

target : Neptune
 target radius (km) : 24764.00
 C/A epoch : 2046-07-17T01:12:00.030
 Event type : PgtRgt
 : Neptune occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 30960533746904704
 2Mass ID (if available) : 03053537+1537102

Neptune 2046-07-17T01:12:00 K13.34 G16.28 PgtRgt

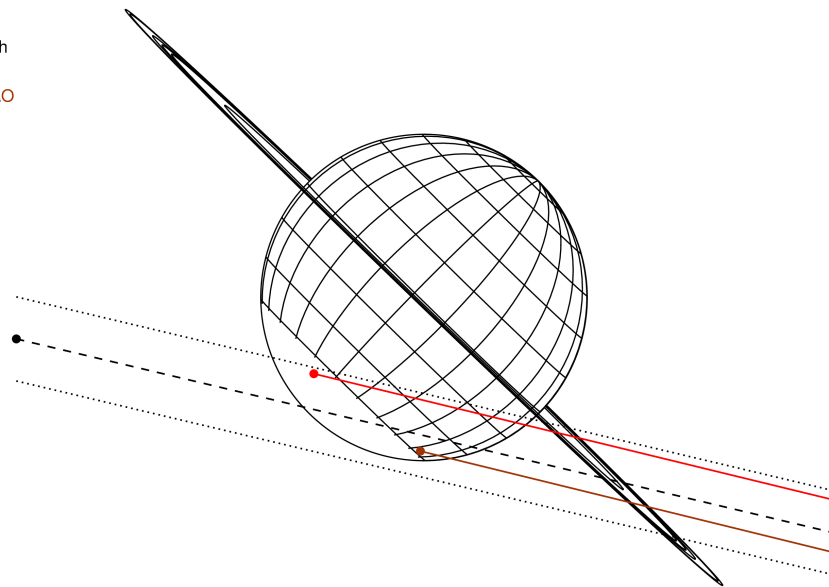
ICRS Star Coord at Epoch: 03h 05m 35.37395s +15:37:10.20050s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 13.336
 G magnitude : 16.283
 RP magnitude : 15.437
 BP magnitude : 17.041
 DUPflag : 0
 Distance (au) : 30.218
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 17.48
 Sun-Target sep (deg) : 65.68
 Sun-Moon sep (deg) : 125.87
 B (ring opening deg) : 1.13
 PA of pole (deg) : -44.47
 # a(km) ring

Neptune 2046-07-17T01:12:00 K13.34 G16.28
 PgtRgt



2046-07-17T01:12:00.0300 ex: 03 05 35.3739 s: +15 37 10.200 C/A 0.930° PA 346.66 deg v_sky +17.48 km/s D 30.22 AU
 Credit: Styled after SORA/Lucky Star

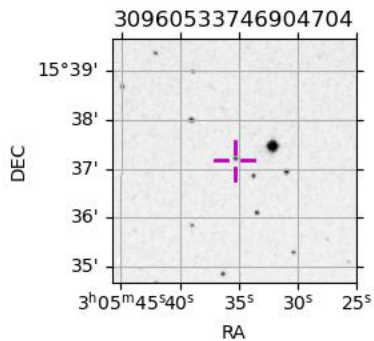
Earth
 PIC
 SAAO



- 1 42000.0 Galle
- 2 53200.0 LeVerrier
- 3 55200.0 Lassell
- 4 57200.0 Arago
- 5 61953.0 Galatea
- 6 62933.0 Adams

