

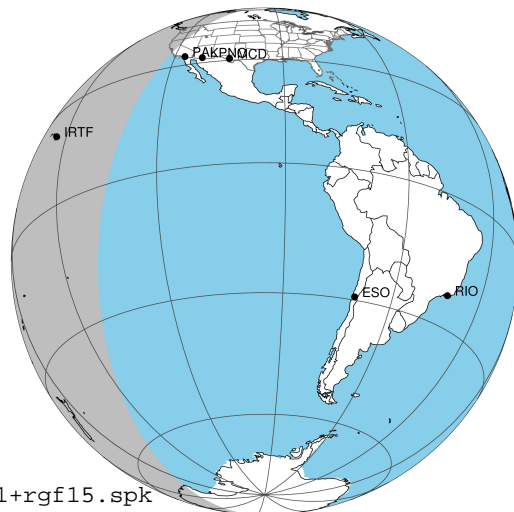
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-03T15:05:52.870
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116748525780507392
 2Mass ID (if available) : 17390457-2253098

Jupiter 2043-02-03T15:05:52 K8.45 G14.99 Pgt

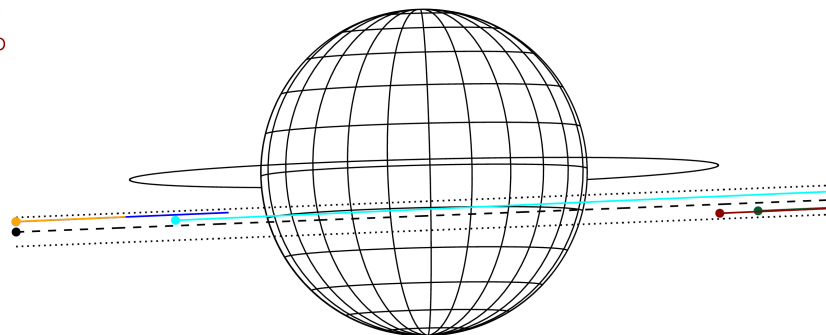
ICRS Star Coord at Epoch: 17h 39m 04.57209s -22:53:09.98054s

RUWE (>1.4 is poor) : 0.97
 K magnitude : 8.452
 G magnitude : 14.988
 RP magnitude : 13.438
 BP magnitude : 18.598
 DUPflag : 0
 Distance (au) : 5.908
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 32.80
 Sun-Target sep (deg) : 48.89
 Sun-Moon sep (deg) : 25.69
 B (ring opening deg) : -2.58
 PA of pole (deg) : 1.42
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 4.438
 C/A sky separation (km) : 19016.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-03T15:05:52 K8.45 G14.99
 Pgt



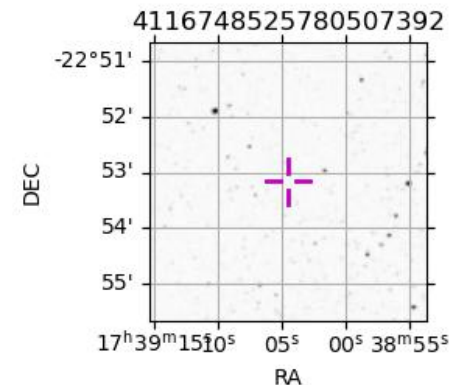
Earth
 PAL
 KPNO
 IRTF
 AAT
 MSO



2043-02-03T15:05:52.8700 at: 17 39 04.5721 s -22 53 09.981 C/A 4.447 PA 2.26 deg v_sky +32.80 km/s D 05.91 AU
 Credit: Styled after SORA/Lucky Star

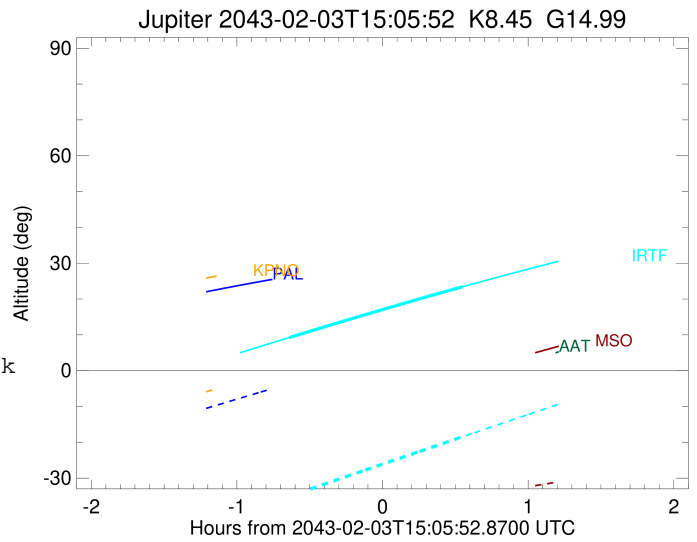
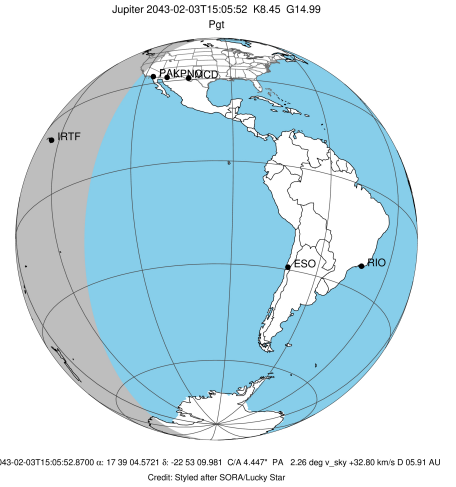
Observable events with sun below -5 deg and altitude above 5 deg

| Obs | Location | lat | Elon | Target | Observed Events Interval | 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 | + + | FEB 03 14:27 - FEB 03 15:38 | Pie |
| 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 |



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-03T15:03:11.300
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : IRTF
Location               : Mauna Kea/IRTF
Latitude (deg)        : 19.82622
E. Longitude (deg)    : 204.52800
Altitude (km)         : 4.168
Gaia source ID        : 4116748525780507392
2Mass ID (if available) : 17390457-2253098
ICRS Star Coord at Epoch: 17h 39m 04.57209s -22:53:09.98054s
RUWE (>1.4 is poor) : 0.97
K magnitude           : 8.452
G magnitude           : 14.988
RP magnitude          : 13.438
BP magnitude          : 18.598
DUPflag              : 0
Distance (au)         : 5.908
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.80
Sun-Target sep (deg) : 48.89
Sun-Moon sep (deg)   : 25.19
B (ring opening deg) : -2.58
PA of pole (deg)     : 1.42
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 3.758
C/A sky separation (km) : 16101.1
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 | 2043-02-03T14:27:36.969 | 9.27 | -35.02 | 71491.5 | -14.12 | -16.04 |
| Jupiter | E | 2043-02-03T15:38:50.206 | 23.41 | -18.46 | 71491.6 | -11.90 | -13.54 |