

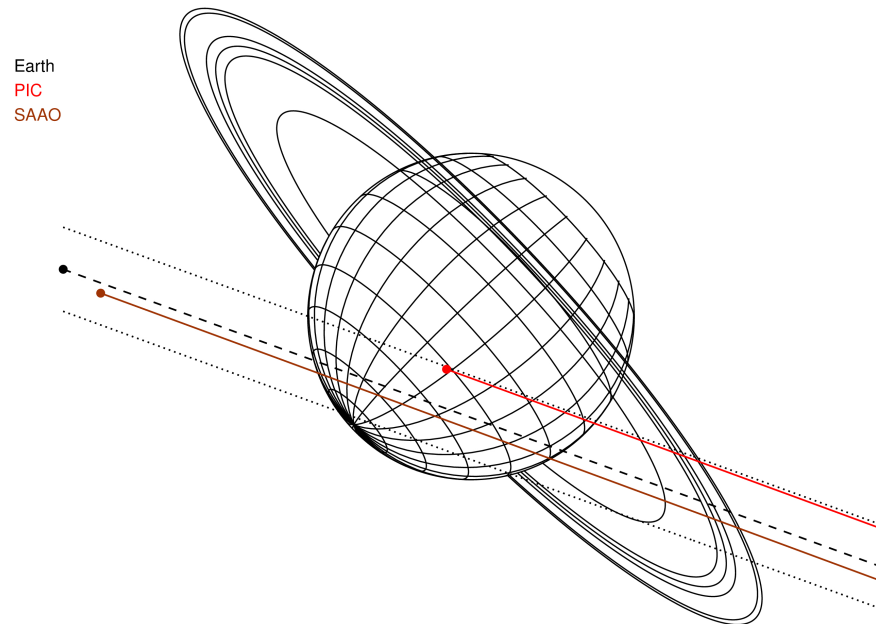
target : Neptune
 target radius (km) : 24764.00
 C/A epoch : 2033-06-11T02:02:49.210
 Event type : PgtRgt
 : Neptune occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 2576622765738672384
 2Mass ID (if available) : 01131257+0602172

Neptune 2033-06-11T02:02:49 K11.55 G12.81 PgtRgt

ICRS Star Coord at Epoch: 01h 13m 12.62606s +06:02:16.99895s
 RUWE (>1.4 is poor) : 0.91
 K magnitude : 11.555
 G magnitude : 12.815
 RP magnitude : 12.370
 BP magnitude : 13.104
 DUPflag : 0
 Distance (au) : 30.325
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 19.95
 Sun-Target sep (deg) : 60.86
 Sun-Moon sep (deg) : 141.63
 B (ring opening deg) : -12.33
 PA of pole (deg) : -47.28
 # a(km) ring



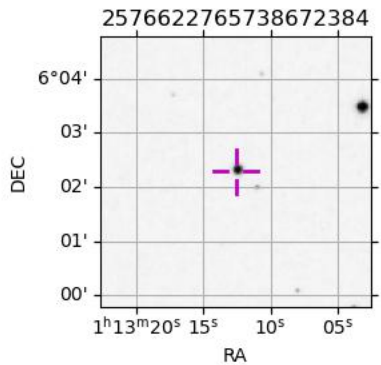
2033-06-11T02:02:49.2100 ex: 01 13 12.6261 s: +06 02 16.999 C/A 0.656° PA 340.02 deg v_sky +19.95 km/s D 30.32 AU
 Credit: Styled after SORA/Lucky Star



