

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-11T21:05:34.340
 Event type : PtRgt
 : Uranus occs: topocentric, not geocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3382553480249496576
 2Mass ID (if available) : 06322057+2333131

ICRS Star Coord at Epoch: 06h 32m 20.54577s +23:33:10.98489s

RUWE (>1.4 is poor) : 0.99
 K magnitude : 13.469
 G magnitude : 17.352
 RP magnitude : 16.113
 BP magnitude : 19.022
 DUPflag : 0
 Distance (au) : 19.542
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.78
 Sun-Target sep (deg) : 46.88
 Sun-Moon sep (deg) : 10.63
 B (ring opening deg) : 68.72
 PA of pole (deg) : 70.59

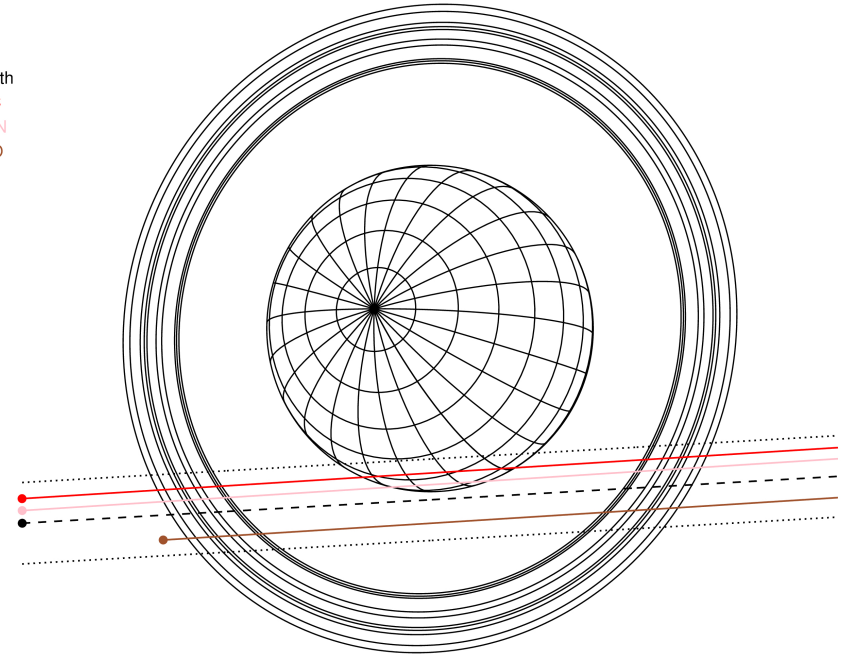
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2035-05-11T21:05:34.3400 α: 06 32 20.5458 δ: +23 33 10.985 C/A 1.883° PA 3.29 deg v_sky +26.78 km/s D 19.54 AU
 Credit: Styled after SORA/Lucky Star

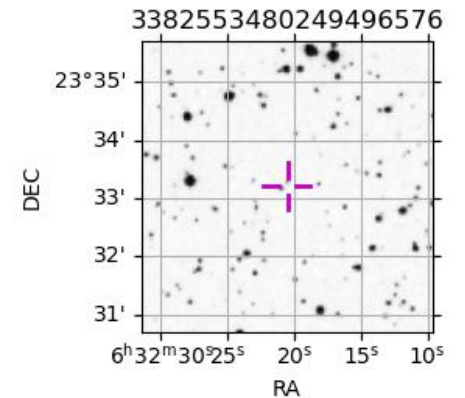
Uranus 2035-05-11T21:05:34 K13.47 G17.35 PtRgt

Earth
 PIC
 TEN
 RIO

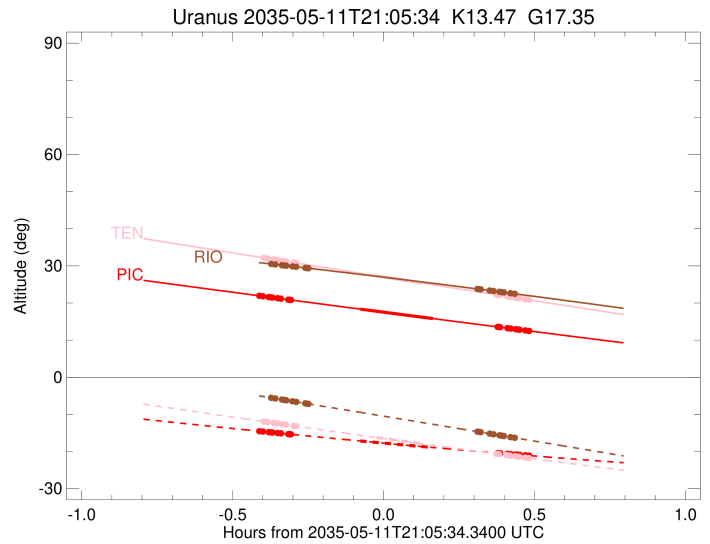
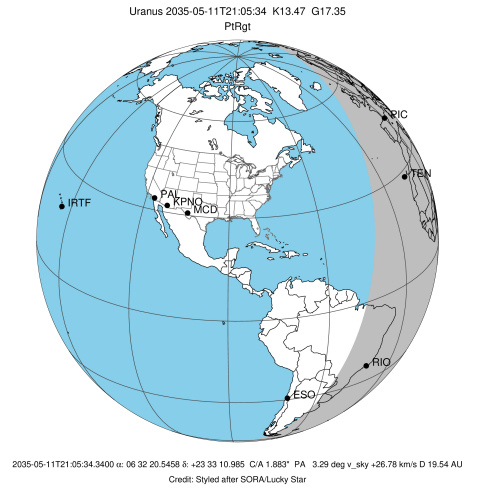


