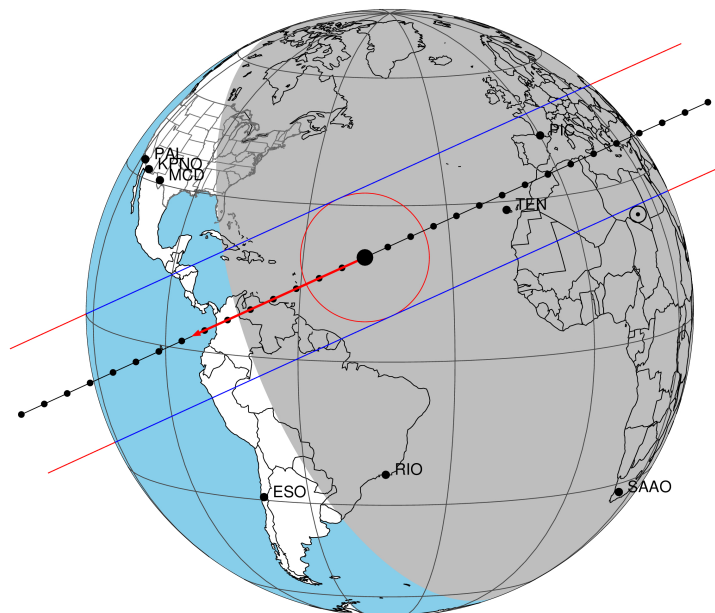


target : Triton  
 target radius (km) : 1352.60  
 C/A epoch : 2038-12-21T22:36:10.100  
 Event type : Pgt  
 : Triton occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 2572227674164976128  
 2Mass ID (if available) : 01465902+0909428

ICRS Star Coord at Epoch: 01h 46m 59.08374s +09:09:42.25470s  
 RUWE (>1.4 is poor) : 0.93  
 K magnitude : 13.672  
 G magnitude : 16.290  
 RP magnitude : 15.469  
 BP magnitude : 17.018  
 DUPflag : 0  
 Distance (au) : 29.336  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -8.80  
 Sun-Target sep (deg) : 118.48  
 Sun-Moon sep (deg) : 174.30  
 B (ring opening deg) : -12.76  
 PA of pole (deg) : -70.21  
 Pole direction: RA (deg): 306.96475  
 Dec (deg): 21.17117  
 C/A sky separation (") : 0.060  
 C/A sky separation (km) : 1274.5  
 NAIF SPICE kernels : RAJobs\_U111+rgf16.spk

Triton 2038-12-21T22:36:10 K13.67 G16.29 dots 60.0 sec  
 Pgt



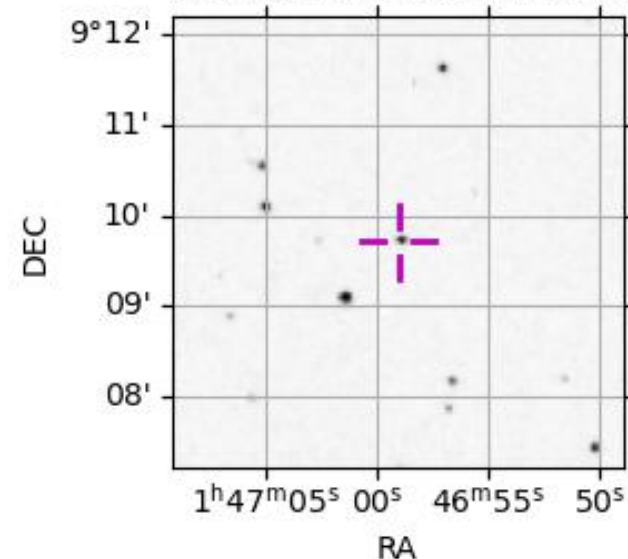
2038-12-21T22:36:10.1000 α: 01 46 59.0837 δ: +09 09 42.255 C/A 0.060" PA 335.52 deg v\_sky - 8.80 km/s D 29.34 AU

Credit: Styled after SORA/Lucky Star

URKALLv1.spk  
 naif0012.tls  
 nep097.bsp  
 nep101.bsp  
 sat4401.bsp  
 Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+ +	DEC 21 22:26 - DEC 21 22:30	Pie
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5	+ +	DEC 21 22:28 - DEC 21 22:32	Pie
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8			Pnn
RIO	Rio de Janeiro	-22.9	316.8			Pnn
ESO	European Southern Obs. (3.6m)	-29.3	289.3			Pnn
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn