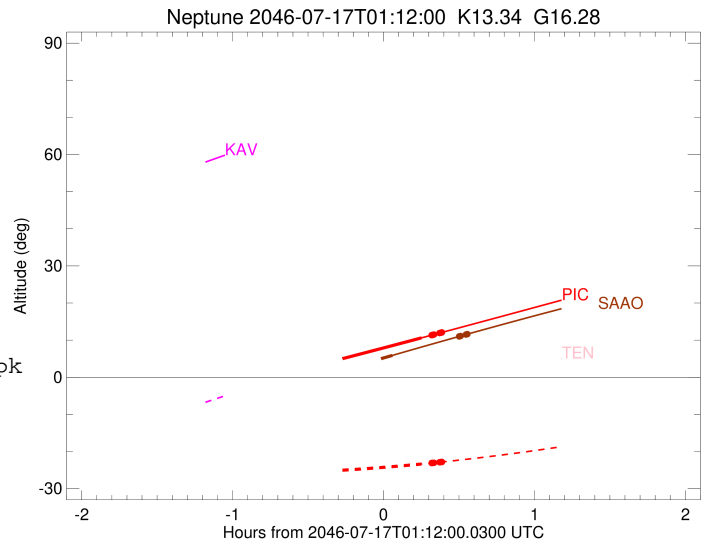
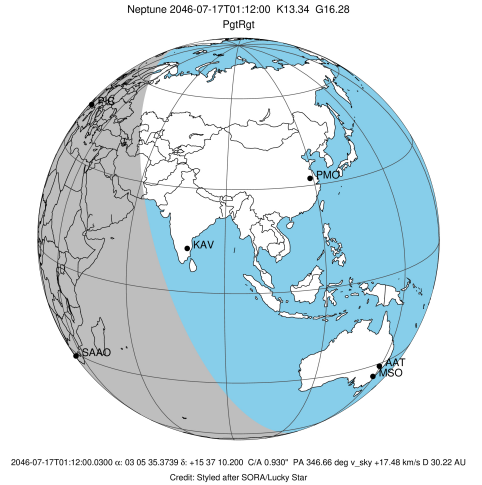
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+	+	+	JUL 17 01:27 - JUL 17 01:34	PneRie
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	+	+	+	JUL 17 01:15 - JUL 17 01:44	PneRie
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn



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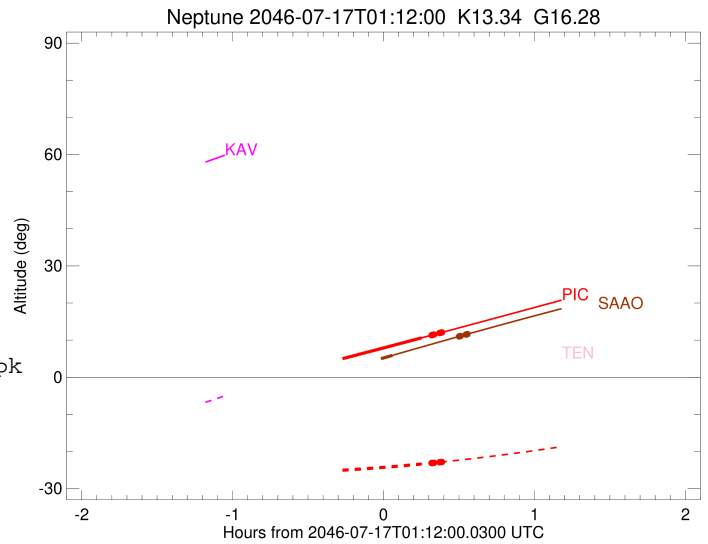
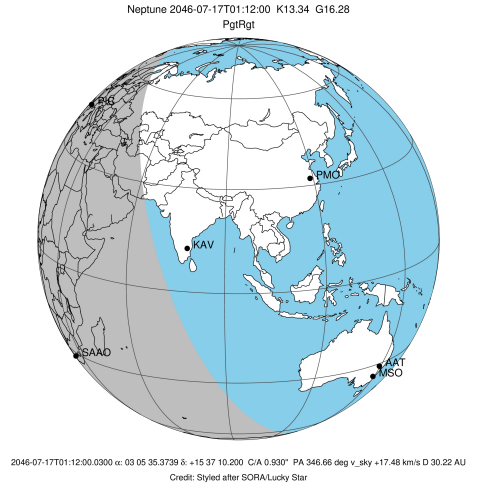
target                : Neptune
target radius (km)   : 24764.00
C/A epoch            : 2046-07-17T01:08:31.660
Event type          : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code       : PIC
Location            : Pic du Midi
Latitude (deg)      : 42.93656
E. Longitude (deg)  : 0.14231
Altitude (km)       : 2.890
Gaia source ID      : 30960533746904704
2Mass ID (if available) : 03053537+1537102
ICRS Star Coord at Epoch: 03h 05m 35.37395s +15:37:10.20050s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 13.336
G magnitude          : 16.283
RP magnitude        : 15.437
BP magnitude        : 17.041
DUPflag             : 0
Distance (au)       : 30.218
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : 17.48
Sun-Target sep (deg) : 65.68
Sun-Moon sep (deg)  : 126.23
B (ring opening deg) : 1.13
PA of pole (deg)    : -44.47
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.693
C/A sky separation (km) : 15177.7
NAIF SPICE kernels  : RAJobs_U111+rgf16.spk
URKALLv1.spk
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
earthstns_itr93_040916.bsp
earth_200101_990628_predict.bpc
pck00010.tpc
pck.urall11.tpc.Neptune
naif0012.tls
IAU_NEPTUNE_for_RINGFIT.tpc.BECAREFUL
earth_flat_IAU.spk
    
