

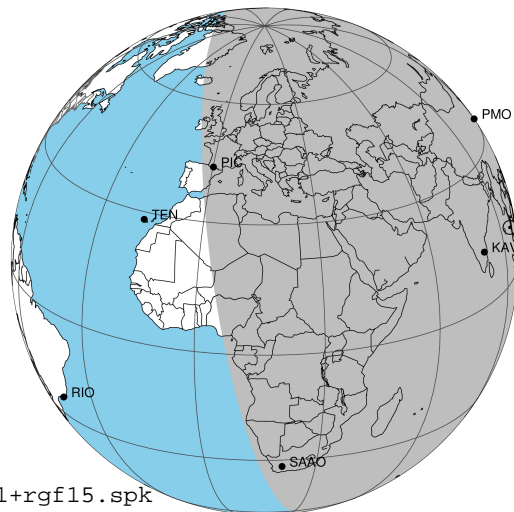
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2025-02-17T17:43:58.490  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 144832688132473600  
 2Mass ID (if available) : 04385621+2141156

Jupiter 2025-02-17T17:43:58 K9.96 G11.63 Pgt

ICRS Star Coord at Epoch: 04h 38m 56.28449s +21:41:14.98334s

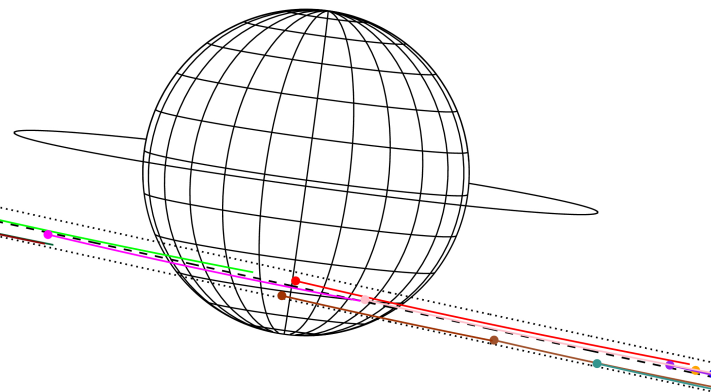
RUWE (>1.4 is poor) : 0.93  
 K magnitude : 9.955  
 G magnitude : 11.635  
 RP magnitude : 11.051  
 BP magnitude : 12.049  
 DUPflag : 0  
 Distance (au) : 4.796  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 6.45  
 Sun-Target sep (deg) : 102.26  
 Sun-Moon sep (deg) : 135.10  
 B (ring opening deg) : 2.65  
 PA of pole (deg) : -7.79  
 Pole direction: RA (deg): 268.05782  
 Dec (deg): 64.49672  
 C/A sky separation (") : 14.327  
 C/A sky separation (km) : 49838.9  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2025-02-17T17:43:58 K9.96 G11.63  
 Pgt



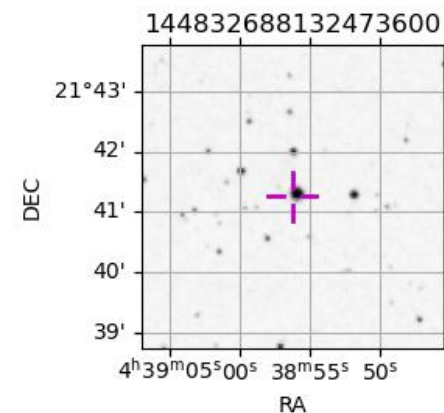
2025-02-17T17:43:58.4900 a: 04 38 56.2845 s: +21 41 14.983 C/A \*\*\*\*\* PA 347.71 deg v\_sky + 6.45 km/s D 04.80 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 PIC  
 PAL  
 PMO  
 KPNO  
 MCD  
 TEN  
 IRTF  
 KAV  
 RIO  
 ESO  
 AAT  
 SAAO  
 MSO



