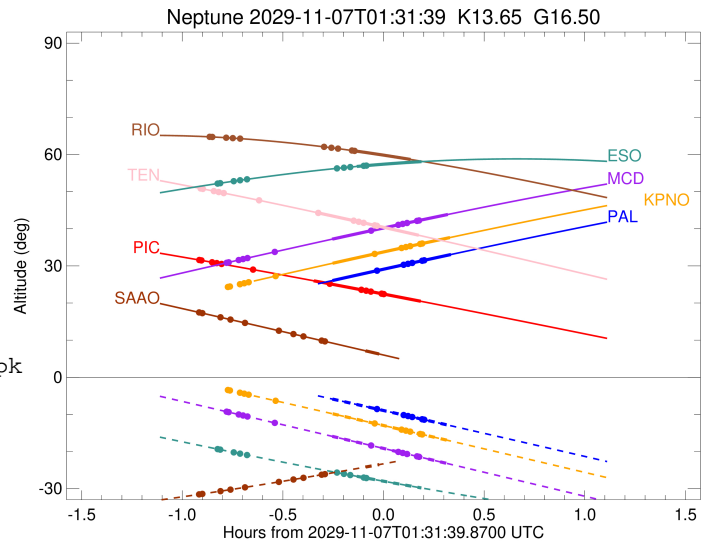
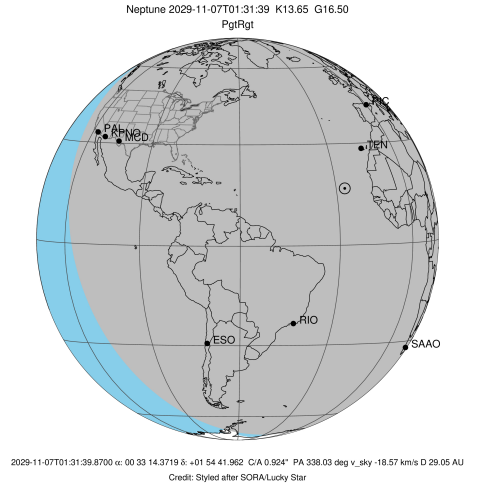



```

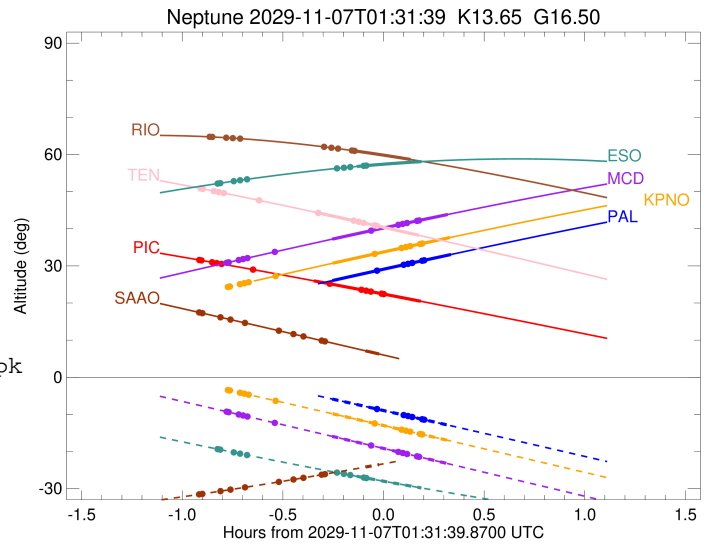
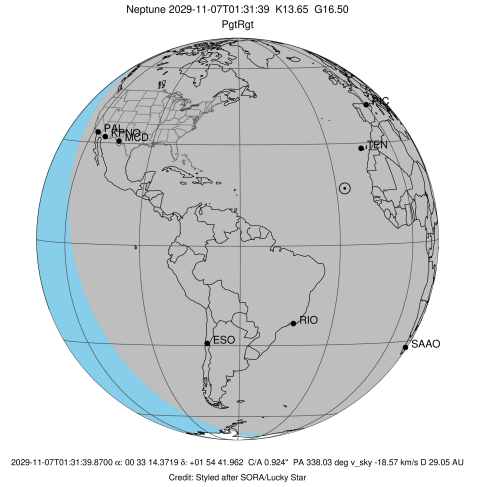
target                : Neptune
target radius (km)   : 24764.00
C/A epoch             : 2029-11-07T01:26:50.230
Event type            : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code        : PIC
Location              : Pic du Midi
Latitude (deg)       : 42.93656
E. Longitude (deg)   : 0.14231
Altitude (km)        : 2.890
Gaia source ID       : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 13.655
G magnitude           : 16.503
RP magnitude         : 15.591
BP magnitude         : 17.357
DUPflag              : 0
Distance (au)        : 29.051
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg) : 143.85
Sun-Moon sep (deg)   : 130.90
B (ring opening deg) : -16.70
PA of pole (deg)     : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.809
C/A sky separation (km) : 17041.4
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:37:03.535		31.54	-61.16	62933.00	-25.92		
Galatea	I	2029-11-07T00:37:41.491		31.44	-61.10	61953.00	-25.72		
Arago	I	2029-11-07T00:40:50.253		30.93	-60.83	57200.00	-24.59		
Lassell	I	2029-11-07T00:42:12.529		30.71	-60.70	55200.00	-24.01		
LeVerrier	I	2029-11-07T00:43:36.969		30.49	-60.57	53200.00	-23.35		
Galle	I	2029-11-07T00:52:45.961		29.00	-59.67	42000.00	-16.67		
Neptune	I	2029-11-07T01:10:51.979		25.99	-57.61	24759.99		-19.00	-19.61
Neptune	E	2029-11-07T01:42:47.756		20.47	-53.28	24734.57		-61.96	-62.77
Galle	E	2029-11-07T01:16:25.733	b	25.04	-56.91	42000.01	16.73		
LeVerrier	E	2029-11-07T01:25:33.466	b	23.48	-55.71	53200.00	23.32		
Lassell	E	2029-11-07T01:26:58.101	b	23.23	-55.52	55200.00	23.93		
Arago	E	2029-11-07T01:28:20.736	b	23.00	-55.33	57200.00	24.46		
Galatea	E	2029-11-07T01:31:30.926	b	22.45	-54.89	61953.00	25.48		