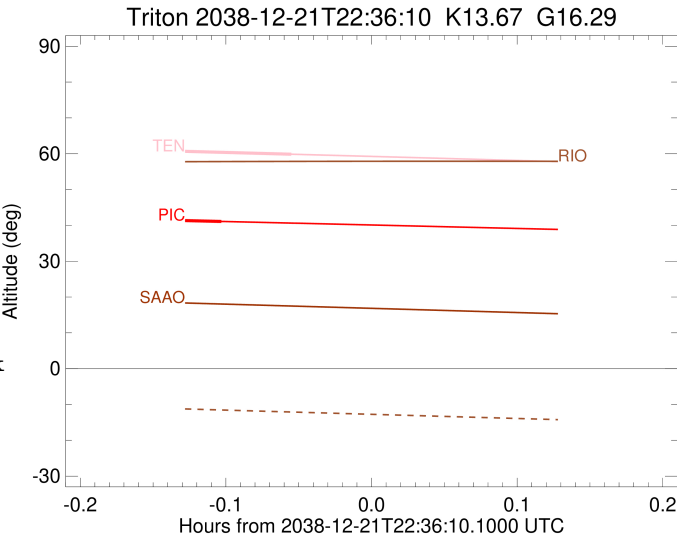
2572227674164976128



```

target                : Triton
target radius (km)   : 1352.60
C/A epoch             : 2038-12-21T22:28:02.990
Event type            : Pgt
: Triton occs: geocentric, topocentric
: Not a ringed target
Observer code         : PIC
Location              : Pic du Midi
Latitude (deg)        : 42.93656
E. Longitude (deg)    : 0.14231
Altitude (km)         : 2.890
Gaia source ID        : 2572227674164976128
2Mass ID (if available) : 01465902+0909428
ICRS Star Coord at Epoch: 01h 46m 59.08374s +09:09:42.25470s
RUWE (>1.4 is poor)  : 0.93
K magnitude           : 13.672
G magnitude           : 16.290
RP magnitude          : 15.469
BP magnitude          : 17.018
DUPflag              : 0
Distance (au)         : 29.335
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -8.80
Sun-Target sep (deg) : 118.48
Sun-Moon sep (deg)   : 173.92
B (ring opening deg) : -12.76
PA of pole (deg)     : -70.21
Pole direction: RA (deg): 306.96474
Dec (deg): 21.17117
C/A sky separation (") : 0.039
C/A sky separation (km) : 835.5
NAIF SPICE kernels   : RAJobs_U111+rgf16.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
IAU_NEPTUNE_for_RINGFIT.tpc.BECAREFUL
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk

```



```

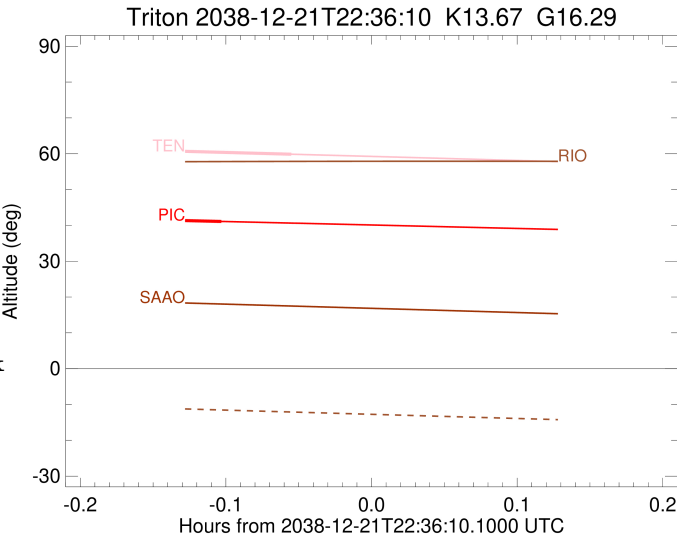
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2038-12-21T22:26:05.261	41.70	-62.96	1352.6	76.12	76.12
Triton	E	2038-12-21T22:30:00.695	41.09	-63.52	1352.6	-7.95	-7.95

```

target                : Triton
target radius (km)   : 1352.60
C/A epoch            : 2038-12-21T22:30:28.130
Event type           : Pgt
: Triton occs: geocentric, topocentric
: Not a ringed target
Observer code        : TEN
Location             : Teide Obs./Tenerife
Latitude (deg)       : 28.30050
E. Longitude (deg)   : 343.48909
Altitude (km)        : 2.395
Gaia source ID       : 2572227674164976128
2Mass ID (if available) : 01465902+0909428
ICRS Star Coord at Epoch: 01h 46m 59.08374s +09:09:42.25470s
RUWE (>1.4 is poor) : 0.93
K magnitude          : 13.672
G magnitude          : 16.290
RP magnitude         : 15.469
BP magnitude         : 17.018
DUPflag             : 0
Distance (au)        : 29.335
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -8.80
Sun-Target sep (deg) : 118.48
Sun-Moon sep (deg)   : 174.04
B (ring opening deg) : -12.76
PA of pole (deg)     : -70.21
Pole direction: RA (deg): 306.96474
Dec (deg): 21.17117
C/A sky separation (") : 0.014
C/A sky separation (km) : 289.5
NAIF SPICE kernels   : RAJobs_U111+rgf16.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
IAU_NEPTUNE_for_RINGFIT.tpc.BECAREFUL
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```



```

x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2038-12-21T22:28:03.526	60.73	-54.68	1352.6	33.33	33.33
Triton	E	2038-12-21T22:32:52.681	59.85	-55.75	1352.6	-56.68	-56.68