

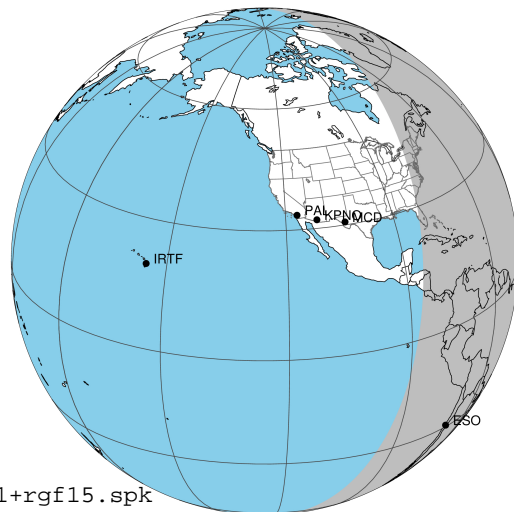
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2037-04-21T23:53:03.570
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3416137723619044736
 2Mass ID (if available) : 05294514+2304307

Jupiter 2037-04-21T23:53:03 K7.77 G11.70 Pgt

ICRS Star Coord at Epoch: 05h 29m 45.15904s +23°04:30.24370s

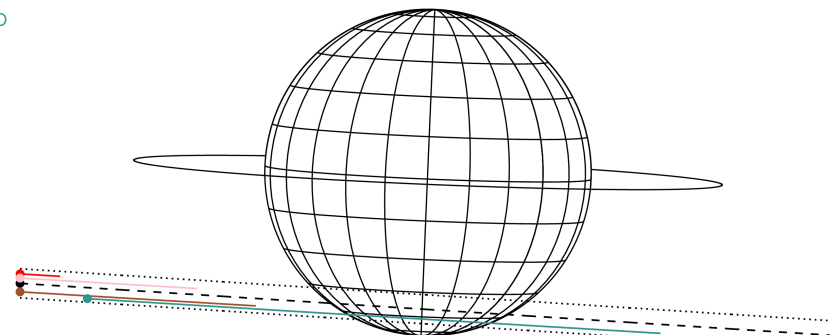
RUWE (>1.4 is poor) : 1.04
 K magnitude : 7.768
 G magnitude : 11.703
 RP magnitude : 10.636
 BP magnitude : 12.893
 DUPflag : 0
 Distance (au) : 5.704
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 31.30
 Sun-Target sep (deg) : 51.35
 Sun-Moon sep (deg) : 24.17
 B (ring opening deg) : 2.32
 PA of pole (deg) : -2.42
 Pole direction: RA (deg): 268.05629
 Dec (deg): 64.49688
 C/A sky separation (") : 14.475
 C/A sky separation (km) : 59885.8
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2037-04-21T23:53:03 K7.77 G11.70
 Pgt



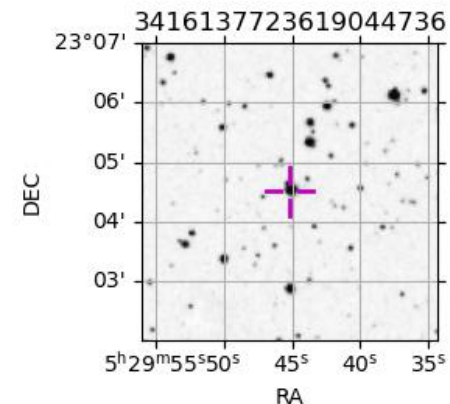
2037-04-21T23:53:03.5700 α: 05 29 45.1590 & +23 04 30.244 C/A ***** PA 356.33 deg v_sky +31.30 km/s D 05.70 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PIC
 TEN
 RIO
 ESO



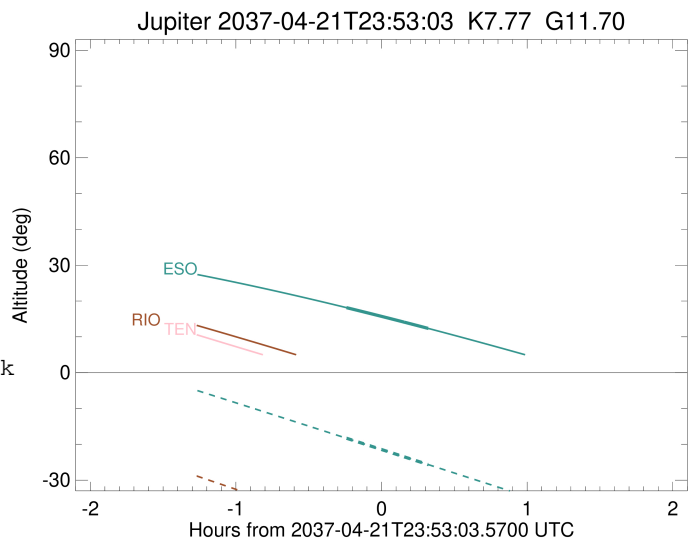
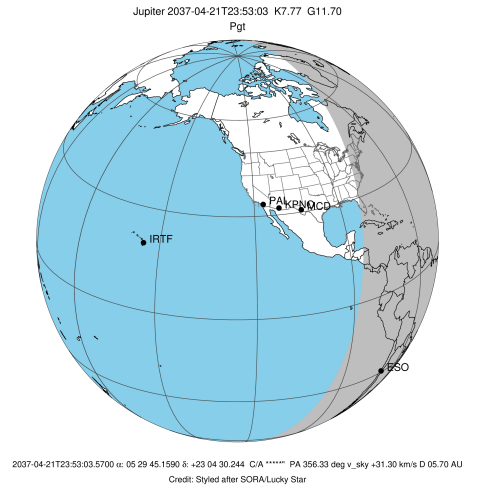
Observable events with sun below -5 deg and altitude above 5 deg

| 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 | | | Pnn |
| ESO | European Southern Obs. (3.6m) | -29.3 | 289.3 | + + | APR 21 23:38 - APR 22 00:12 | 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 |



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-04-21T23:55:29.970
Event type          : Pgt
: Jupiter occs: geocentric, topocentric
: 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      : 3416137723619044736
2Mass ID (if available) : 05294514+2304307
ICRS Star Coord at Epoch: 05h 29m 45.15904s +23:04:30.24370s
RUWE (>1.4 is poor) : 1.04
K magnitude          : 7.768
G magnitude          : 11.703
RP magnitude         : 10.636
BP magnitude         : 12.893
DUPflag             : 0
Distance (au)        : 5.704
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 31.30
Sun-Target sep (deg) : 51.35
Sun-Moon sep (deg)  : 23.65
B (ring opening deg) : 2.32
PA of pole (deg)    : -2.42
Pole direction: RA (deg): 268.05629
Dec (deg): 64.49688
C/A sky separation (" ) : 15.529
C/A sky separation (km) : 64243.1
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 | 2037-04-21T23:38:39.895 | 18.14 | -18.31 | 71486.2 | -62.85 | -65.70 |
| Jupiter | E | 2037-04-22T00:12:19.089 | 12.35 | -25.66 | 71486.0 | -64.91 | -67.59 |