Adams	E	2029-11-07T01:32:09.256	b	22.33	-54.80	62933.00	25.66		

```

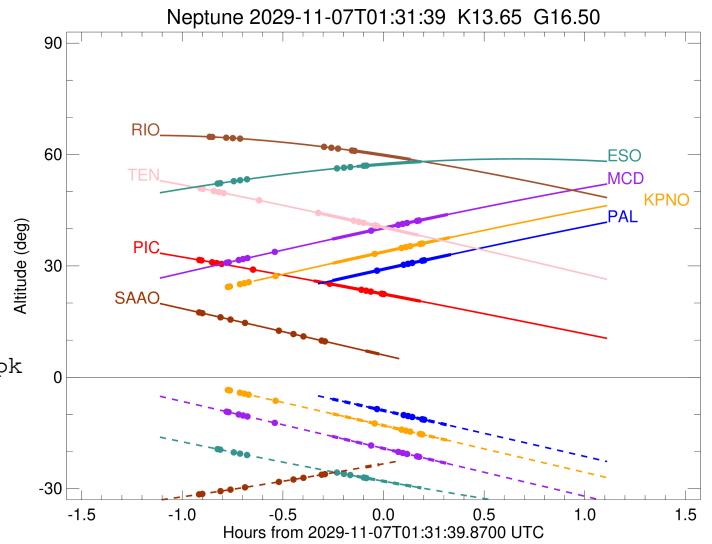
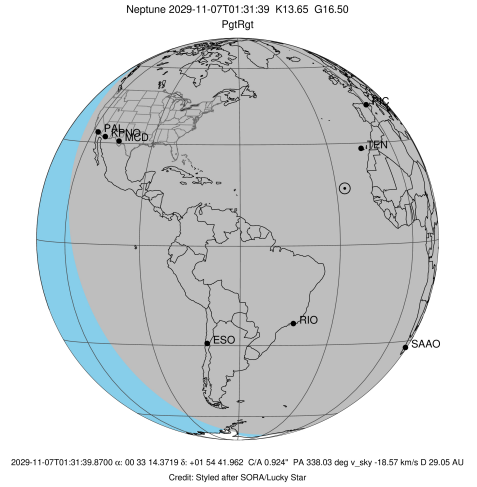
target                : Neptune
target radius (km)   : 24764.00
C/A epoch            : 2029-11-07T01:34:07.500
Event type          : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code       : PAL
Location            : Palomar Mt (200")
Latitude (deg)      : 33.35622
E. Longitude (deg) : 243.13601
Altitude (km)       : 1.706
Gaia source ID      : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor) : 1.08
K magnitude         : 13.655
G magnitude         : 16.503
RP magnitude        : 15.591
BP magnitude        : 17.357
DUPflag            : 0
Distance (au)       : 29.051
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg) : 143.85
Sun-Moon sep (deg)  : 131.81
B (ring opening deg) : -16.70
PA of pole (deg)    : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.697
C/A sky separation (km) : 14686.9
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:45:46.997		19.79	0.24x	62933.00	-27.32		
Galatea	I	2029-11-07T00:46:22.956		19.92	0.12x	61953.00	-27.19		
Arago	I	2029-11-07T00:49:20.170		20.52	-0.46x	57200.00	-26.42		
Lassell	I	2029-11-07T00:50:36.408		20.79	-0.71x	55200.00	-26.03		
LeVerrier	I	2029-11-07T00:51:53.873		21.05	-0.97x	53200.00	-25.59		
Galle	I	2029-11-07T00:59:45.107		22.66	-2.53x	42000.00	-21.45		
Neptune	I	2029-11-07T01:16:25.122		26.05	-5.87	24762.33		-12.12	-12.53
Neptune	E	2029-11-07T01:51:47.167		33.07	-13.07	24737.91		-56.19	-57.08
Galle	E	2029-11-07T01:30:10.360	b	28.81	-8.65	42000.00	21.69		
LeVerrier	E	2029-11-07T01:37:58.787	b	30.36	-10.24	53200.00	25.59		
Lassell	E	2029-11-07T01:39:16.301	b	30.62	-10.50	55200.00	26.00		
Arago	E	2029-11-07T01:40:32.662	b	30.87	-10.76	57200.00	26.37		
