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 84.36
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.543
 C/A sky separation (km) : 33543.9
 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

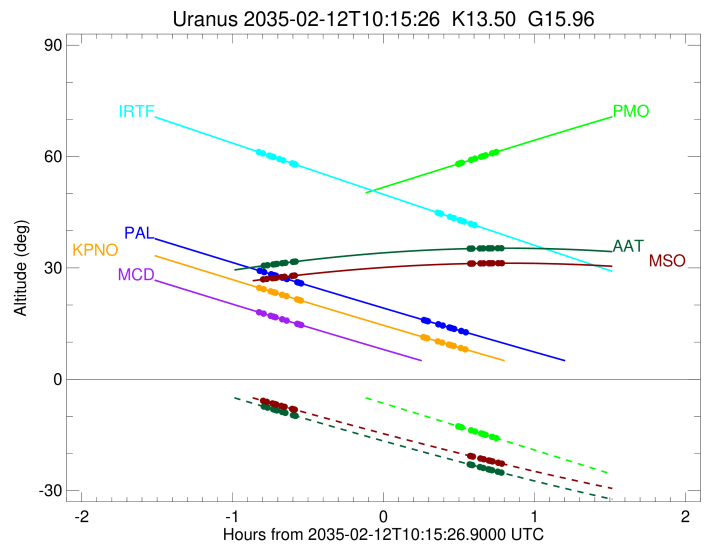
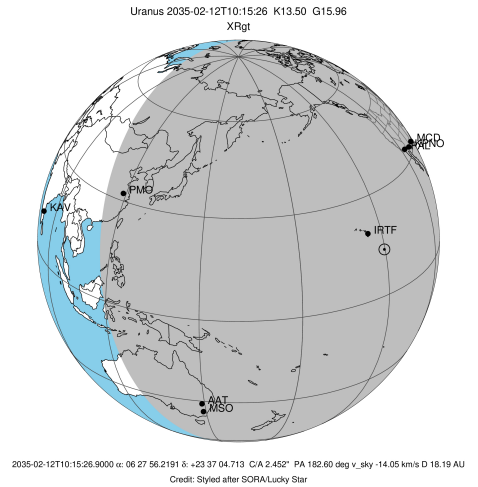


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-02-12T09:35:39.516		43.24	1.69x	51437.66	-11.42		
lambda	I	2035-02-12T09:37:44.986		43.69	1.27x	50026.71	-11.12		
delta	I	2035-02-12T09:40:22.675		44.25	0.74x	48300.35	-10.77		
gamma	I	2035-02-12T09:41:25.823		44.47	0.52x	47624.85	-10.62		
eta	I	2035-02-12T09:42:08.276		44.62	0.38x	47176.12	-10.52		
beta	I	2035-02-12T09:44:36.214		45.15	-0.12x	45648.63	-10.13		
alpha	I	2035-02-12T09:46:09.686		45.48	-0.44x	44714.89	-9.86		
4	I	2035-02-12T09:49:59.228		46.29	-1.22x	42532.87	-9.15		
5	I	2035-02-12T09:50:26.771		46.39	-1.32x	42281.37	-9.02		
6	I	2035-02-12T09:51:19.579		46.58	-1.50x	41810.09	-8.87		

No planet occultations

6	E	2035-02-12T10:45:13.864		58.03	-12.69	41859.70	8.90		
5	E	2035-02-12T10:45:50.169		58.16	-12.81	42185.86	9.06		
4	E	2035-02-12T10:46:32.453		58.31	-12.96	42584.01	9.18		
alpha	E	2035-02-12T10:50:12.651		59.09	-13.73	44684.65	9.90		
beta	E	2035-02-12T10:51:50.965		59.43	-14.08	45675.46	10.18		
eta	E	2035-02-12T10:54:15.708		59.94	-14.58	47176.12	10.56		
gamma	E	2035-02-12T10:54:57.623		60.09	-14.73	47621.13	10.67		
delta	E	2035-02-12T10:56:00.830		60.31	-14.95	48300.35	10.82		
lambda	E	2035-02-12T10:58:37.760		60.86	-15.50	50026.71	11.17		
epsilon	E	2035-02-12T11:00:38.598		61.29	-15.93	51392.06	11.48		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:08:44.670
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : KPNO
 Location : Kitt Peak Natl Obs
 Latitude (deg) : 31.96333
 E. Longitude (deg) : 248.40000
 Altitude (km) : 2.120
 Gaia source ID : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046
 ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 83.98
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.685
 C/A sky separation (km) : 35425.3
 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