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1	+++++	+ +	+++++	MAY 11 20:40 - MAY 11 21:34	PieRie
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 11 20:41 - MAY 11 21:34	PieRie
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 11 20:42 - MAY 11 21:31	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

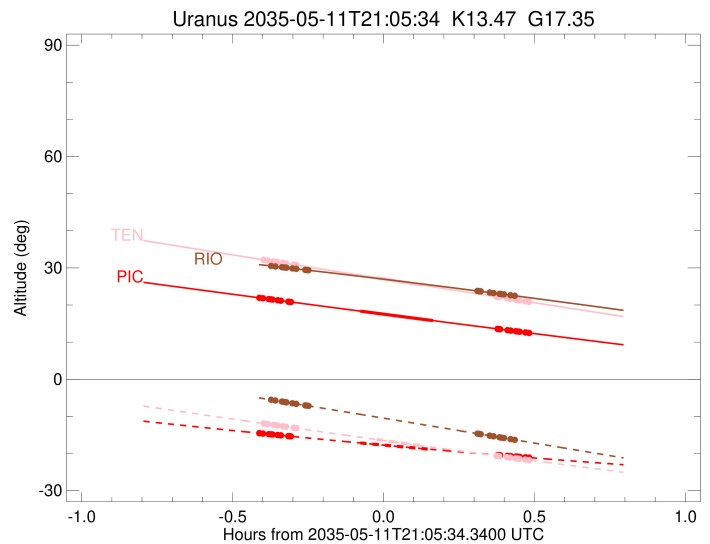
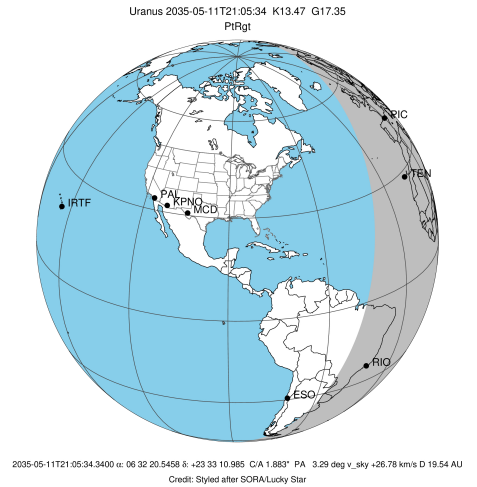


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-11T21:08:24.030
 Event type : PtRgt
 : Uranus occs: topocentric, not geocentric
 : Ring occs: geocentric, topocentric
 Observer code : PIC
 Location : Pic du Midi
 Latitude (deg) : 42.93656
 E. Longitude (deg) : 0.14231
 Altitude (km) : 2.890
 Gaia source ID : 3382553480249496576
 2Mass ID (if available) : 06322057+2333131
 ICRS Star Coord at Epoch: 06h 32m 20.54577s +23:33:10.98489s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 13.469
 G magnitude : 17.352
 RP magnitude : 16.113
 BP magnitude : 19.022
 DUPflag : 0
 Distance (au) : 19.542
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.78
 Sun-Target sep (deg) : 46.88
 Sun-Moon sep (deg) : 10.37
 B (ring opening deg) : 68.72
 PA of pole (deg) : 70.59
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.595
 C/A sky separation (km) : 22604.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl1.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