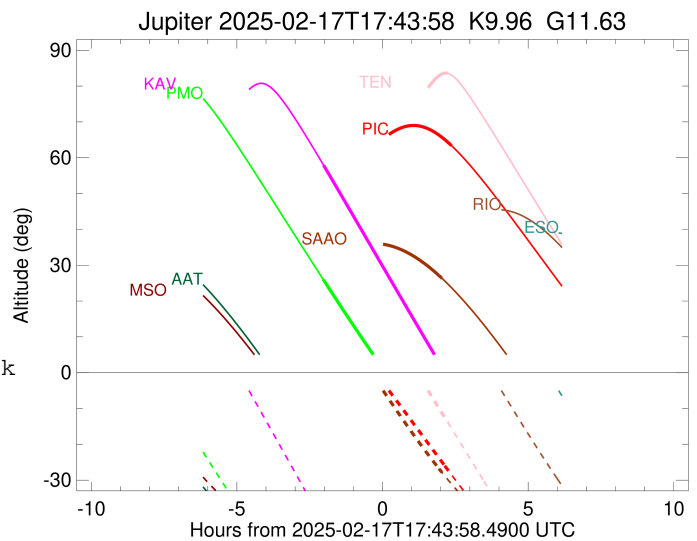
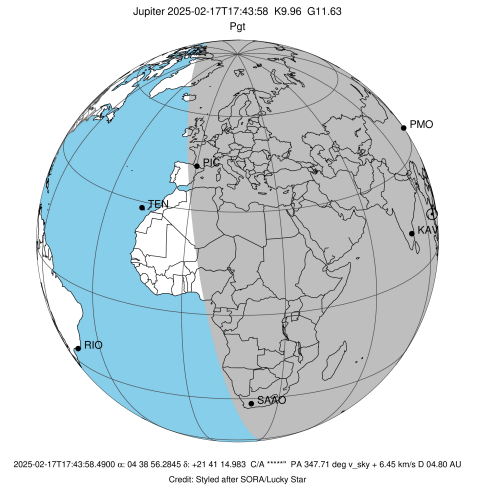
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	FEB 17 20:06 - FEB 17 20:06	Pne
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+	FEB 17 15:42 - FEB 17 15:42	Pin
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	+	FEB 17 19:58 - FEB 17 19:58	Pne
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	FEB 17 15:42 - FEB 17 15:42	Pin
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	+	FEB 17 19:46 - FEB 17 19:46	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2025-02-17T17:39:41.370
Event type            : Pgt
: Jupiter 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        : 144832688132473600
2Mass ID (if available) : 04385621+2141156
ICRS Star Coord at Epoch: 04h 38m 56.28449s +21:41:14.98334s
RUWE (>1.4 is poor)  : 0.93
K magnitude           : 9.955
G magnitude           : 11.635
RP magnitude          : 11.051
BP magnitude          : 12.049
DUPflag              : 0
Distance (au)         : 4.796
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 6.45
Sun-Target sep (deg)  : 102.26
Sun-Moon sep (deg)    : 135.55
B (ring opening deg)  : 2.65
PA of pole (deg)      : -7.79
Pole direction: RA (deg): 268.05782
Dec (deg): 64.49672
C/A sky separation (") : 13.583
C/A sky separation (km) : 47248.8
NAIF SPICE kernels    : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