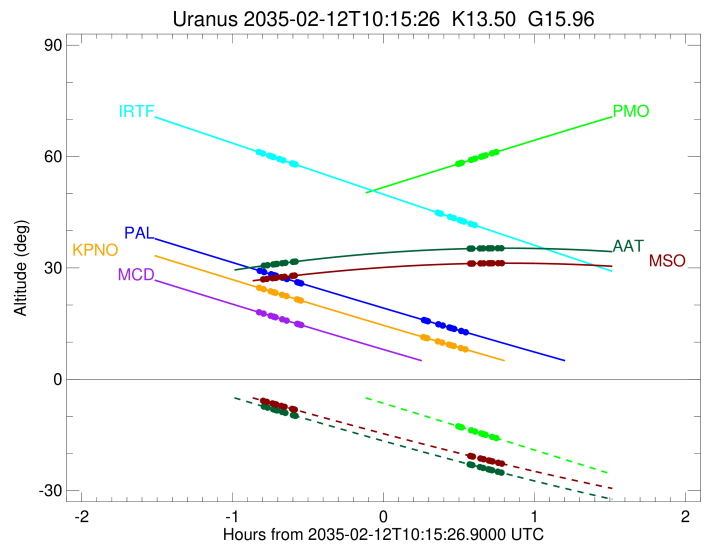
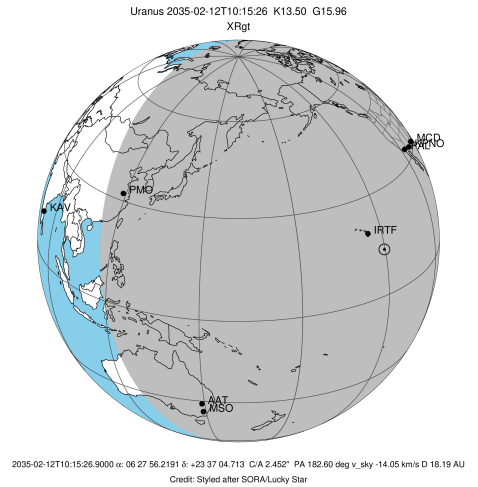


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-02-12T09:25:36.240		24.72	-59.91	51446.69	-10.81		
lambda	I	2035-02-12T09:27:50.064		24.26	-59.50	50026.71	-10.46		
delta	I	2035-02-12T09:30:38.348		23.68	-58.98	48300.35	-10.05		
gamma	I	2035-02-12T09:31:46.176		23.45	-58.77	47624.64	-9.87		
eta	I	2035-02-12T09:32:31.894		23.29	-58.63	47176.12	-9.75		
beta	I	2035-02-12T09:35:12.273		22.74	-58.13	45649.38	-9.29		
alpha	I	2035-02-12T09:36:54.927		22.38	-57.81	44713.22	-8.96		
4	I	2035-02-12T09:41:10.346		21.51	-57.00	42534.37	-8.09		
5	I	2035-02-12T09:41:42.324		21.40	-56.90	42277.26	-7.94		
6	I	2035-02-12T09:42:41.724		21.19	-56.71	41812.23	-7.74		

