

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T17:21:50.880
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3382608975525390080
 2Mass ID (if available) : 06302159+2335209

ICRS Star Coord at Epoch: 06h 30m 21.59556s +23:35:20.85541s

RUWE (>1.4 is poor) : 1.06
 K magnitude : 14.733
 G magnitude : 16.051
 RP magnitude : 15.561
 BP magnitude : 16.368
 DUPflag : 0
 Distance (au) : 18.011
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.86
 Sun-Target sep (deg) : 151.88
 Sun-Moon sep (deg) : 52.97
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.90

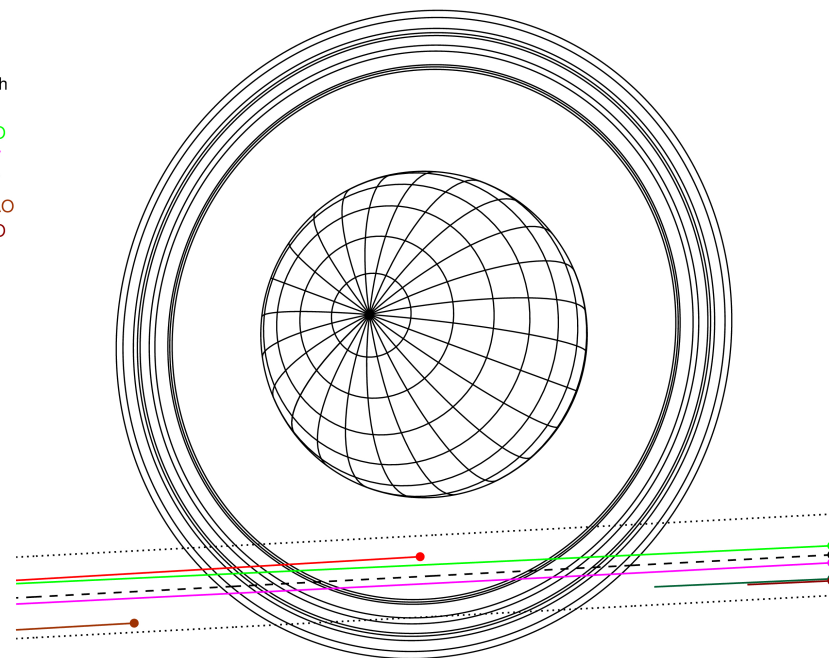
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2035-01-25T17:21:50.8800 α: 06 30 21.5956 δ: +23 35 20.855 C/A 2.889° PA 3.02 deg v_sky -19.86 km/s D 18.01 AU
 Credit: Styled after SORA/Lucky Star

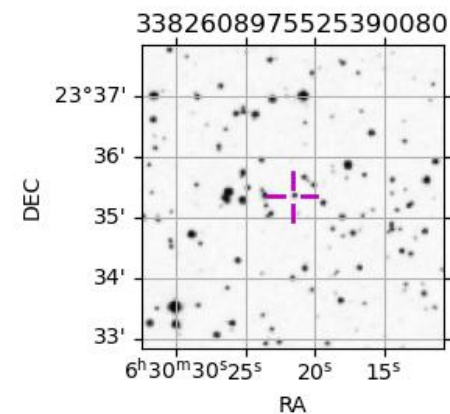
Uranus 2035-01-25T17:21:50 K14.73 G16.05 XRgt

Earth
 PIC
 PMO
 KAV
 AAT
 SAAO
 MSO

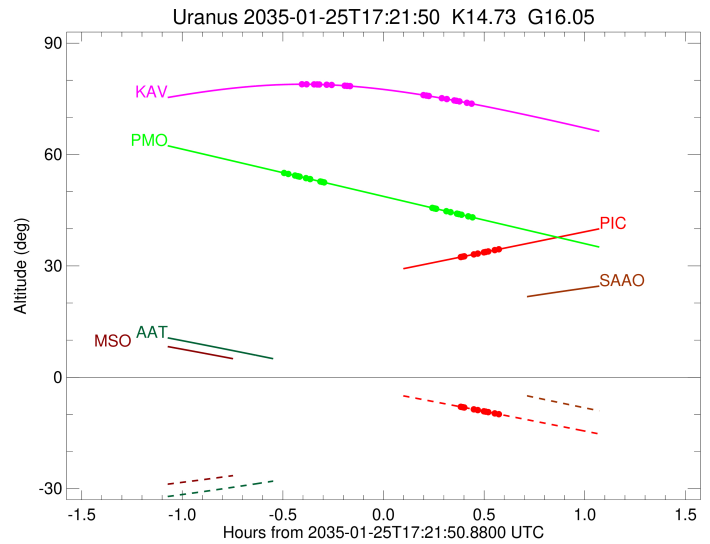
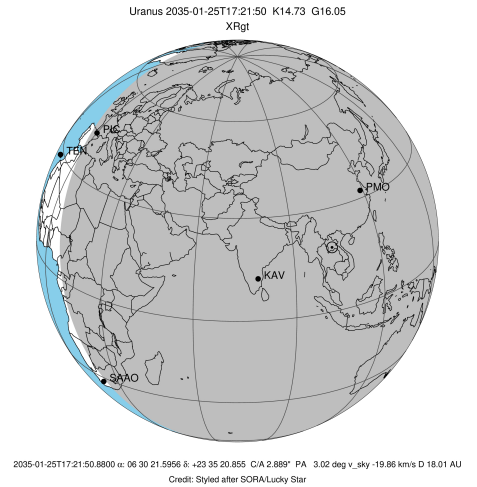


