

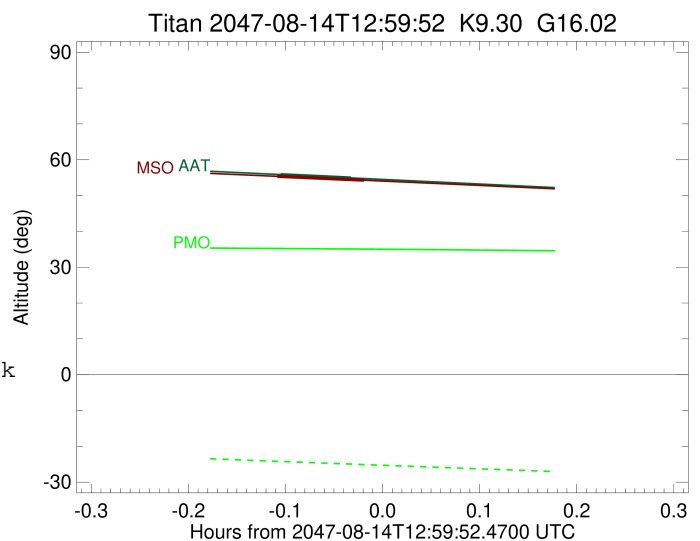

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target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2047-08-14T12:55:45.080
Event type            : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code         : AAT
Location              : Siding Spring (AAT)
Latitude (deg)       : -31.27703
E. Longitude (deg)   : 149.06608
Altitude (km)        : 1.164
Gaia source ID       : 4068929493773089792
2Mass ID (if available) : 17494196-2228120
ICRS Star Coord at Epoch: 17h 49m 41.95052s -22:28:12.43924s
RUWE (>1.4 is poor) : 0.93
K magnitude           : 9.297
G magnitude           : 16.019
RP magnitude          : 14.458
BP magnitude          : 19.792
DUPflag              : 0
Distance (au)        : 9.405
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -12.08
Sun-Target sep (deg) : 126.58
Sun-Moon sep (deg)   : 152.63
B (ring opening deg) : 26.78
PA of pole (deg)     : 5.46
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.294
C/A sky separation (km) : 2002.3
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

```

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	2047-08-14T12:53:34.235	55.85	-65.97	2575.1	31.25	31.26
Titan	E	2047-08-14T12:57:55.927	54.91	-66.67	2575.1	54.98	55.00

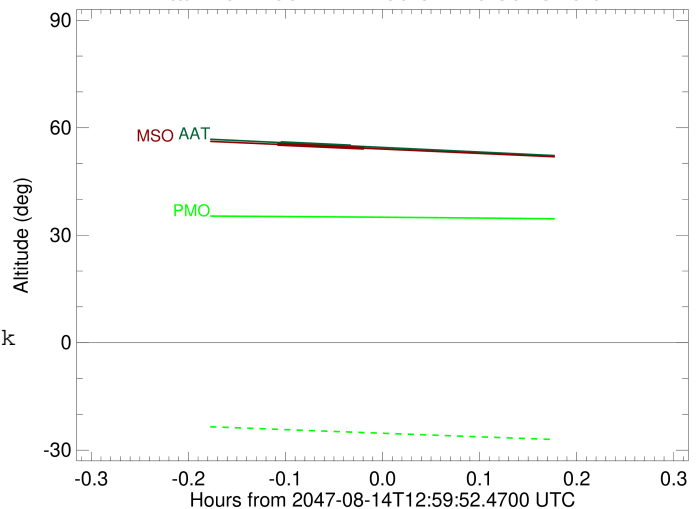


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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2047-08-14T12:56:03.440
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : MSO
Location             : Mt. Stromlo Observatory
Latitude (deg)       : -35.32000
E. Longitude (deg)   : 149.00833
Altitude (km)        : 0.770
Gaia source ID       : 4068929493773089792
2Mass ID (if available) : 17494196-2228120
ICRS Star Coord at Epoch: 17h 49m 41.95052s -22:28:12.43924s
RUWE (>1.4 is poor) : 0.93
K magnitude          : 9.297
G magnitude          : 16.019
RP magnitude         : 14.458
BP magnitude         : 19.792
DUPflag             : 0
Distance (au)        : 9.405
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -12.08
Sun-Target sep (deg) : 126.58
Sun-Moon sep (deg)   : 152.60
B (ring opening deg) : 26.78
PA of pole (deg)     : 5.46
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.237
C/A sky separation (km): 1617.7
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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Titan 2047-08-14T12:59:52 K9.30 G16.02



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	2047-08-14T12:53:21.369	55.35	-63.14	2575.1	20.74	20.75
Titan	E	2047-08-14T12:58:45.514	54.27	-63.88	2575.1	46.58	46.60