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

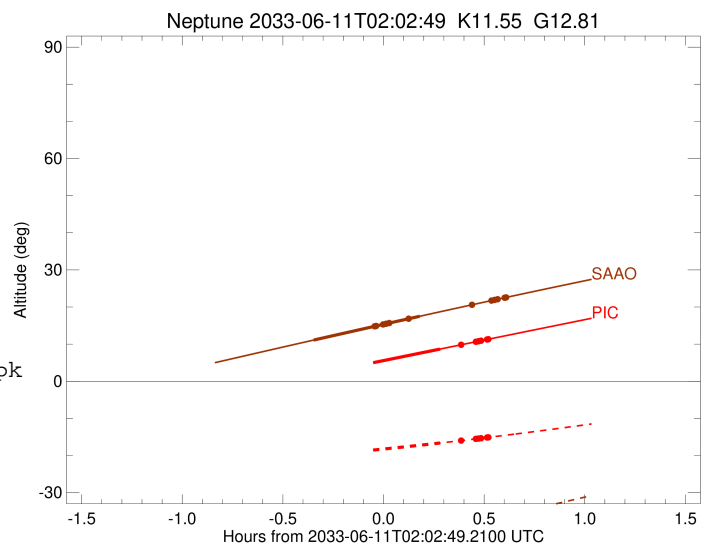
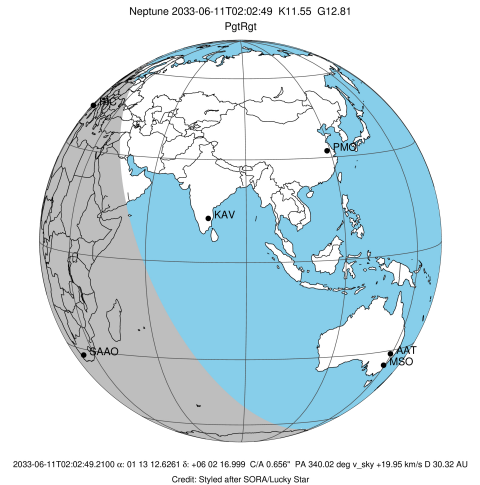
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1		+	+	JUN 11 02:19 - JUN 11 02:33	PneRne
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		+	+	JUN 11 01:42 - JUN 11 02:38	PieRne
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn



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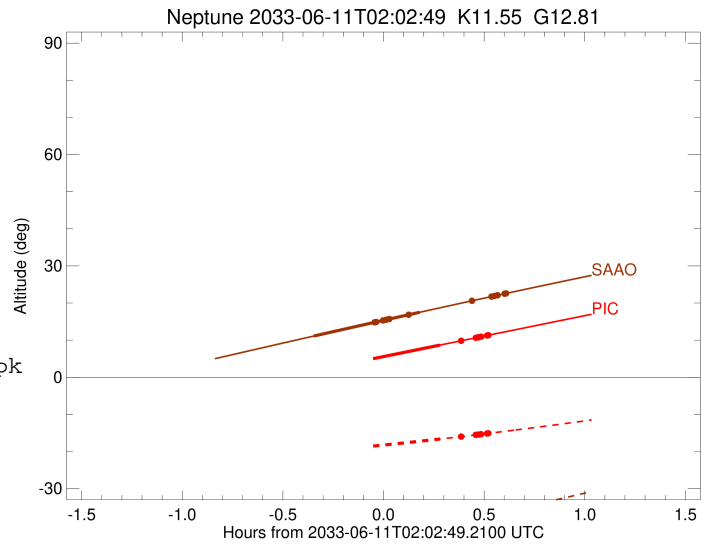
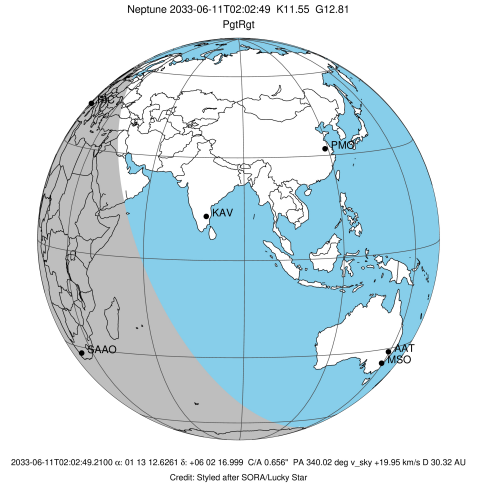
target                : Neptune
target radius (km)   : 24764.00
C/A epoch             : 2033-06-11T02:00:21.150
Event type            : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code        : PIC
Location              : Pic du Midi
Latitude (deg)       : 42.93656
E. Longitude (deg)   : 0.14231
Altitude (km)        : 2.890
Gaia source ID       : 2576622765738672384
2Mass ID (if available) : 01131257+0602172
ICRS Star Coord at Epoch: 01h 13m 12.62606s +06:02:16.99895s
RUWE (>1.4 is poor) : 0.91
K magnitude           : 11.555
G magnitude           : 12.815
RP magnitude         : 12.370
BP magnitude         : 13.104
DUPflag              : 0
Distance (au)        : 30.325
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : 19.95
Sun-Target sep (deg) : 60.86
Sun-Moon sep (deg)   : 142.03
B (ring opening deg) : -12.33
PA of pole (deg)     : -47.28
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.400
C/A sky separation (km) : 8792.3
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.urall1.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	2033-06-11T01:50:22.577	b	3.29x	-19.35	62933.00	-43.82		
Galatea	I	2033-06-11T01:50:44.961	b	3.35x	-19.32	61953.00	-43.74		
Arago	I	2033-06-11T01:52:34.209	b	3.69x	-19.16	57200.00	-43.27		
Lassell	I	2033-06-11T01:53:20.549	b	3.83x	-19.10	55200.00	-43.05		
LeVerrier	I	2033-06-11T01:54:07.126	b	3.97x	-19.03	53200.00	-42.83		
Galle	I	2033-06-11T01:58:32.372	b	4.78x	-18.64	42000.00	-41.67		
Neptune	I	2033-06-11T01:41:02.516		1.58x	-20.10	24753.42		-46.56	-47.53
Neptune	E	2033-06-11T02:19:42.251		8.68	-16.63	24763.77		6.23	6.45
Galle	E	2033-06-11T02:25:43.199		9.78	-16.01	42000.00	41.74		
LeVerrier	E	2033-06-11T02:30:05.698		10.59	-15.54	53200.00	43.40		
Lassell	E	2033-06-11T02:30:51.678		10.73	-15.46	55200.00	43.59		
Arago	E	2033-06-11T02:31:37.470		10.87	-15.38	57200.00	43.76		
Galatea	E	2033-06-11T02:33:25.655		11.20	-15.18	61953.00	44.09		
Adams	E	2033-06-11T02:33:47.864		11.27	-15.14	62933.00	44.15		