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			+++++++	JAN 25 17:44 - JAN 25 17:55	PnnRne
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8	+++++++		+++++++	JAN 25 16:52 - JAN 25 17:47	PnnRie
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	+++++++		+++++++	JAN 25 16:57 - JAN 25 17:47	PnnRie
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					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T17:25:33.090
 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 : 3382608975525390080
 2Mass ID (if available) : 06302159+2335209
 ICRS Star Coord at Epoch: 06h 30m 21.59556s +23:35:20.85541s
 RUWE (>1.4 is poor) : 1.06
 K magnitude : 14.733
 G magnitude : 16.051
 RP magnitude : 15.561
 BP magnitude : 16.368
 DUPflag : 0
 Distance (au) : 18.011
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.86
 Sun-Target sep (deg) : 151.88
 Sun-Moon sep (deg) : 53.78
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.90
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.657
 C/A sky separation (km) : 34704.2
 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_itr93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk

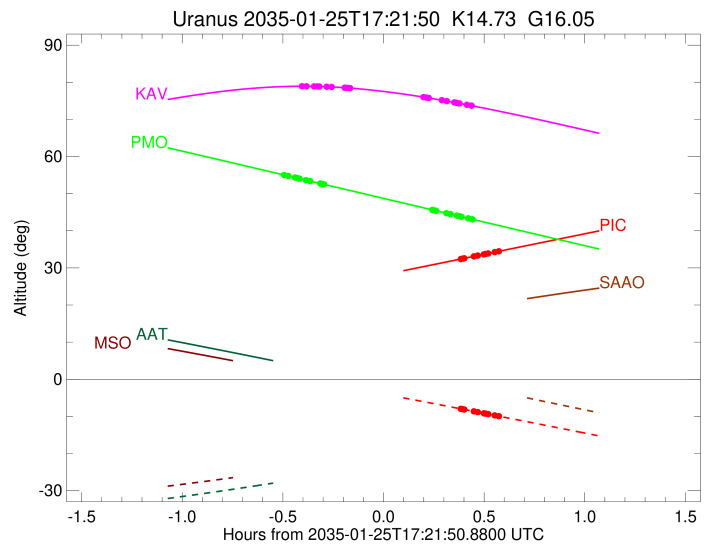
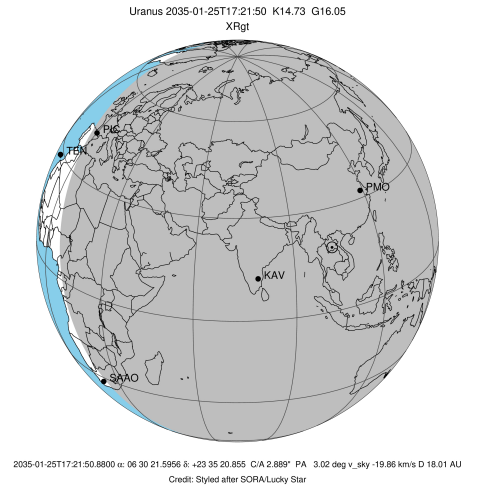


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-01-25T16:57:40.990		23.77	0.05x	51042.79	-15.23		
lambda	I	2035-01-25T16:58:47.847		23.97	-0.14x	50026.71	-15.05		
delta	I	2035-01-25T17:00:44.567		24.32	-0.46x	48300.35	-14.52		
gamma	I	2035-01-25T17:01:31.104		24.46	-0.59x	47630.10	-14.29		
eta	I	2035-01-25T17:02:03.064		24.56	-0.67x	47176.12	-14.12		
beta	I	2035-01-25T17:03:54.115		24.89	-0.98x	45641.40	-13.51		
alpha	I	2035-01-25T17:05:00.983		25.10	-1.17x	44746.62	-13.12		
4	I	2035-01-25T17:07:57.323		25.63	-1.66x	42532.03	-11.96		
5	I	2035-01-25T17:08:15.404		25.69	-1.71x	42314.61	-11.81		
6	I	2035-01-25T17:08:59.601		25.82	-1.83x	41795.65	-11.49		