No planet occultations

6	E	2035-02-12T10:31:17.937		11.35	-47.02	41856.11	7.69		
5	E	2035-02-12T10:32:01.003		11.21	-46.87	42192.04	7.88		
4	E	2035-02-12T10:32:48.365		11.05	-46.71	42579.93	8.03		
alpha	E	2035-02-12T10:36:57.111		10.23	-45.86	44684.90	8.88		
beta	E	2035-02-12T10:38:46.066		9.87	-45.48	45674.30	9.21		
eta	E	2035-02-12T10:41:25.356		9.34	-44.93	47176.12	9.65		
gamma	E	2035-02-12T10:42:11.167		9.19	-44.77	47621.04	9.77		
delta	E	2035-02-12T10:43:20.068		8.97	-44.54	48300.35	9.95		
lambda	E	2035-02-12T10:46:10.194		8.41	-43.95	50026.71	10.34		
epsilon	E	2035-02-12T10:48:22.387		7.97	-43.49	51412.75	10.69		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:08:39.010
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : MCD
 Location : McDonald Obs. 2.7m
 Latitude (deg) : 30.67158
 E. Longitude (deg) : 255.97844
 Altitude (km) : 2.075
 Gaia source ID : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046
 ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 83.88
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.699
 C/A sky separation (km) : 35604.2
 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_itrff93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk

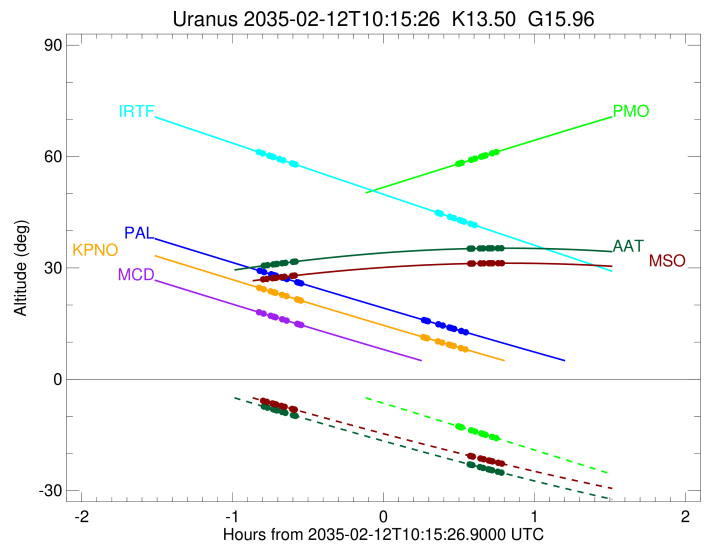
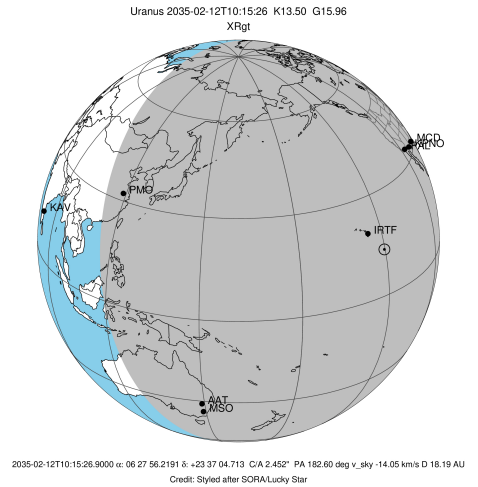


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-02-12T09:25:31.900		18.14	-54.64	51447.99	-10.72		
lambda	I	2035-02-12T09:27:47.018		17.68	-54.19	50026.71	-10.37		
delta	I	2035-02-12T09:30:36.898		17.10	-53.61	48300.35	-9.95		
gamma	I	2035-02-12T09:31:45.418		16.86	-53.38	47624.61	-9.77		
eta	I	2035-02-12T09:32:31.613		16.70	-53.23	47176.12	-9.65		
beta	I	2035-02-12T09:35:13.789		16.15	-52.68	45649.48	-9.18		
alpha	I	2035-02-12T09:36:57.751		15.79	-52.32	44713.00	-8.84		
4	I	2035-02-12T09:41:16.810		14.91	-51.44	42534.58	-7.96		
5	I	2035-02-12T09:41:49.419		14.80	-51.32	42276.72	-7.81		
6	I	2035-02-12T09:42:49.738		14.59	-51.12	41812.52	-7.61		

