


```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2048-09-14T18:30:05.020
Event type            : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
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        : 4079213672706526848
2Mass ID (if available) : 18375190-2244292
ICRS Star Coord at Epoch: 18h 37m 51.88398s -22:44:29.43350s
RUWE (>1.4 is poor)  : 1.07
K magnitude           : 12.714
G magnitude           : 15.748
RP magnitude          : 14.828
BP magnitude          : 16.508
DUPflag              : 0
Distance (au)         : 9.697
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s)  : 3.36
Sun-Target sep (deg)  : 106.79
Sun-Moon sep (deg)    : 23.72
B (ring opening deg)  : 25.90
PA of pole (deg)      : 6.33
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.118
C/A sky separation (km) : 831.7
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	2048-09-14T18:17:20.969	77.37	-23.74	2575.1	-39.52	-39.53
Titan	E	2048-09-14T18:42:52.204	73.11	-28.97	2575.0	63.19	63.20