No planet occultations

6	E	2035-01-25T17:44:51.843		32.38	-7.96	41828.31	11.52		
5	E	2035-01-25T17:45:28.526		32.49	-8.06	42255.36	11.84		
4	E	2035-01-25T17:45:55.395		32.58	-8.14	42578.44	11.99		
alpha	E	2035-01-25T17:48:47.456		33.10	-8.64	44743.37	13.16		
beta	E	2035-01-25T17:49:56.173		33.31	-8.84	45661.23	13.55		
eta	E	2035-01-25T17:51:45.440		33.65	-9.16	47176.12	14.17		
gamma	E	2035-01-25T17:52:17.311		33.75	-9.25	47630.25	14.33		
delta	E	2035-01-25T17:53:03.689		33.89	-9.39	48300.35	14.56		
lambda	E	2035-01-25T17:55:00.017		34.25	-9.73	50026.71	15.11		
epsilon	E	2035-01-25T17:55:48.390		34.39	-9.87	50762.59	15.28		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T17:18:53.520
 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 : 3382608975525390080
 2Mass ID (if available) : 06302159+2335209
 ICRS Star Coord at Epoch: 06h 30m 21.59556s +23:35:20.85541s
 RUWE (>1.4 is poor) : 1.06
 K magnitude : 14.733
 G magnitude : 16.051
 RP magnitude : 15.561
 BP magnitude : 16.368
 DUPflag : 0
 Distance (au) : 18.011
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.86
 Sun-Target sep (deg) : 151.88
 Sun-Moon sep (deg) : 53.22
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.90
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.760
 C/A sky separation (km) : 36047.0
 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



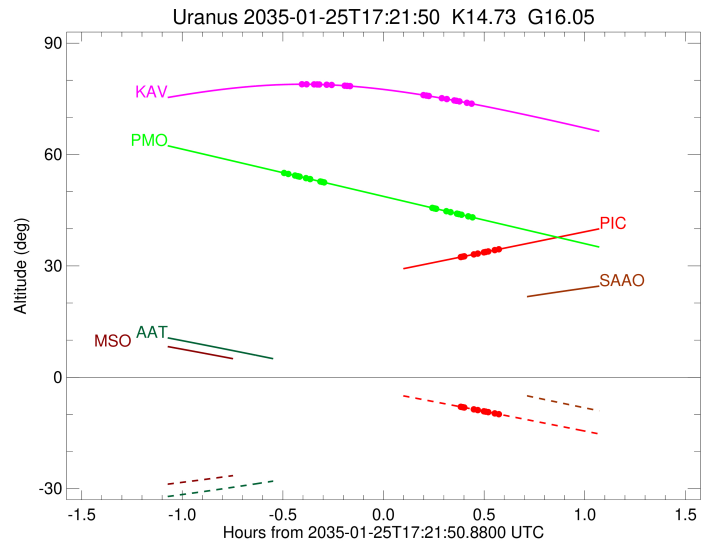
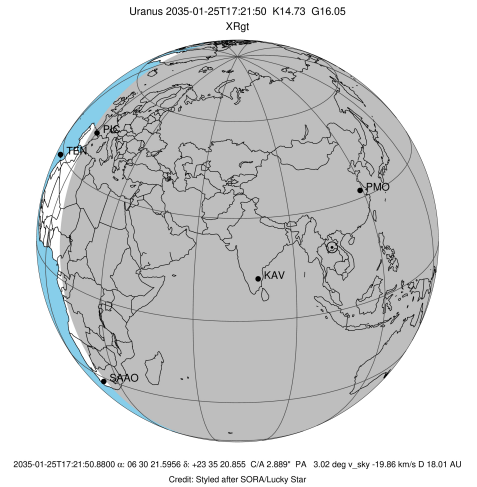
b: ring blocked by planet x: target alt < 5.0 deg or sun > -5.0 deg

Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-01-25T16:52:21.947		55.00	-74.74	51023.87	-14.85		
lambda	I	2035-01-25T16:53:29.279		54.76	-74.61	50026.71	-14.65		
delta	I	2035-01-25T16:55:29.606		54.34	-74.36	48300.35	-14.03		
gamma	I	2035-01-25T16:56:17.802		54.16	-74.26	47630.29	-13.77		
eta	I	2035-01-25T16:56:51.014		54.05	-74.19	47176.12	-13.58		
beta	I	2035-01-25T16:58:46.979		53.64	-73.94	45641.65	-12.88		
alpha	I	2035-01-25T16:59:57.335		53.39	-73.78	44747.73	-12.42		
4	I	2035-01-25T17:03:05.698		52.72	-73.35	42533.71	-11.05		
5	I	2035-01-25T17:03:25.647		52.65	-73.31	42313.70	-10.86		
6	I	2035-01-25T17:04:13.719		52.48	-73.19	41796.40	-10.48		

No planet occultations

6	E	2035-01-25T17:36:21.695		45.64	-67.91	41826.24	10.46		
5	E	2035-01-25T17:37:02.426		45.50	-67.78	42259.03	10.84		
4	E	2035-01-25T17:37:31.251		45.39	-67.70	42576.37	11.02		
alpha	E	2035-01-25T17:40:36.246		44.74	-67.13	44744.23	12.39		
beta	E	2035-01-25T17:41:48.886		44.48	-66.91	45660.52	12.84		
eta	E	2035-01-25T17:43:43.747		44.07	-66.55	47176.12	13.54		
gamma	E	2035-01-25T17:44:17.070		43.96	-66.45	47630.36	13.73		
delta	E	2035-01-25T17:45:05.421		43.78	-66.30	48300.35	13.99		
lambda	E	2035-01-25T17:47:06.170		43.36	-65.92	50026.71	14.60		
epsilon	E	2035-01-25T17:47:55.983		43.18	-65.76	50759.63	14.80		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T17:21:19.520
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : KAV
 Location : Kavalur Observatory
 Latitude (deg) : 12.57556
 E. Longitude (deg) : 78.83167
 Altitude (km) : 0.722
 Gaia source ID : 3382608975525390080
 2Mass ID (if available) : 06302159+2335209
 ICRS Star Coord at Epoch: 06h 30m 21.59556s +23:35:20.85541s
 RUWE (>1.4 is poor) : 1.06
 K magnitude : 14.733
 G magnitude : 16.051
 RP magnitude : 15.561
 BP magnitude : 16.368
 DUPflag : 0
 Distance (au) : 18.011
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.86
 Sun-Target sep (deg) : 151.88
 Sun-Moon sep (deg) : 53.67
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.90
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.985
 C/A sky separation (km) : 38998.2
 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	2035-01-25T16:57:44.258		78.93	-60.65	50991.88	-13.54		
lambda	I	2035-01-25T16:58:55.966		78.93	-60.93	50026.71	-13.26		
delta	I	2035-01-25T17:01:10.223		78.90	-61.46	48300.35	-12.44		
gamma	I	2035-01-25T17:02:04.813		78.89	-61.67	47630.62	-12.09		
eta	I	2035-01-25T17:02:42.809		78.87	-61.82	47176.12	-11.83		
beta	I	2035-01-25T17:04:57.893		78.80	-62.34	45642.32	-10.86		
alpha	I	2035-01-25T17:06:22.288		78.75	-62.67	44749.62	-10.21		
4	I	2035-01-25T17:10:22.815		78.53	-63.61	42538.00	-8.13		
5	I	2035-01-25T17:10:51.442		78.50	-63.72	42310.25	-7.83		
6	I	2035-01-25T17:11:58.986		78.43	-63.98	41798.96	-7.19		

No planet occultations

6	E	2035-01-25T17:33:40.951		76.02	-68.99	41819.21	7.19		
5	E	2035-01-25T17:34:41.207		75.87	-69.22	42271.32	7.82		
4	E	2035-01-25T17:35:18.575		75.78	-69.37	42569.11	8.13		
alpha	E	2035-01-25T17:39:15.454		75.17	-70.27	44746.88	10.20		
beta	E	2035-01-25T17:40:41.977		74.94	-70.59	45658.09	10.86		
eta	E	2035-01-25T17:42:55.713		74.58	-71.10	47176.12	11.82		
gamma	E	2035-01-25T17:43:33.743		74.47	-71.24	47630.69	12.08		
delta	E	2035-01-25T17:44:28.368		74.32	-71.45	48300.35	12.44		
lambda	E	2035-01-25T17:46:42.736		73.94	-71.95	50026.71	13.25		
epsilon	E	2035-01-25T17:47:36.783		73.78	-72.15	50750.88	13.52		