No planet occultations

6	E	2035-02-12T10:30:56.637		4.94x	-41.01	41855.79	7.55		
5	E	2035-02-12T10:31:40.565		4.80x	-40.85	42192.59	7.75		
4	E	2035-02-12T10:32:28.619		4.64x	-40.68	42579.59	7.90		
alpha	E	2035-02-12T10:36:41.025		3.82x	-39.78	44684.93	8.77		
beta	E	2035-02-12T10:38:31.332		3.46x	-39.39	45674.21	9.10		
eta	E	2035-02-12T10:41:12.449		2.94x	-38.81	47176.12	9.55		
gamma	E	2035-02-12T10:41:58.749		2.79x	-38.65	47621.04	9.67		
delta	E	2035-02-12T10:43:08.362		2.56x	-38.40	48300.35	9.85		
lambda	E	2035-02-12T10:46:00.132		2.01x	-37.79	50026.71	10.25		
epsilon	E	2035-02-12T10:48:13.652		1.58x	-37.31	51414.24	10.59		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:10:20.900
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : IRTF
 Location : Mauna Kea/IRTF
 Latitude (deg) : 19.82622
 E. Longitude (deg) : 204.52800
 Altitude (km) : 4.168
 Gaia source ID : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046
 ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 84.45
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.474
 C/A sky separation (km) : 32639.3
 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

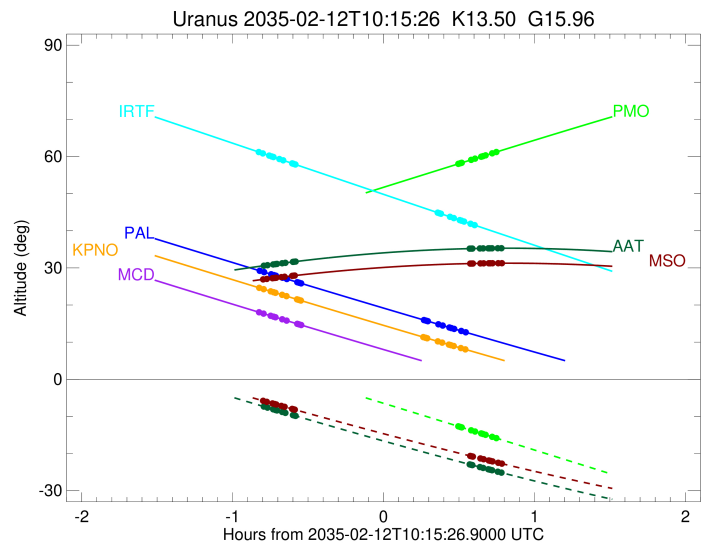
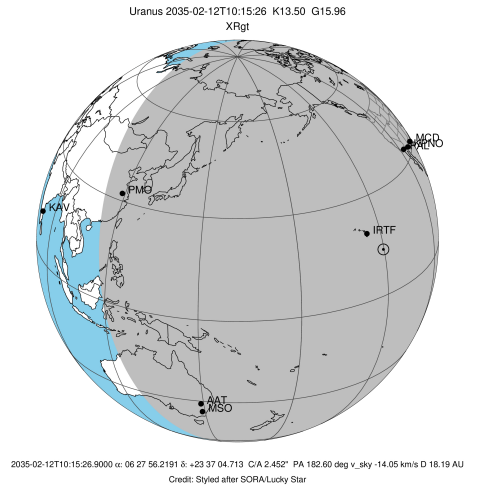


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-02-12T09:25:29.256		61.29	-72.08	51426.41	-11.77		
lambda	I	2035-02-12T09:27:29.930		60.83	-72.53	50026.71	-11.48		
delta	I	2035-02-12T09:30:02.459		60.25	-73.10	48300.35	-11.15		
gamma	I	2035-02-12T09:31:03.395		60.02	-73.33	47625.07	-11.01		
eta	I	2035-02-12T09:31:44.350		59.86	-73.48	47176.12	-10.91		
beta	I	2035-02-12T09:34:06.741		59.31	-74.01	45647.95	-10.55		
alpha	I	2035-02-12T09:35:36.155		58.97	-74.34	44716.45	-10.30		
4	I	2035-02-12T09:39:15.289		58.13	-75.14	42531.71	-9.64		
5	I	2035-02-12T09:39:40.892		58.03	-75.23	42284.64	-9.53		
6	I	2035-02-12T09:40:31.407		57.84	-75.42	41808.43	-9.39		