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target                : Neptune
target radius (km)   : 24764.00
C/A epoch            : 2033-06-11T01:57:47.520
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       : 2576622765738672384
2Mass ID (if available) : 01131257+0602172
ICRS Star Coord at Epoch: 01h 13m 12.62606s +06:02:16.99895s
RUWE (>1.4 is poor) : 0.91
K magnitude           : 11.555
G magnitude           : 12.815
RP magnitude         : 12.370
BP magnitude         : 13.104
DUPflag              : 0
Distance (au)        : 30.325
f0 (km)              : 0.000
g0 (km)              : 0.000
skyplane vel. (km/s) : 19.95
Sun-Target sep (deg) : 60.86
Sun-Moon sep (deg)   : 142.46
B (ring opening deg) : -12.33
PA of pole (deg)     : -47.28
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.731
C/A sky separation (km) : 16079.2
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	2033-06-11T01:59:50.090	b	14.73	-44.46	62933.00	-39.36		
Galatea	I	2033-06-11T02:00:15.057	b	14.82	-44.37	61953.00	-39.14		
Arago	I	2033-06-11T02:02:18.417	b	15.23	-43.94	57200.00	-37.85		
Lassell	I	2033-06-11T02:03:11.718	b	15.41	-43.75	55200.00	-37.18		
LeVerrier	I	2033-06-11T02:04:06.076	b	15.60	-43.56	53200.00	-36.39		
Galle	I	2033-06-11T02:09:44.737	b	16.73	-42.37	42000.01	-28.87		
Neptune	I	2033-06-11T01:41:59.580		11.10	-48.24	24747.65		-64.56	-65.31
Neptune	E	2033-06-11T02:13:37.872		17.51	-41.55	24762.97		-13.14	-13.58
Galle	E	2033-06-11T02:28:57.551		20.55	-38.32	42000.00	28.65		
LeVerrier	E	2033-06-11T02:34:39.664		21.67	-37.12	53200.00	35.96		
Lassell	E	2033-06-11T02:35:34.689		21.85	-36.92	55200.00	36.72		
Arago	E	2033-06-11T02:36:28.653		22.02	-36.73	57200.00	37.39		
Galatea	E	2033-06-11T02:38:33.508		22.43	-36.30	61953.00	38.69		
Adams	E	2033-06-11T02:38:58.761		22.51	-36.21	62933.00	38.92		