Galatea	E	2029-11-07T01:43:30.249	b	31.45	-11.37	61953.00	27.13		
Adams	E	2029-11-07T01:44:06.276	b	31.57	-11.49	62933.00	27.27		

```

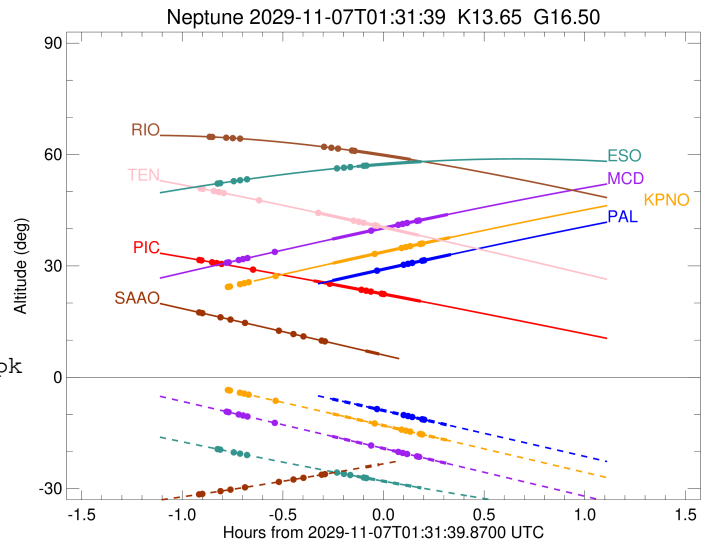
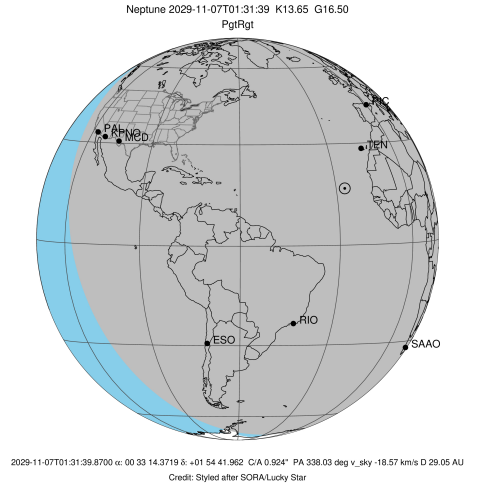
target           : Neptune
target radius (km) : 24764.00
C/A epoch       : 2029-11-07T01:33:58.440
Event type      : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code   : KPNO
Location        : Kitt Peak Natl Obs
Latitude (deg)  : 31.96333
E. Longitude (deg) : 248.40000
Altitude (km)   : 2.120
Gaia source ID  : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor) : 1.08
K magnitude     : 13.655
G magnitude     : 16.503
RP magnitude    : 15.591
BP magnitude    : 17.357
DUPflag        : 0
Distance (au)   : 29.051
f0 (km)         : 0.000
g0 (km)         : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg) : 143.85
Sun-Moon sep (deg) : 131.85
B (ring opening deg) : -16.70
PA of pole (deg) : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.708
C/A sky separation (km) : 14907.9
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:45:35.705		24.39	-3.50x	62933.00	-27.27		
Galatea	I	2029-11-07T00:46:11.729		24.51	-3.62x	61953.00	-27.13		
Arago	I	2029-11-07T00:49:09.373		25.12	-4.22x	57200.00	-26.35		
Lassell	I	2029-11-07T00:50:25.865		25.39	-4.48x	55200.00	-25.94		
LeVerrier	I	2029-11-07T00:51:43.640		25.66	-4.75x	53200.00	-25.48		
Galle	I	2029-11-07T00:59:38.689		27.28	-6.37	42000.00	-21.16		
Neptune	I	2029-11-07T01:16:26.567		30.70	-9.83	24762.18		-12.69	-13.12
Neptune	E	2029-11-07T01:51:27.670		37.63	-17.13	24737.56		-56.76	-57.65
Galle	E	2029-11-07T01:29:30.042	b	33.32	-12.54	42000.00	21.39		
LeVerrier	E	2029-11-07T01:37:22.043	b	34.88	-14.18	53200.00	25.50		
Lassell	E	2029-11-07T01:38:39.828	b	35.14	-14.45	55200.00	25.92		
Arago	E	2029-11-07T01:39:56.417	b	35.39	-14.72	57200.00	26.30		
