

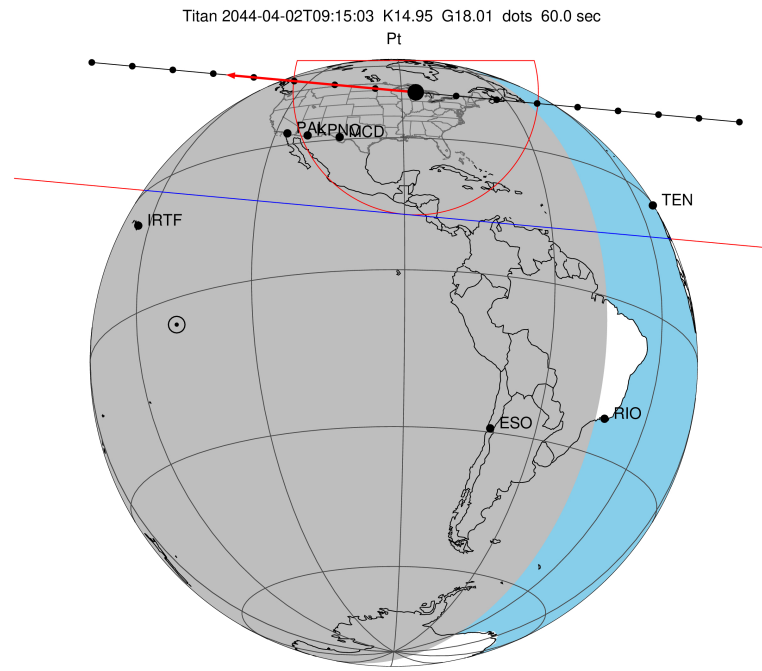
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2044-04-02T09:15:03.320
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 6260639759982275200
 2Mass ID (if available) : 15494953-1744253

ICRS Star Coord at Epoch: 15h 49m 49.51911s -17:44:25.92887s
 RUWE (>1.4 is poor) : 1.07
 K magnitude : 14.951
 G magnitude : 18.011
 RP magnitude : 17.010
 BP magnitude : 18.900
 DUPflag : 0
 Distance (au) : 9.219
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -14.22
 Sun-Target sep (deg) : 133.47
 Sun-Moon sep (deg) : 170.14
 B (ring opening deg) : 23.98
 PA of pole (deg) : 2.22
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.852
 C/A sky separation (km) : 5695.7
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

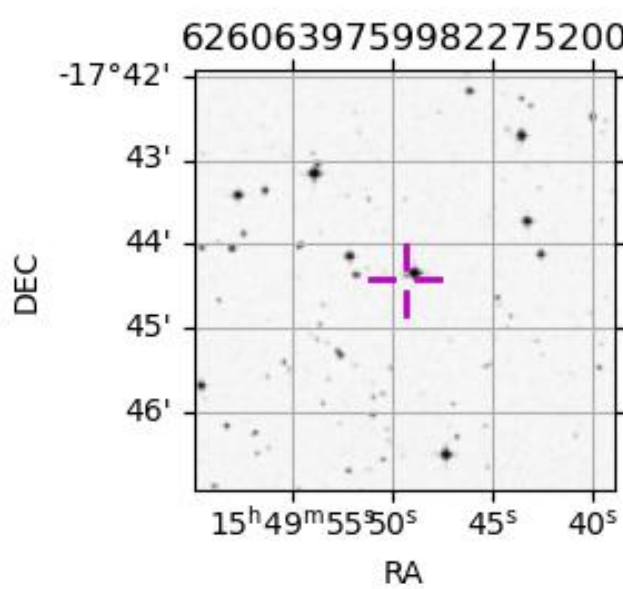
URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+ +	APR 02 09:15 - APR 02 09:20	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	APR 02 09:14 - APR 02 09:20	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	APR 02 09:14 - APR 02 09:19	Pie
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
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



2044-04-02T09:15:03.3200 α: 15 49 49.5191 δ: -17 44 25.929 C/A 0.853" PA 5.26 deg v_sky -14.22 km/s D 09.22 AU
 Credit: Styled after SORA/Lucky Star



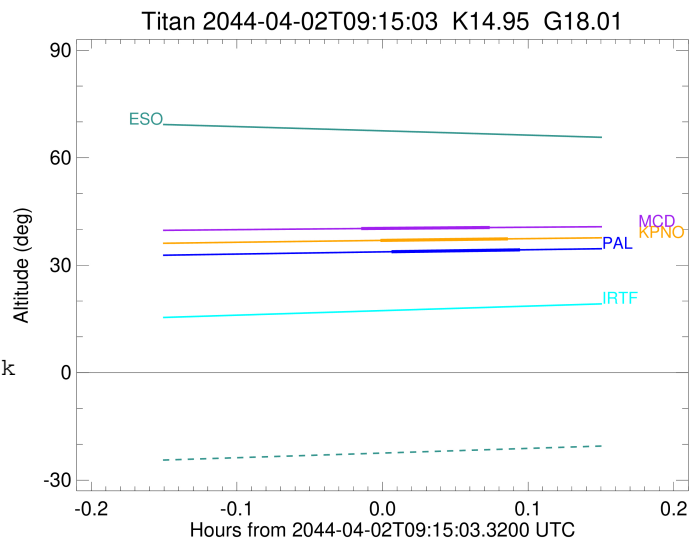
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2044-04-02T09:18:05.650
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : PAL
Location             : Palomar Mt (200")
Latitude (deg)       : 33.35622
E. Longitude (deg)  : 243.13601
Altitude (km)        : 1.706
Gaia source ID       : 6260639759982275200
2Mass ID (if available) : 15494953-1744253
ICRS Star Coord at Epoch: 15h 49m 49.51911s -17:44:25.92887s
RUWE (>1.4 is poor) : 1.07
K magnitude           : 14.951
G magnitude           : 18.011
RP magnitude          : 17.010
BP magnitude          : 18.900
DUPflag              : 0
Distance (au)         : 9.219
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -14.22
Sun-Target sep (deg) : 133.47
Sun-Moon sep (deg)   : 171.04
B (ring opening deg) : 23.98
PA of pole (deg)     : 2.22
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.163
C/A sky separation (km) : 1090.7
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