No planet occultations

6	E	2035-02-12T10:37:01.602		44.87	-83.96	41860.52	9.33		
5	E	2035-02-12T10:37:36.058		44.74	-83.95	42184.49	9.47		
4	E	2035-02-12T10:38:16.745		44.59	-83.94	42584.92	9.58		
alpha	E	2035-02-12T10:41:48.825		43.78	-83.81	44684.63	10.22		
beta	E	2035-02-12T10:43:24.198		43.42	-83.71	45675.68	10.47		
eta	E	2035-02-12T10:45:45.129		42.88	-83.53	47176.12	10.83		
gamma	E	2035-02-12T10:46:26.060		42.72	-83.47	47621.15	10.92		
delta	E	2035-02-12T10:47:27.865		42.49	-83.37	48300.35	11.06		
lambda	E	2035-02-12T10:50:01.727		41.90	-83.10	50026.71	11.38		
epsilon	E	2035-02-12T10:52:00.290		41.45	-82.85	51388.97	11.66		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:16:31.530
 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 : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046
 ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 84.18
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.051
 C/A sky separation (km) : 27056.2
 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_itr93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk

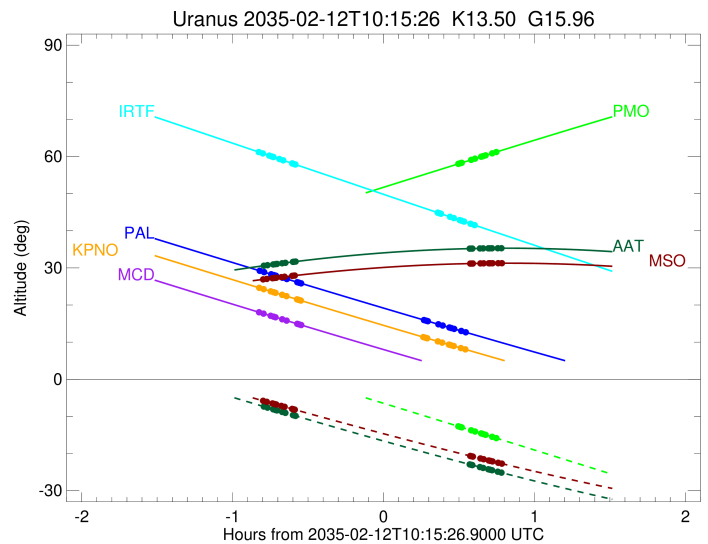
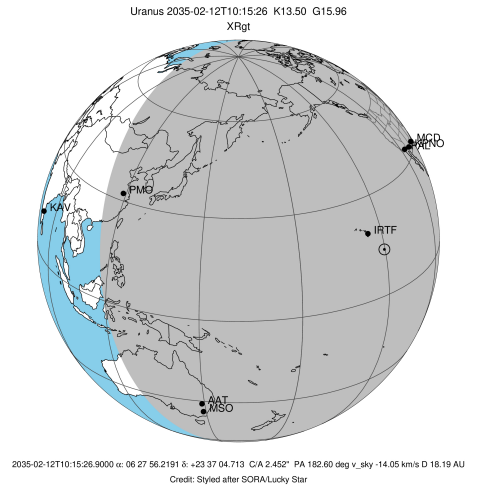


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-02-12T09:27:35.408		30.57	-7.29	51387.14	-12.96		
lambda	I	2035-02-12T09:29:21.356		30.73	-7.65	50026.71	-12.77		
delta	I	2035-02-12T09:31:37.595		30.94	-8.10	48300.35	-12.57		
gamma	I	2035-02-12T09:32:31.435		31.02	-8.28	47625.82	-12.48		
eta	I	2035-02-12T09:33:07.536		31.07	-8.40	47176.12	-12.43		
beta	I	2035-02-12T09:35:11.784		31.26	-8.81	45645.77	-12.21		
alpha	I	2035-02-12T09:36:27.960		31.37	-9.06	44721.91	-12.06		
4	I	2035-02-12T09:39:32.819		31.63	-9.67	42528.41	-11.69		
5	I	2035-02-12T09:39:52.504		31.66	-9.74	42295.19	-11.62		
6	I	2035-02-12T09:40:35.215		31.72	-9.88	41803.17	-11.54		