Galatea	E	2029-11-07T01:42:54.426	b	35.97	-15.34	61953.00	27.08		
Adams	E	2029-11-07T01:43:30.522	b	36.09	-15.46	62933.00	27.22		

```

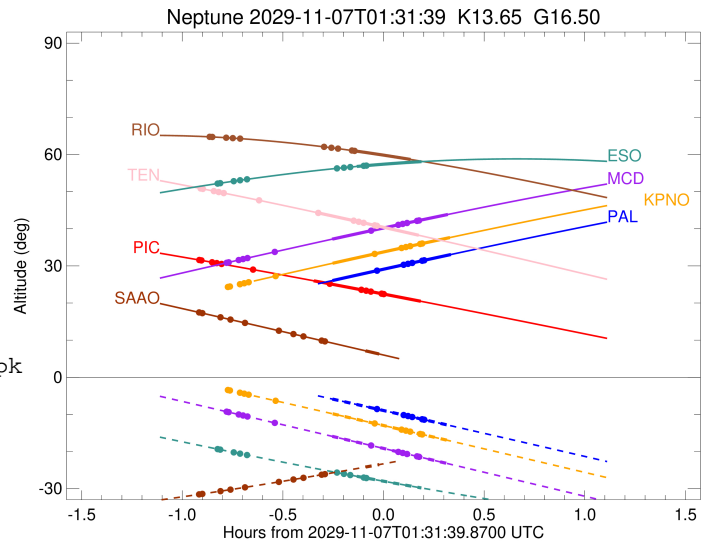
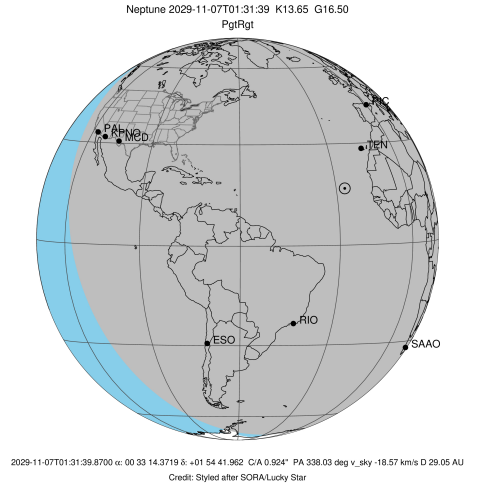
target                : Neptune
target radius (km)    : 24764.00
C/A epoch              : 2029-11-07T01:33:38.780
Event type             : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code         : MCD
Location               : McDonald Obs. 2.7m
Latitude (deg)        : 30.67158
E. Longitude (deg)    : 255.97844
Altitude (km)         : 2.075
Gaia source ID        : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor)  : 1.08
K magnitude           : 13.655
G magnitude           : 16.503
RP magnitude          : 15.591
BP magnitude          : 17.357
DUPflag              : 0
Distance (au)         : 29.051
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg)  : 143.85
Sun-Moon sep (deg)    : 131.88
B (ring opening deg) : -16.70
PA of pole (deg)      : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.722
C/A sky separation (km) : 15203.8
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:45:13.101		30.90	-9.34	62933.00	-27.21		
Galatea	I	2029-11-07T00:45:49.218		31.03	-9.46	61953.00	-27.06		
Arago	I	2029-11-07T00:48:47.479		31.64	-10.09	57200.00	-26.23		
Lassell	I	2029-11-07T00:50:04.333		31.90	-10.36	55200.00	-25.81		
LeVerrier	I	2029-11-07T00:51:22.552		32.17	-10.63	53200.00	-25.32		
Galle	I	2029-11-07T00:59:23.105		33.80	-12.32	42000.00	-20.75		
Neptune	I	2029-11-07T01:16:21.189		37.20	-15.91	24761.95		-13.47	-13.93
Neptune	E	2029-11-07T01:50:53.855		43.86	-23.28	24737.10		-57.53	-58.41
Galle	E	2029-11-07T01:28:27.944	b	39.59	-18.48	42000.00	20.97		
LeVerrier	E	2029-11-07T01:36:25.231	b	41.12	-20.18	53200.00	25.36		
Lassell	E	2029-11-07T01:37:43.416	b	41.37	-20.46	55200.00	25.80		