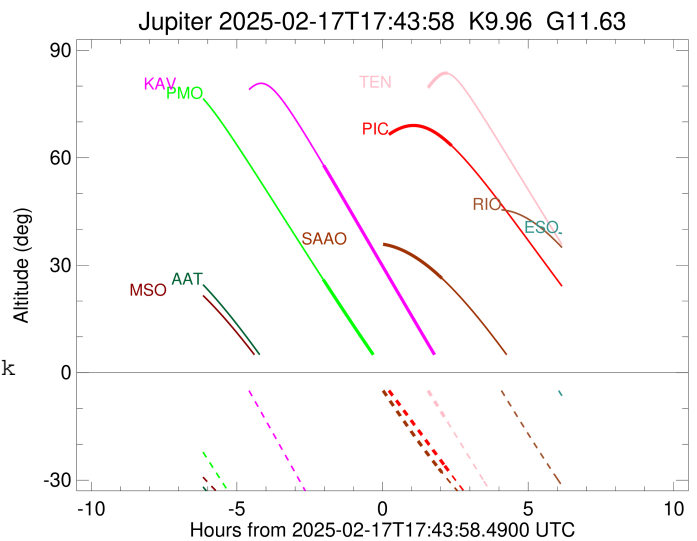
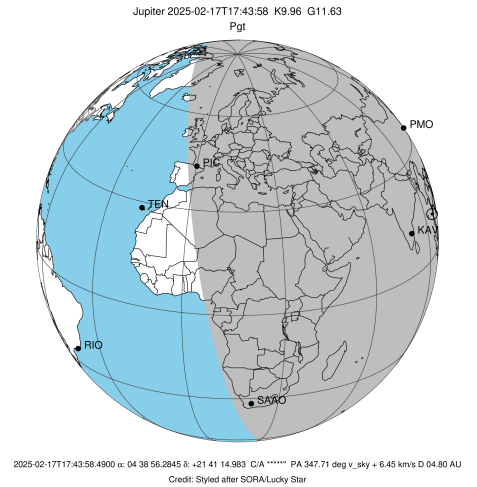


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2025-02-17T15:14:12.407	41.04	21.61x	71488.7	-35.61	-39.23
Jupiter	E	2025-02-17T20:06:04.965	63.38	-28.49	71487.0	-46.43	-50.11

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2025-02-17T18:02:04.630
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)        : 32.06667
E. Longitude (deg)    : 118.82089
Altitude (km)         : 0.364
Gaia source ID        : 144832688132473600
2Mass ID (if available) : 04385621+2141156
ICRS Star Coord at Epoch: 04h 38m 56.28449s +21:41:14.98334s
RUWE (>1.4 is poor)  : 0.93
K magnitude           : 9.955
G magnitude           : 11.635
RP magnitude          : 11.051
BP magnitude          : 12.049
DUPflag              : 0
Distance (au)         : 4.797
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s)  : 6.45
Sun-Target sep (deg)  : 102.26
Sun-Moon sep (deg)    : 135.67
B (ring opening deg)  : 2.65
PA of pole (deg)      : -7.79
Pole direction: RA (deg): 268.05782
Dec (deg): 64.49672
C/A sky separation (") : 13.598
C/A sky separation (km) : 47304.7
NAIF SPICE kernels    : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
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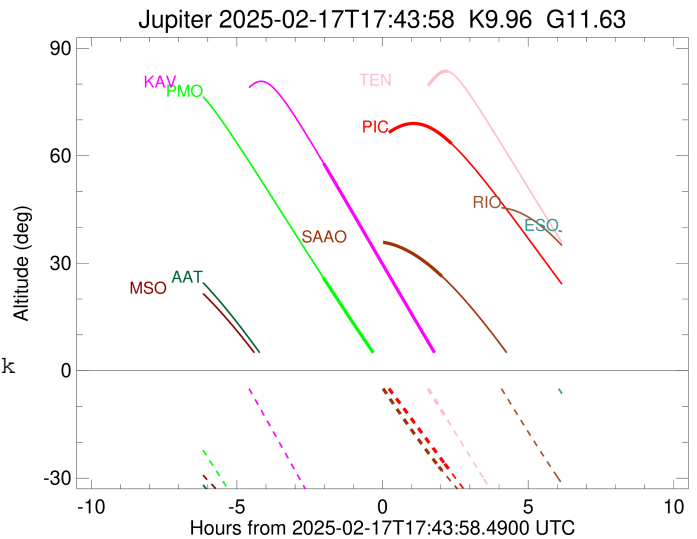
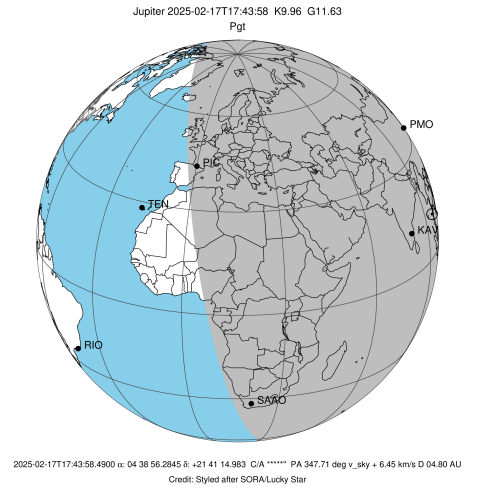


