

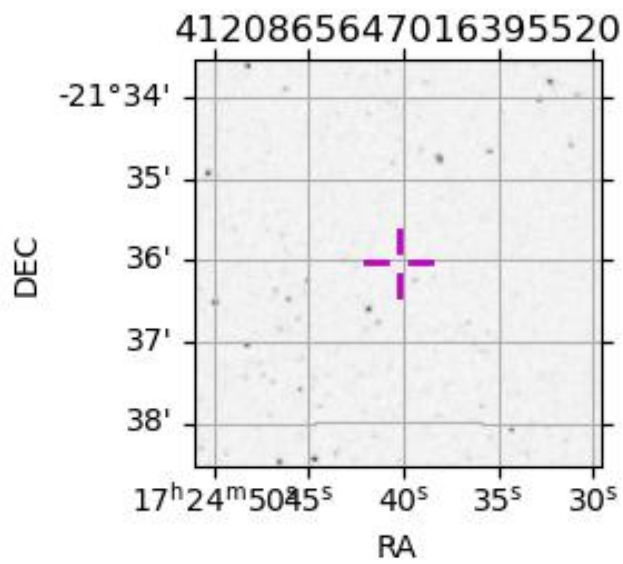
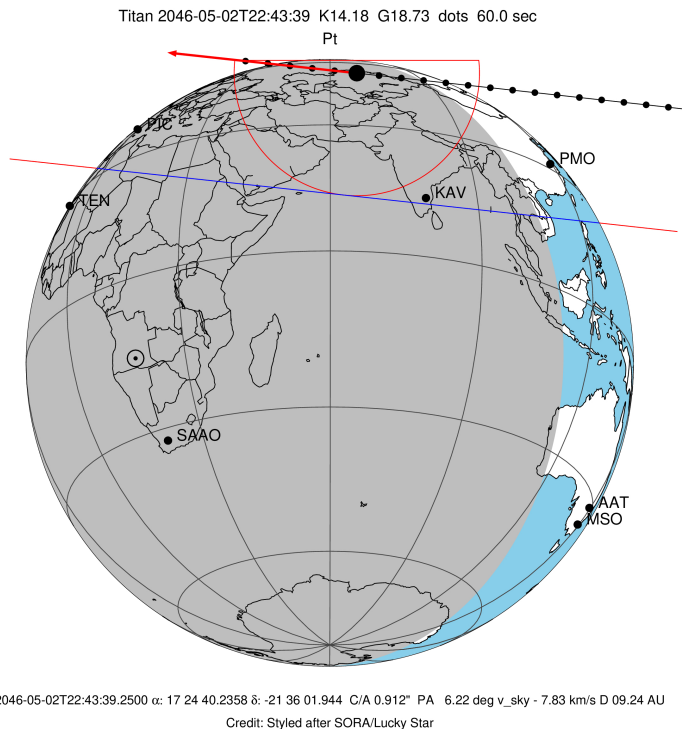
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2046-05-02T22:43:39.250
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4120865647016395520
 2Mass ID (if available) : 17244025-2136015

ICRS Star Coord at Epoch: 17h 24m 40.23576s -21:36:01.94389s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 14.179
 G magnitude : 18.726
 RP magnitude : 17.551
 BP magnitude : 20.337
 DUPflag : 0
 Distance (au) : 9.243
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -7.84
 Sun-Target sep (deg) : 140.24
 Sun-Moon sep (deg) : 104.25
 B (ring opening deg) : 26.44
 PA of pole (deg) : 4.88
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.912
 C/A sky separation (km) : 6116.1
 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

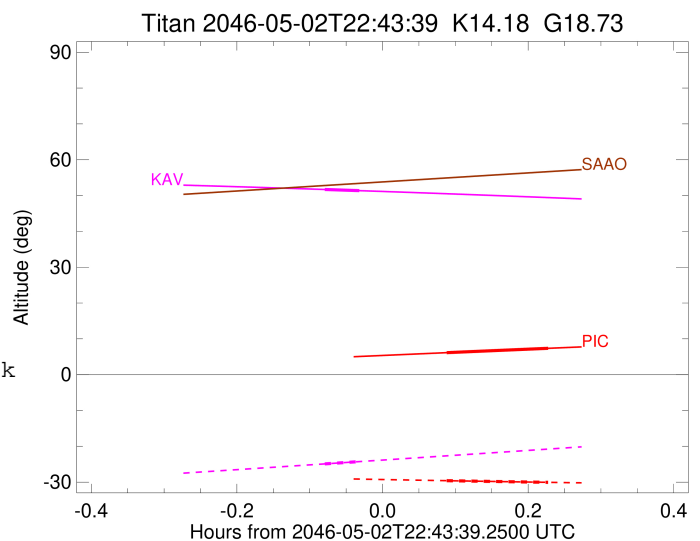
Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+ +	MAY 02 22:48 - MAY 02 22:57	Pie
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+ +	MAY 02 22:38 - MAY 02 22:41	Pie
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



target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2046-05-02T22:53:08.330
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : 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 : 4120865647016395520
 2Mass ID (if available) : 17244025-2136015
 ICRS Star Coord at Epoch: 17h 24m 40.23576s -21:36:01.94389s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 14.179
 G magnitude : 18.726
 RP magnitude : 17.551
 BP magnitude : 20.337
 DUPflag : 0
 Distance (au) : 9.243
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -7.84
 Sun-Target sep (deg) : 140.24
 Sun-Moon sep (deg) : 104.20
 B (ring opening deg) : 26.44
 PA of pole (deg) : 4.88
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.239
 C/A sky separation (km) : 1599.5
 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	2046-05-02T22:48:56.182	6.14	-29.59	2575.1	-33.45	-33.46
Titan	E	2046-05-02T22:57:20.309	7.36	-30.05	2575.1	-34.13	-34.14



target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2046-05-02T22:40:19.260
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Observer code : KAV
 Location : Kavalur Observatory
 Latitude (deg) : 12.57556
 E. Longitude (deg) : 78.83167
 Altitude (km) : 0.722
 Gaia source ID : 4120865647016395520
 2Mass ID (if available) : 17244025-2136015
 ICRS Star Coord at Epoch: 17h 24m 40.23576s -21:36:01.94389s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 14.179
 G magnitude : 18.726
 RP magnitude : 17.551
 BP magnitude : 20.337
 DUPflag : 0
 Distance (au) : 9.243
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -7.84
 Sun-Target sep (deg) : 140.24
 Sun-Moon sep (deg) : 105.01
 B (ring opening deg) : 26.44
 PA of pole (deg) : 4.88
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.368
 C/A sky separation (km) : 2469.2
 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	2046-05-02T22:38:50.873	51.69	-24.91	2575.1	-58.44	-58.46
Titan	E	2046-05-02T22:41:47.658	51.36	-24.26	2575.1	-59.83	-59.85