Arago	E	2029-11-07T01:39:00.341	b	41.62	-20.73	57200.00	26.19		
Galatea	E	2029-11-07T01:41:58.971	b	42.19	-21.37	61953.00	27.00		
Adams	E	2029-11-07T01:42:35.172	b	42.30	-21.50	62933.00	27.14		


```

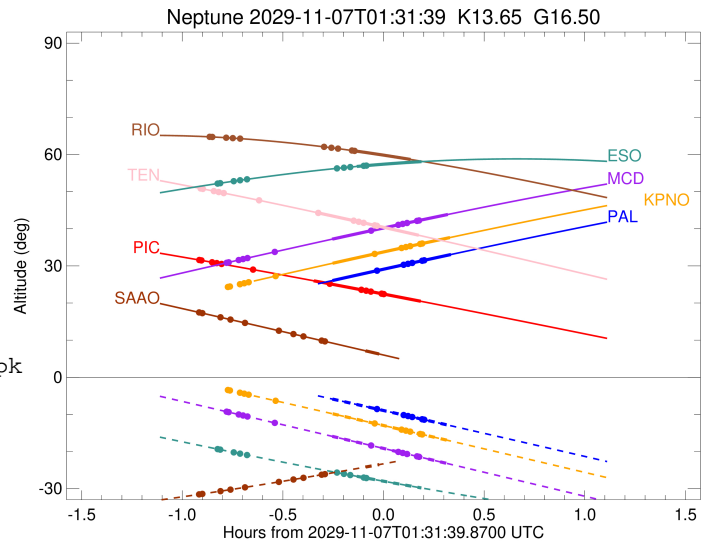
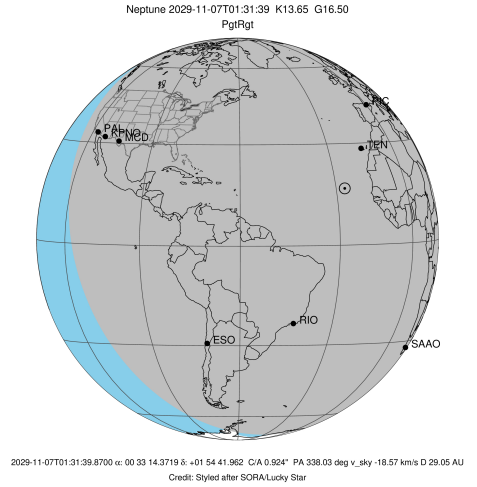
target                : Neptune
target radius (km)   : 24764.00
C/A epoch            : 2029-11-07T01:27:24.840
Event type           : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code        : TEN
Location             : Teide Obs./Tenerife
Latitude (deg)       : 28.30050
E. Longitude (deg)   : 343.48909
Altitude (km)        : 2.395
Gaia source ID       : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 13.655
G magnitude           : 16.503
RP magnitude         : 15.591
BP magnitude         : 17.357
DUPflag              : 0
Distance (au)        : 29.051
f0 (km)              : 0.000
g0 (km)              : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg) : 143.85
Sun-Moon sep (deg)   : 131.19
B (ring opening deg) : -16.70
PA of pole (deg)     : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 0.866
C/A sky separation (km) : 18250.8
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:37:26.543		50.81	-77.84	62933.00	-25.30		
Galatea	I	2029-11-07T00:38:05.452		50.69	-77.87	61953.00	-25.07		
Arago	I	2029-11-07T00:41:20.059		50.11	-78.02	57200.00	-23.72		
Lassell	I	2029-11-07T00:42:45.602		49.85	-78.07	55200.00	-23.02		
LeVerrier	I	2029-11-07T00:44:13.991		49.58	-78.11	53200.00	-22.22		
Galle	I	2029-11-07T00:54:22.802		47.70	-78.12	42000.00	-13.56		
Neptune	I	2029-11-07T01:12:37.832		44.19	-77.04	24758.39		-22.66	-23.37
Neptune	E	2029-11-07T01:42:10.788		38.25	-73.08	24732.91		-65.13	-65.86
Galle	E	2029-11-07T01:13:15.854	b	44.07	-76.98	42000.11	13.59		
LeVerrier	E	2029-11-07T01:23:23.222	b	42.06	-75.85	53200.00	22.24		