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2025-02-17T15:42:02.462	25.98	-68.16	71488.3	-38.12	-41.80
Jupiter	E	2025-02-17T20:16:06.285	-24.54x	-32.05	71487.3	-44.46	-48.17

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2025-02-17T17:33:09.970
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : TEN
Location            : Teide Obs./Tenerife
Latitude (deg)      : 28.30050
E. Longitude (deg)  : 343.48909
Altitude (km)       : 2.395
Gaia source ID      : 144832688132473600
2Mass ID (if available) : 04385621+2141156
ICRS Star Coord at Epoch: 04h 38m 56.28449s +21:41:14.98334s
RUWE (>1.4 is poor) : 0.93
K magnitude          : 9.955
G magnitude          : 11.635
RP magnitude         : 11.051
BP magnitude         : 12.049
DUPflag             : 0
Distance (au)       : 4.796
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 6.45
Sun-Target sep (deg) : 102.26
Sun-Moon sep (deg)  : 135.35
B (ring opening deg) : 2.65
PA of pole (deg)    : -7.79
Pole direction: RA (deg): 268.05782
Dec (deg): 64.49672
C/A sky separation (") : 13.827
C/A sky separation (km) : 48099.6
NAIF SPICE kernels  : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
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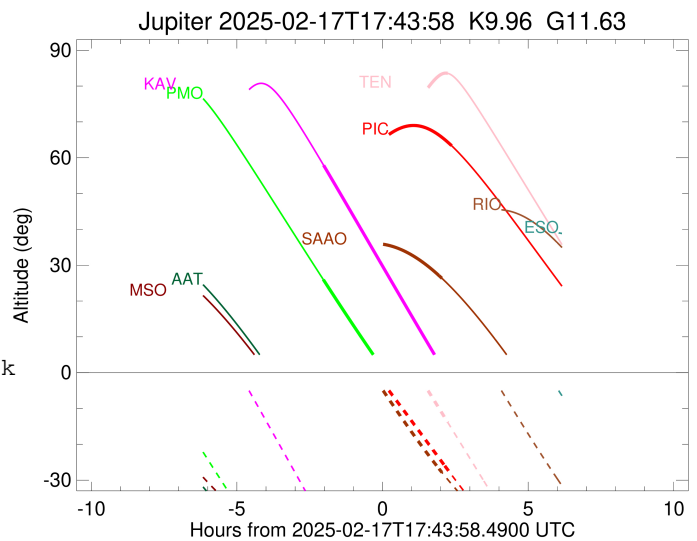
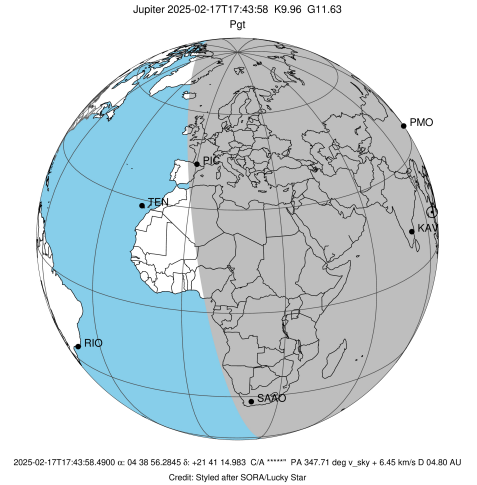


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2025-02-17T15:10:56.254	26.17	41.92x	71488.7	-36.16	-39.80
Jupiter	E	2025-02-17T19:58:20.576	83.54	-13.86	71486.7	-47.88	-51.52