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Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2046-07-17T01:30:39.038		11.25	-23.14	62933.49	-401.98		
Galatea	I	2046-07-17T01:30:41.481		11.26	-23.13	61953.59	-400.14		
Arago	I	2046-07-17T01:30:53.509		11.30	-23.12	57201.50	-389.69		
Lassell	I	2046-07-17T01:30:58.675		11.31	-23.11	55202.23	-384.36		
LeVerrier	I	2046-07-17T01:31:03.919		11.33	-23.11	53203.44	-378.34		
Galle	I	2046-07-17T01:31:35.570		11.42	-23.07	42066.08	-323.16		
Neptune	I	2046-07-17T00:49:56.877		4.00x	-25.26	24763.86		-68.63	-69.29
Neptune	E	2046-07-17T01:27:08.529		10.62	-23.37	24764.00		-6.96	-7.20
Galle	E	2046-07-17T01:33:46.265		11.82	-22.92	42004.27	322.71		
LeVerrier	E	2046-07-17T01:34:17.945		11.91	-22.88	53200.55	378.05		
Lassell	E	2046-07-17T01:34:23.194		11.93	-22.88	55200.41	384.04		
Arago	E	2046-07-17T01:34:28.366		11.94	-22.87	57200.31	389.33		
Galatea	E	2046-07-17T01:34:40.409		11.98	-22.86	61953.16	399.70		
Adams	E	2046-07-17T01:34:42.855		11.99	-22.86	62933.13	401.52		

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target                : Neptune
target radius (km)   : 24764.00
C/A epoch             : 2046-07-17T01:06:13.550
Event type            : PgtRgt
: Neptune 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       : 30960533746904704
2Mass ID (if available) : 03053537+1537102
ICRS Star Coord at Epoch: 03h 05m 35.37395s +15:37:10.20050s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 13.336
G magnitude           : 16.283
RP magnitude          : 15.437
BP magnitude          : 17.041
DUPflag               : 0
Distance (au)         : 30.218
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : 17.48
Sun-Target sep (deg) : 65.68
Sun-Moon sep (deg)   : 126.47
B (ring opening deg) : 1.13
PA of pole (deg)     : -44.47
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (" ) : 1.039
C/A sky separation (km) : 22772.0
NAIF SPICE kernels   : RAJobs_U111+rgf16.spk
URKALLv1.spk
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
earthstns_itr93_040916.bsp
earth_200101_990628_predict.bpc
pck00010.tpc
pck.urall11.tpc.Neptune
naif0012.tls
IAU_NEPTUNE_for_RINGFIT.tpc.BECAREFUL
earth_flat_IAU.spk
    
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Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2046-07-17T01:41:18.392		10.85	-48.97	63041.33	-317.48		
Galatea	I	2046-07-17T01:41:21.508		10.86	-48.96	62087.77	-312.50		
Arago	I	2046-07-17T01:41:37.493		10.92	-48.90	57649.06	-284.56		
Lassell	I	2046-07-17T01:41:44.784		10.94	-48.87	56031.67	-271.83		
LeVerrier	I	2046-07-17T01:41:52.445		10.96	-48.85	54946.59	-262.27		
Neptune	I	2046-07-17T00:56:54.979	2.22x	-58.26	24763.82			-82.33	-82.59
Neptune	E	2046-07-17T01:15:32.728		5.89	-54.38	24763.97		-36.14	-37.08
LeVerrier	E	2046-07-17T01:44:01.750		11.37	-48.39	53231.97	245.27		
Lassell	E	2046-07-17T01:44:09.597		11.39	-48.37	55222.18	264.91		
Arago	E	2046-07-17T01:44:16.922		11.42	-48.34	57215.75	281.39		
Galatea	E	2046-07-17T01:44:32.924		11.47	-48.28	61960.51	311.81		
Adams	E	2046-07-17T01:44:36.042		11.48	-48.27	62939.51	316.93		