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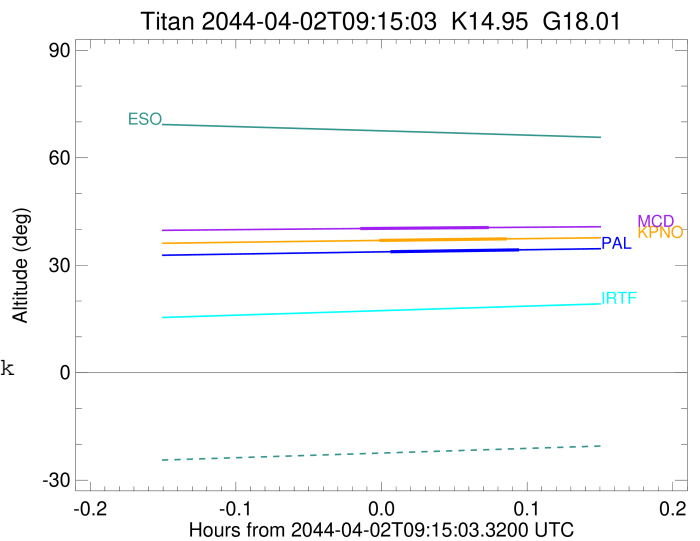
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2044-04-02T09:15:25.609	33.76	-46.66	2575.1	-20.31	-20.32
Titan	E	2044-04-02T09:20:45.622	34.28	-46.06	2575.1	-25.23	-25.24



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2044-04-02T09:17:36.060
Event type            : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code         : KPNO
Location              : Kitt Peak Natl Obs
Latitude (deg)        : 31.96333
E. Longitude (deg)    : 248.40000
Altitude (km)         : 2.120
Gaia source ID        : 6260639759982275200
2Mass ID (if available) : 15494953-1744253
ICRS Star Coord at Epoch: 15h 49m 49.51911s -17:44:25.92887s
RUWE (>1.4 is poor) : 1.07
K magnitude           : 14.951
G magnitude           : 18.011
RP magnitude          : 17.010
BP magnitude          : 18.900
DUPflag              : 0
Distance (au)         : 9.219
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -14.22
Sun-Target sep (deg)  : 133.47
Sun-Moon sep (deg)    : 171.00
B (ring opening deg) : 23.98
PA of pole (deg)      : 2.22
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.164
C/A sky separation (km) : 1099.3
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
    
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x: target alt < 5.0 deg or sun > -5.0 deg

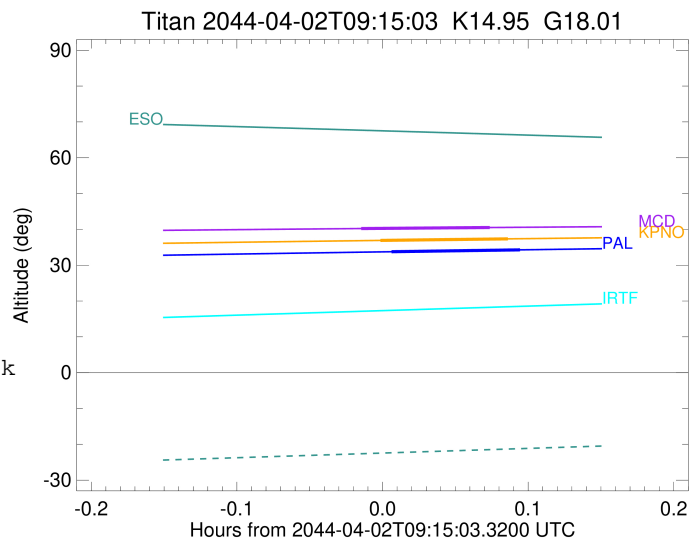
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Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2044-04-02T09:14:56.498	36.91	-45.29	2575.1	-20.47	-20.48
Titan	E	2044-04-02T09:20:15.556	37.35	-44.57	2575.1	-25.44	-25.45

```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2044-04-02T09:16:49.640
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : MCD
Location             : McDonald Obs. 2.7m
Latitude (deg)       : 30.67158
E. Longitude (deg)   : 255.97844
Altitude (km)        : 2.075
Gaia source ID       : 6260639759982275200
2Mass ID (if available) : 15494953-1744253
ICRS Star Coord at Epoch: 15h 49m 49.51911s -17:44:25.92887s
RUWE (>1.4 is poor) : 1.07
K magnitude           : 14.951
G magnitude           : 18.011
RP magnitude          : 17.010
BP magnitude          : 18.900
DUPflag              : 0
Distance (au)         : 9.219
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -14.22
Sun-Target sep (deg)  : 133.47
Sun-Moon sep (deg)   : 170.96
B (ring opening deg) : 23.98
PA of pole (deg)     : 2.22
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.161
C/A sky separation (km) : 1079.2
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
Titan	I	2044-04-02T09:14:09.645	40.22	-41.88	2575.1	-19.98	-19.99
Titan	E	2044-04-02T09:19:29.585	40.51	-41.02	2575.1	-25.04	-25.06