No planet occultations

6	E	2035-02-12T10:49:44.836		35.19	-22.94	41867.24	11.55		
5	E	2035-02-12T10:50:11.313		35.20	-23.02	42173.10	11.63		
4	E	2035-02-12T10:50:46.006		35.20	-23.12	42593.13	11.69		
alpha	E	2035-02-12T10:53:42.285		35.24	-23.64	44685.00	12.07		
beta	E	2035-02-12T10:55:03.725		35.26	-23.88	45677.86	12.22		
eta	E	2035-02-12T10:57:05.342		35.27	-24.24	47176.12	12.43		
gamma	E	2035-02-12T10:57:41.072		35.28	-24.34	47621.44	12.49		
delta	E	2035-02-12T10:58:35.232		35.29	-24.50	48300.35	12.58		
lambda	E	2035-02-12T11:00:51.391		35.30	-24.90	50026.71	12.78		
epsilon	E	2035-02-12T11:02:33.567		35.30	-25.19	51339.26	12.97		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-02-12T10:16:27.430
 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 : 3383349565326919680
 2Mass ID (if available) : 06275621+2337046
 ICRS Star Coord at Epoch: 06h 27m 56.21911s +23:37:04.71344s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.497
 G magnitude : 15.963
 RP magnitude : 15.185
 BP magnitude : 16.602
 DUPflag : 0
 Distance (au) : 18.190
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.05
 Sun-Target sep (deg) : 133.36
 Sun-Moon sep (deg) : 84.12
 B (ring opening deg) : 69.64
 PA of pole (deg) : 69.07
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.032
 C/A sky separation (km) : 26812.5
 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	2035-02-12T09:27:18.520		26.88	-5.75	51385.25	-12.99		
lambda	I	2035-02-12T09:29:04.062		27.03	-6.08	50026.71	-12.80		
delta	I	2035-02-12T09:31:19.920		27.22	-6.51	48300.35	-12.61		
gamma	I	2035-02-12T09:32:13.591		27.30	-6.68	47625.85	-12.52		
eta	I	2035-02-12T09:32:49.577		27.35	-6.80	47176.12	-12.47		
beta	I	2035-02-12T09:34:53.394		27.52	-7.19	45645.68	-12.26		
alpha	I	2035-02-12T09:36:09.245		27.62	-7.43	44722.14	-12.11		
4	I	2035-02-12T09:39:13.295		27.86	-8.00	42528.30	-11.75		
5	I	2035-02-12T09:39:32.827		27.89	-8.07	42295.59	-11.68		
6	I	2035-02-12T09:40:15.367		27.94	-8.20	41802.98	-11.61		

No planet occultations

6	E	2035-02-12T10:49:57.857		31.17	-20.66	41867.48	11.61		
5	E	2035-02-12T10:50:24.147		31.17	-20.74	42172.72	11.69		
4	E	2035-02-12T10:50:58.716		31.18	-20.83	42593.43	11.75		
alpha	E	2035-02-12T10:53:54.189		31.22	-21.32	44685.03	12.12		
beta	E	2035-02-12T10:55:15.319		31.23	-21.54	45677.94	12.27		
eta	E	2035-02-12T10:57:16.511		31.24	-21.88	47176.12	12.47		
gamma	E	2035-02-12T10:57:52.130		31.25	-21.97	47621.45	12.53		
delta	E	2035-02-12T10:58:46.126		31.25	-22.12	48300.35	12.61		
lambda	E	2035-02-12T11:01:01.916		31.26	-22.49	50026.71	12.81		
epsilon	E	2035-02-12T11:02:43.692		31.27	-22.77	51337.22	13.00		