Lassell	E	2029-11-07T01:24:51.578	b	41.77	-75.66	55200.00	23.02		
Arago	E	2029-11-07T01:26:17.209	b	41.48	-75.47	57200.00	23.68		
Galatea	E	2029-11-07T01:29:32.554	b	40.83	-75.02	61953.00	24.93		
Adams	E	2029-11-07T01:30:11.703	b	40.70	-74.93	62933.00	25.14		

```

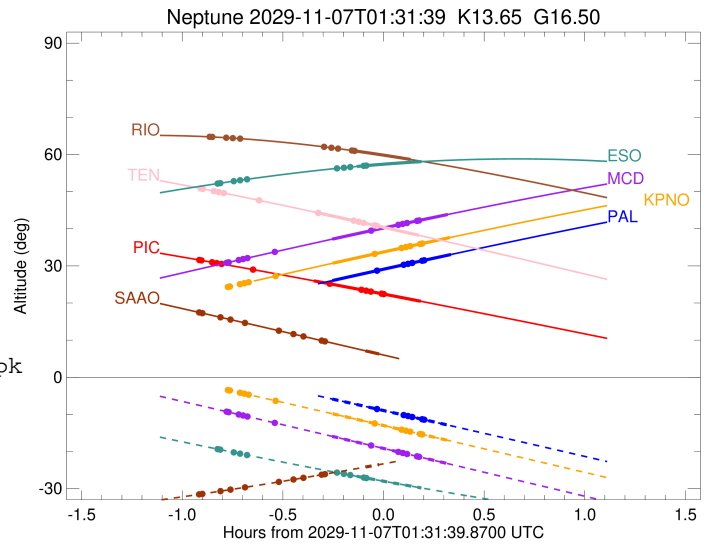
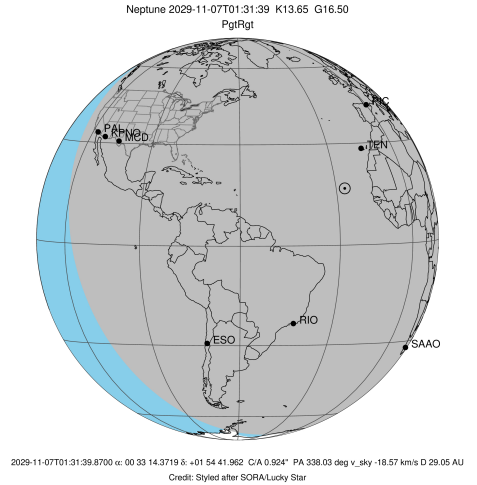
target                : Neptune
target radius (km)   : 24764.00
C/A epoch             : 2029-11-07T01:30:56.390
Event type            : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code         : RIO
Location              : Rio de Janeiro
Latitude (deg)        : -22.89506
E. Longitude (deg)    : 316.77708
Altitude (km)         : 0.033
Gaia source ID        : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 13.655
G magnitude           : 16.503
RP magnitude          : 15.591
BP magnitude          : 17.357
DUPflag              : 0
Distance (au)         : 29.051
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg) : 143.85
Sun-Moon sep (deg)   : 131.82
B (ring opening deg) : -16.70
PA of pole (deg)     : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 1.072
C/A sky separation (km) : 22591.5
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:40:01.261		64.76	-41.65	62933.00	-21.33		
Galatea	I	2029-11-07T00:40:47.656		64.73	-41.76	61953.00	-20.91		
Arago	I	2029-11-07T00:44:49.216		64.53	-42.33	57200.00	-18.34		
Lassell	I	2029-11-07T00:46:42.593		64.42	-42.59	55200.00	-16.91		
LeVerrier	I	2029-11-07T00:48:47.171		64.29	-42.88	53200.00	-15.16		
Neptune	I	2029-11-07T01:22:03.300		61.11	-46.89	24748.48		-39.86	-40.83
Neptune	E	2029-11-07T01:39:47.180		58.67	-48.53	24729.36		-73.30	-73.83
LeVerrier	E	2029-11-07T01:15:09.273		61.93	-46.15	53200.07	15.19		
Lassell	E	2029-11-07T01:17:13.607		61.69	-46.38	55200.02	16.95		
Arago	E	2029-11-07T01:19:06.741		61.47	-46.58	57200.01	18.38		