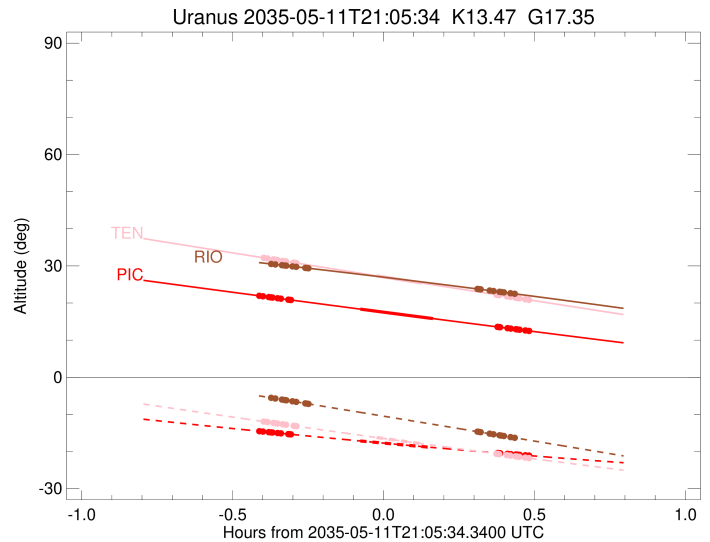
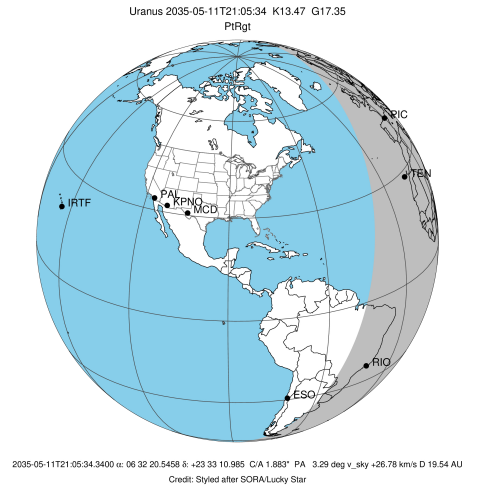
Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-05-11T20:40:37.692		21.99	-14.50	51555.29	-25.45		
lambda	I	2035-05-11T20:41:37.972		21.81	-14.63	50026.71	-25.26		
delta	I	2035-05-11T20:42:46.638		21.60	-14.79	48300.35	-25.02		
gamma	I	2035-05-11T20:43:13.723		21.52	-14.85	47624.11	-24.91		
eta	I	2035-05-11T20:43:31.729		21.47	-14.89	47176.12	-24.84		
beta	I	2035-05-11T20:44:33.664		21.28	-15.03	45644.51	-24.59		
alpha	I	2035-05-11T20:45:10.802		21.17	-15.11	44733.16	-24.40		
4	I	2035-05-11T20:46:41.572		20.90	-15.31	42535.44	-23.94		
5	I	2035-05-11T20:46:50.881		20.87	-15.33	42309.33	-23.91		
6	I	2035-05-11T20:47:12.031		20.81	-15.38	41802.35	-23.77		
Uranus	I	2035-05-11T21:00:58.760		18.35	-17.16	25555.31		1.75	1.83
Uranus	E	2035-05-11T21:15:25.060		15.80	-18.93	25261.46		-16.02	-16.74
6	E	2035-05-11T21:28:13.586		13.57	-20.41	41828.98	23.83		
5	E	2035-05-11T21:28:30.080		13.52	-20.44	42231.58	23.97		
4	E	2035-05-11T21:28:44.319		13.48	-20.46	42561.11	24.01		
alpha	E	2035-05-11T21:30:11.475		13.23	-20.62	44684.66	24.48		
beta	E	2035-05-11T21:30:52.051		13.11	-20.70	45679.20	24.66		
eta	E	2035-05-11T21:31:52.365		12.94	-20.81	47176.12	24.92		
gamma	E	2035-05-11T21:32:10.284		12.89	-20.84	47623.35	24.99		
delta	E	2035-05-11T21:32:37.313		12.81	-20.89	48300.35	25.10		
lambda	E	2035-05-11T21:33:45.753		12.61	-21.02	50026.71	25.35		
epsilon	E	2035-05-11T21:34:20.214		12.51	-21.08	50902.15	25.54		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-11T21:08:54.080
 Event type : PtRgt
 : Uranus occs: topocentric, not geocentric
 : 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 : 3382553480249496576
 2Mass ID (if available) : 06322057+2333131
 ICRS Star Coord at Epoch: 06h 32m 20.54577s +23:33:10.98489s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 13.469
 G magnitude : 17.352
 RP magnitude : 16.113
 BP magnitude : 19.022
 DUPflag : 0
 Distance (au) : 19.542
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.78
 Sun-Target sep (deg) : 46.88
 Sun-Moon sep (deg) : 10.16
 B (ring opening deg) : 68.72
 PA of pole (deg) : 70.59
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.723
 C/A sky separation (km) : 24415.9
 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_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	2035-05-11T20:41:30.350		32.23	-11.88	51554.90	-24.81		
lambda	I	2035-05-11T20:42:32.217		32.00	-12.08	50026.71	-24.59		
delta	I	2035-05-11T20:43:42.842		31.75	-12.31	48300.35	-24.30		
gamma	I	2035-05-11T20:44:10.753		31.65	-12.40	47623.89	-24.17		
eta	I	2035-05-11T20:44:29.307		31.58	-12.46	47176.12	-24.09		
beta	I	2035-05-11T20:45:33.238		31.35	-12.66	45645.06	-23.78		
alpha	I	2035-05-11T20:46:11.751		31.21	-12.79	44731.64	-23.57		
4	I	2035-05-11T20:47:45.973		30.87	-13.09	42534.03	-23.01		
5	I	2035-05-11T20:47:55.525		30.84	-13.12	42310.83	-22.97		
