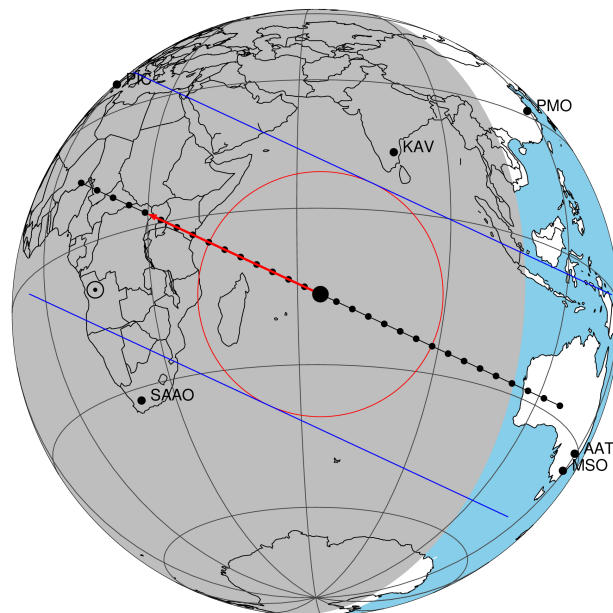


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2045-04-13T22:55:28.930
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4130976820345059712
 2Mass ID (if available) : 16372427-2005033

ICRS Star Coord at Epoch: 16h 37m 24.29093s -20°05'03.21841s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 14.317
 G magnitude : 17.986
 RP magnitude : 16.921
 BP magnitude : 19.076
 DUPflag : 0
 Distance (au) : 9.290
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -6.16
 Sun-Target sep (deg) : 133.11
 Sun-Moon sep (deg) : 93.71
 B (ring opening deg) : 25.74
 PA of pole (deg) : 3.63
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.062
 C/A sky separation (km) : 420.5
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

Titan 2045-04-13T22:55:28 K14.32 G17.99 dots 60.0 sec
 Pgt

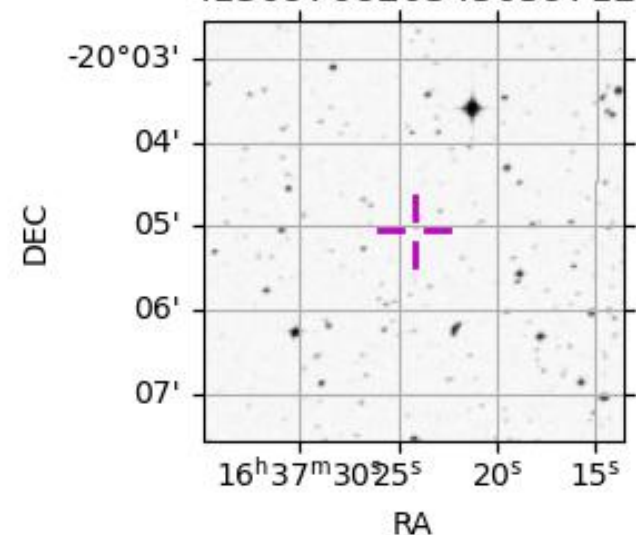


2045-04-13T22:55:28.9300 α: 16 37 24.2909 δ: -20 05 03.218 C/A 0.059" PA 24.97 deg v_sky - 6.16 km/s D 09.29 AU
 Credit: Styled after SORA/Lucky Star

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

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1	+ +	APR 13 23:07 - APR 13 23:13	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			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

4130976820345059712



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2045-04-13T23:10:45.580
Event type            : Pgt
: Titan 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        : 4130976820345059712
2Mass ID (if available) : 16372427-2005033
ICRS Star Coord at Epoch: 16h 37m 24.29093s -20:05:03.21841s
RUWE (>1.4 is poor)  : 0.95
K magnitude           : 14.317
G magnitude           : 17.986
RP magnitude          : 16.921
BP magnitude          : 19.076
DUPflag              : 0
Distance (au)         : 9.289
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -6.16
Sun-Target sep (deg)  : 133.11
Sun-Moon sep (deg)   : 93.73
B (ring opening deg) : 25.74
PA of pole (deg)     : 3.63
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.345
C/A sky separation (km) : 2322.6
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	2045-04-13T23:07:48.209	6.13	-36.46	2575.1	63.66	63.67
Titan	E	2045-04-13T23:13:42.907	7.02	-36.74	2575.1	39.25	39.27

