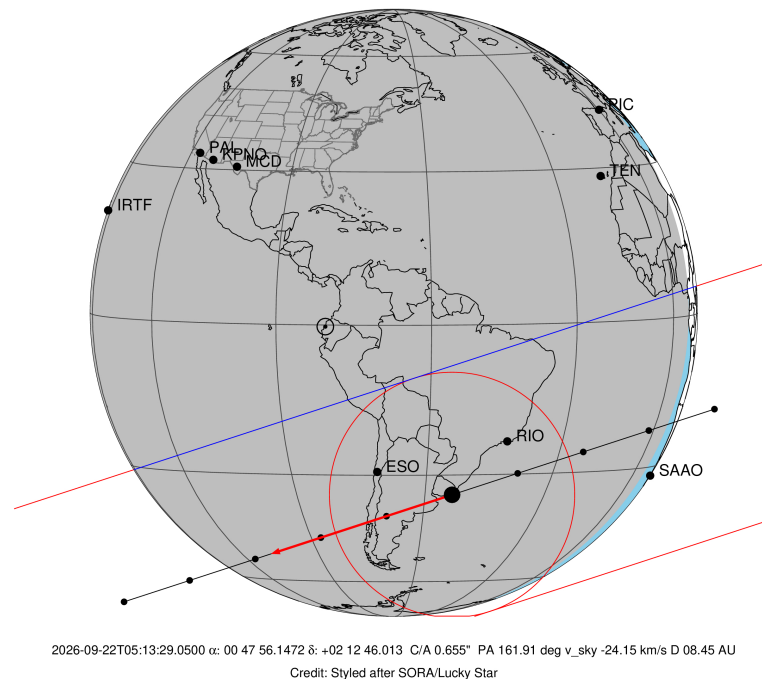


target : Titan  
 target radius (km) : 2575.15  
 C/A epoch : 2026-09-22T05:13:29.050  
 Event type : Pt  
 : Titan occs: topocentric, not geocentric  
 : Not a ringed target  
 Gaia source ID : 2549911573851735936  
 2Mass ID (if available) : 00475608+0212470

ICRS Star Coord at Epoch: 00h 47m 56.14719s +02:12:46.01340s  
 RUWE (>1.4 is poor) : 1.20  
 K magnitude : 9.414  
 G magnitude : 10.622  
 RP magnitude : 10.187  
 BP magnitude : 10.895  
 DUPflag : 0  
 Distance (au) : 8.449  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -24.14  
 Sun-Target sep (deg) : 166.70  
 Sun-Moon sep (deg) : 66.14  
 B (ring opening deg) : -8.04  
 PA of pole (deg) : 3.06  
 Pole direction: RA (deg): 39.48270  
 Dec (deg): 83.42790  
 C/A sky separation (") : 0.656  
 C/A sky separation (km) : 4017.0  
 NAIF SPICE kernels : RAJobs\_U111+rgf16.spk

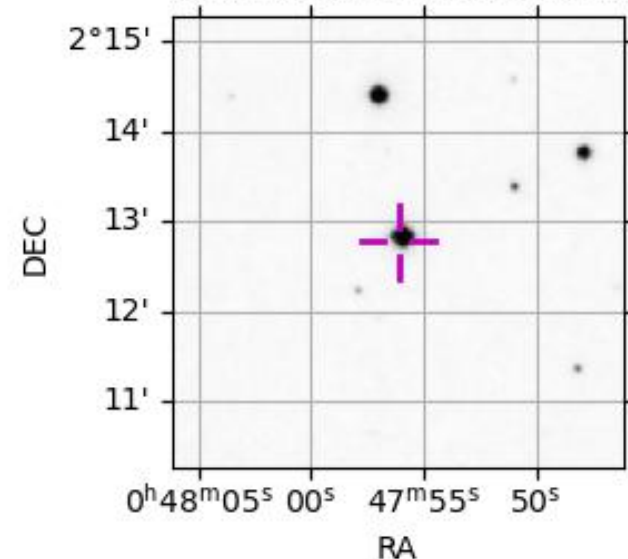
Titan 2026-09-22T05:13:29 K9.41 G10.62 dots 60.0 sec  
 Pt