6	I	2035-05-11T20:48:17.694		30.76	-13.19	41801.09	-22.80		
Uranus	I	2035-05-11T21:04:11.264		27.33	-16.22	25553.49		-2.13	-2.24
Uranus	E	2035-05-11T21:13:10.672		25.40	-17.90	25356.69		-13.12	-13.72
6	E	2035-05-11T21:28:00.722		22.24	-20.61	41826.81	22.87		
5	E	2035-05-11T21:28:18.182		22.17	-20.66	42235.70	23.04		
4	E	2035-05-11T21:28:32.741		22.12	-20.71	42558.88	23.08		
alpha	E	2035-05-11T21:30:03.272		21.80	-20.98	44684.61	23.64		
beta	E	2035-05-11T21:30:45.235		21.65	-21.10	45678.78	23.86		
eta	E	2035-05-11T21:31:47.509		21.43	-21.29	47176.12	24.17		
gamma	E	2035-05-11T21:32:05.969		21.37	-21.34	47623.16	24.26		
delta	E	2035-05-11T21:32:33.811		21.27	-21.43	48300.35	24.38		
lambda	E	2035-05-11T21:33:44.180		21.02	-21.64	50026.71	24.68		
epsilon	E	2035-05-11T21:34:20.075		20.89	-21.74	50915.00	24.90		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-11T21:08:23.490
 Event type : PtRgt
 : Uranus occs: topocentric, not geocentric
 : 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 : 3382553480249496576
 2Mass ID (if available) : 06322057+2333131
 ICRS Star Coord at Epoch: 06h 32m 20.54577s +23:33:10.98489s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 13.469
 G magnitude : 17.352
 RP magnitude : 16.113
 BP magnitude : 19.022
 DUPflag : 0
 Distance (au) : 19.542
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.78
 Sun-Target sep (deg) : 46.88
 Sun-Moon sep (deg) : 9.87
 B (ring opening deg) : 68.72
 PA of pole (deg) : 70.59
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.149
 C/A sky separation (km) : 30453.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl1.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	2035-05-11T20:42:57.265		30.56	-5.47	51548.35	-22.51		
lambda	I	2035-05-11T20:44:05.375		30.39	-5.72	50026.71	-22.14		
delta	I	2035-05-11T20:45:24.201		30.19	-6.01	48300.35	-21.65		
gamma	I	2035-05-11T20:45:55.633		30.11	-6.13	47623.18	-21.43		
eta	I	2035-05-11T20:46:16.560		30.05	-6.20	47176.12	-21.29		
beta	I	2035-05-11T20:47:29.262		29.86	-6.47	45647.30	-20.75		
alpha	I	2035-05-11T20:48:13.990		29.75	-6.64	44726.04	-20.37		
4	I	2035-05-11T20:50:04.346		29.46	-7.04	42529.83	-19.38		
5	I	2035-05-11T20:50:15.306		29.43	-7.08	42314.44	-19.28		
6	I	2035-05-11T20:50:42.264		29.36	-7.18	41797.45	-18.99		

No planet occultations

6	E	2035-05-11T21:24:13.196		23.80	-14.64	41818.96	19.03		
5	E	2035-05-11T21:24:35.363		23.73	-14.73	42251.06	19.32		
4	E	2035-05-11T21:24:51.540		23.68	-14.79	42550.84	19.42		
alpha	E	2035-05-11T21:26:38.152		23.37	-15.18	44685.12	20.41		
beta	E	2035-05-11T21:27:26.421		23.23	-15.37	45676.90	20.80		
eta	E	2035-05-11T21:28:37.488		23.02	-15.63	47176.12	21.34		
gamma	E	2035-05-11T21:28:58.331		22.96	-15.71	47622.52	21.49		
delta	E	2035-05-11T21:29:29.714		22.87	-15.83	48300.35	21.71		
lambda	E	2035-05-11T21:30:48.330		22.64	-16.12	50026.71	22.21		
epsilon	E	2035-05-11T21:31:30.324		22.52	-16.28	50964.42	22.57		