Galatea	E	2029-11-07T01:23:07.775	b	60.97	-47.00	61953.00	20.95		
Adams	E	2029-11-07T01:23:54.081	b	60.88	-47.08	62933.00	21.37		

```

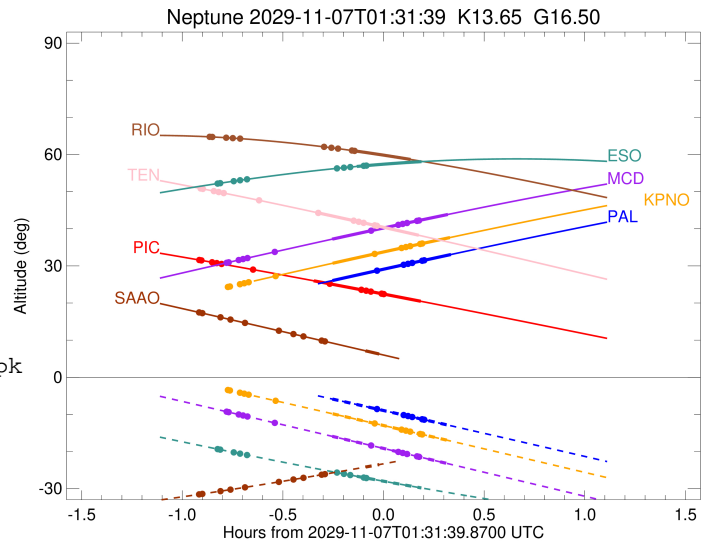
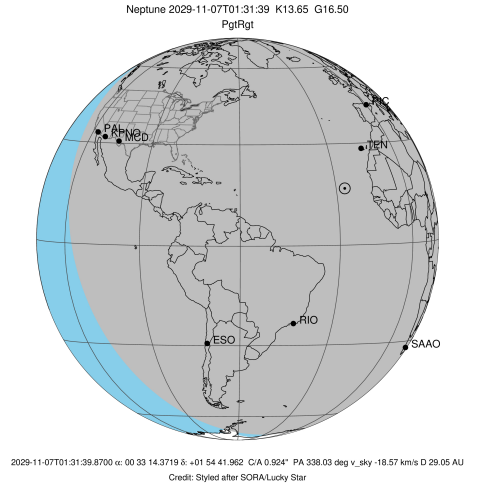
target                : Neptune
target radius (km)   : 24764.00
C/A epoch             : 2029-11-07T01:33:22.710
Event type           : PgtRgt
: Neptune occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code        : ESO
Location              : European Southern Obs. (3.6m)
Latitude (deg)       : -29.26097
E. Longitude (deg)   : 289.26831
Altitude (km)        : 2.400
Gaia source ID       : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 13.655
G magnitude           : 16.503
RP magnitude         : 15.591
BP magnitude         : 17.357
DUPflag              : 0
Distance (au)        : 29.051
f0 (km)              : 0.000
g0 (km)              : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg) : 143.85
Sun-Moon sep (deg)   : 132.09
B (ring opening deg) : -16.70
PA of pole (deg)     : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation (") : 1.052
C/A sky separation (km) : 22175.1
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:42:25.233		52.21	-19.39	62933.00	-21.73		
Galatea	I	2029-11-07T00:43:10.736		52.31	-19.53	61953.00	-21.34		
Arago	I	2029-11-07T00:47:06.158		52.83	-20.25	57200.00	-18.95		
Lassell	I	2029-11-07T00:48:55.447		53.07	-20.58	55200.00	-17.63		
LeVerrier	I	2029-11-07T00:50:54.164		53.32	-20.94	53200.00	-16.03		
Neptune	I	2029-11-07T01:23:42.492		56.79	-26.67	24749.80		-37.75	-38.70
Neptune	E	2029-11-07T01:43:00.481		58.09	-29.82	24729.40		-73.14	-73.67
LeVerrier	E	2029-11-07T01:18:55.106		56.37	-25.87	53200.04	16.10		
Lassell	E	2029-11-07T01:20:53.329		56.55	-26.20	55200.02	17.71		
Arago	E	2029-11-07T01:22:42.120		56.70	-26.51	57200.01	19.04		