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			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	+ +	SEP 22 05:10 - SEP 22 05:14	Pie
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+ +	SEP 22 05:12 - SEP 22 05:16	Pie
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

2549911573851735936



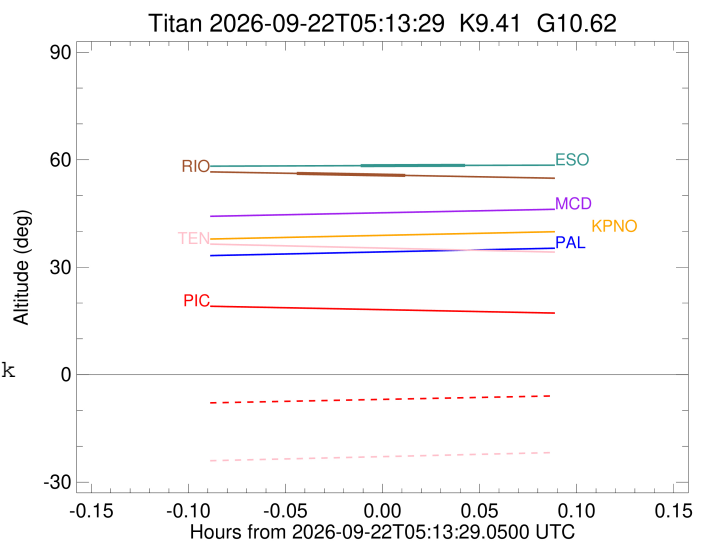
```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2026-09-22T05:12:30.770
Event type          : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code       : RIO
Location           : Rio de Janeiro
Latitude (deg)     : -22.89506
E. Longitude (deg) : 316.77708
Altitude (km)      : 0.033
Gaia source ID     : 2549911573851735936
2Mass ID (if available) : 00475608+0212470
ICRS Star Coord at Epoch: 00h 47m 56.14719s +02:12:46.01340s
RUWE (>1.4 is poor) : 1.20
K magnitude         : 9.414
G magnitude         : 10.622
RP magnitude        : 10.187
BP magnitude        : 10.895
DUPflag            : 0
Distance (au)      : 8.449
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : -24.14
Sun-Target sep (deg) : 166.70
Sun-Moon sep (deg) : 66.90
B (ring opening deg) : -8.04
PA of pole (deg)   : 3.06
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.119
C/A sky separation (km) : 732.2
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	2026-09-22T05:10:50.097	56.17	-48.20	2575.1	-4.31	-4.32
Titan	E	2026-09-22T05:14:11.436	55.61	-47.51	2575.1	36.97	36.98



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2026-09-22T05:14:24.840
Event type            : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code         : ESO
Location              : European Southern Obs. (3.6m)
Latitude (deg)        : -29.26097
E. Longitude (deg)    : 289.26831
Altitude (km)         : 2.400
Gaia source ID        : 2549911573851735936
2Mass ID (if available) : 00475608+0212470
ICRS Star Coord at Epoch: 00h 47m 56.14719s +02:12:46.01340s
RUWE (>1.4 is poor) : 1.20
K magnitude           : 9.414
G magnitude           : 10.622
RP magnitude          : 10.187
BP magnitude          : 10.895
DUPflag              : 0
Distance (au)         : 8.449
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -24.14
Sun-Target sep (deg)  : 166.70
Sun-Moon sep (deg)    : 66.76
B (ring opening deg) : -8.04
PA of pole (deg)      : 3.06
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.156
C/A sky separation (km) : 955.6
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	2026-09-22T05:12:47.371	58.34	-59.88	2575.2	0.92	0.92
Titan	E	2026-09-22T05:16:02.301	58.42	-59.64	2575.1	42.12	42.13