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2025-02-17T18:01:03.270
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : 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      : 144832688132473600
2Mass ID (if available) : 04385621+2141156
ICRS Star Coord at Epoch: 04h 38m 56.28449s +21:41:14.98334s
RUWE (>1.4 is poor) : 0.93
K magnitude          : 9.955
G magnitude          : 11.635
RP magnitude         : 11.051
BP magnitude         : 12.049
DUPflag             : 0
Distance (au)       : 4.797
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 6.45
Sun-Target sep (deg) : 102.26
Sun-Moon sep (deg)  : 135.97
B (ring opening deg) : 2.65
PA of pole (deg)    : -7.79
Pole direction: RA (deg): 268.05782
Dec (deg): 64.49672
C/A sky separation (") : 14.569
C/A sky separation (km) : 50683.2
NAIF SPICE kernels  : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

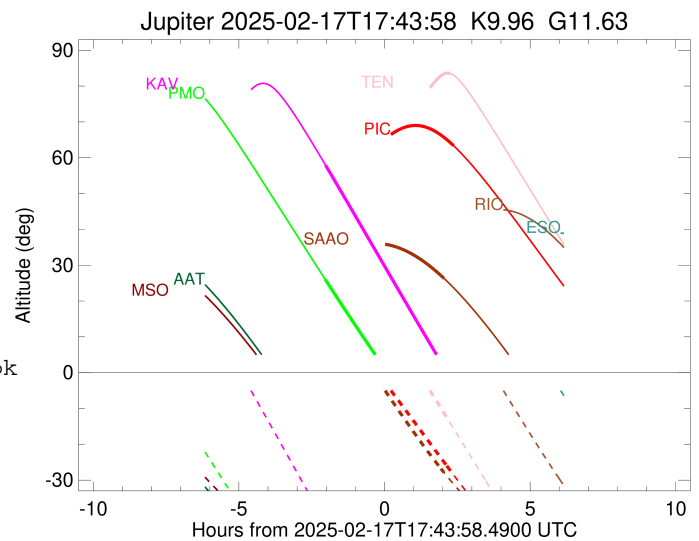
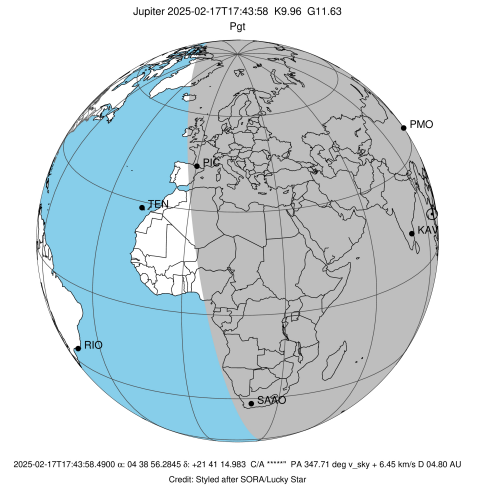


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2025-02-17T15:42:32.702	57.91	-42.14	71487.8	-41.16	-44.88
Jupiter	E	2025-02-17T20:13:13.821	-4.51x	-71.74	71486.7	-48.22	-51.86

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2025-02-17T17:40:20.280
Event type          : Pgt
                    : Jupiter 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      : 144832688132473600
2Mass ID (if available) : 04385621+2141156
ICRS Star Coord at Epoch: 04h 38m 56.28449s +21:41:14.98334s
RUWE (>1.4 is poor) : 0.93
K magnitude          : 9.955
G magnitude          : 11.635
RP magnitude         : 11.051
BP magnitude         : 12.049
DUPflag             : 0
Distance (au)       : 4.796
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 6.45
Sun-Target sep (deg) : 102.26
Sun-Moon sep (deg)  : 135.47
B (ring opening deg) : 2.65
PA of pole (deg)    : -7.79
Pole direction: RA (deg): 268.05782
Dec (deg): 64.49672
C/A sky separation ("): 15.797
C/A sky separation (km): 54950.2
NAIF SPICE kernels  : RAJobs_U111+rgf15.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
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
Jupiter	I	2025-02-17T15:33:35.660	29.76	22.45x	71487.3	-44.61	-48.32
Jupiter	E	2025-02-17T19:46:24.966	26.34	-27.84	71485.6	-54.92	-58.29