Galatea	E	2029-11-07T01:26:36.405	b	57.02	-27.16	61953.00	21.44		
Adams	E	2029-11-07T01:27:21.692	b	57.08	-27.28	62933.00	21.84		


```

target                : Neptune
target radius (km)   : 24764.00
C/A epoch             : 2029-11-07T01:28:22.220
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       : 2544504106946339584
2Mass ID (if available) : 00331433+0154419
ICRS Star Coord at Epoch: 00h 33m 14.37191s +01:54:41.96242s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 13.655
G magnitude           : 16.503
RP magnitude          : 15.591
BP magnitude          : 17.357
DUPflag               : 0
Distance (au)         : 29.051
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : -18.57
Sun-Target sep (deg) : 143.85
Sun-Moon sep (deg)   : 130.94
B (ring opening deg) : -16.70
PA of pole (deg)     : -45.42
Pole direction: RA (deg): 299.33374
Dec (deg): 42.95036
C/A sky separation ("): 1.169
C/A sky separation (km): 24627.8
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
    
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
Adams	I	2029-11-07T00:36:43.854		17.46	-31.54	62933.00	-17.90		
Galatea	I	2029-11-07T00:37:39.509		17.27	-31.42	61953.00	-17.31		
Arago	I	2029-11-07T00:42:46.378		16.21	-30.72	57200.00	-13.52		
Lassell	I	2029-11-07T00:45:28.233		15.66	-30.35	55200.00	-11.15		
LeVerrier	I	2029-11-07T00:48:59.581		14.93	-29.85	53200.75	-7.71		
Neptune	I	2029-11-07T01:26:17.401		7.13	-24.19	24737.41		-57.01	-57.89
Neptune	E	2029-11-07T01:30:24.366		6.26	-23.52	24732.74		-65.49	-66.22
LeVerrier	E	2029-11-07T01:03:04.487		12.00	-27.80	53214.83	7.74		
Lassell	E	2029-11-07T01:06:36.051		11.26	-27.27	55200.72	11.14		
Arago	E	2029-11-07T01:09:18.128		10.70	-26.86	57200.16	13.50		
Galatea	E	2029-11-07T01:14:25.562		9.62	-26.07	61953.02	17.27		
Adams	E	2029-11-07T01:15:21.344		9.43	-25.92	62933.01	17.86		