

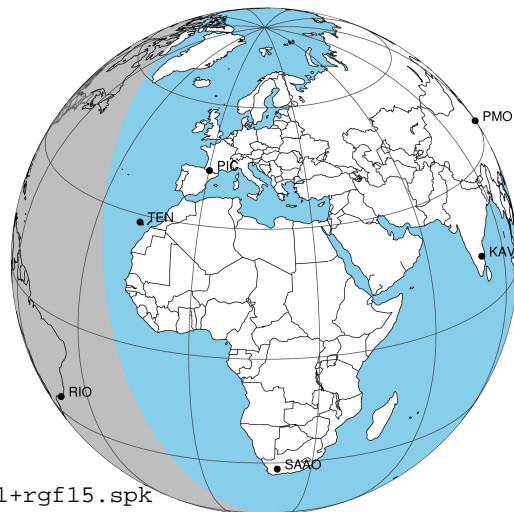
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2048-08-05T07:22:27.150  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3416036358093810560  
 2Mass ID (if available) : 05272750+2242009

Jupiter 2048-08-05T07:22:27 K8.06 G11.86 Pgt

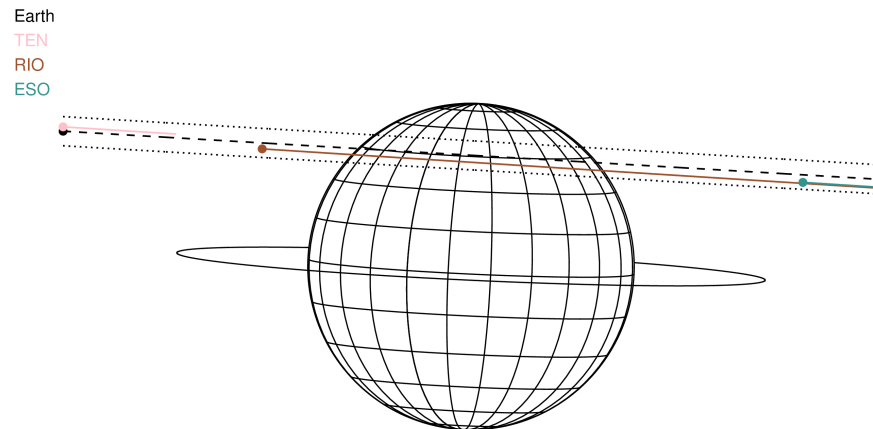
ICRS Star Coord at Epoch: 05h 27m 27.51957s +22:42:01.09213s

RUWE (>1.4 is poor) : 1.09  
 K magnitude : 8.064  
 G magnitude : 11.856  
 RP magnitude : 10.833  
 BP magnitude : 12.936  
 DUPflag : 0  
 Distance (au) : 5.648  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 31.71  
 Sun-Target sep (deg) : 50.39  
 Sun-Moon sep (deg) : 1.13  
 B (ring opening deg) : 2.67  
 PA of pole (deg) : -2.66  
 Pole direction: RA (deg): 268.05732  
 Dec (deg): 64.49722  
 C/A sky separation (") : 11.874  
 C/A sky separation (km) : 48642.8  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2048-08-05T07:22:27 K8.06 G11.86  
 Pgt

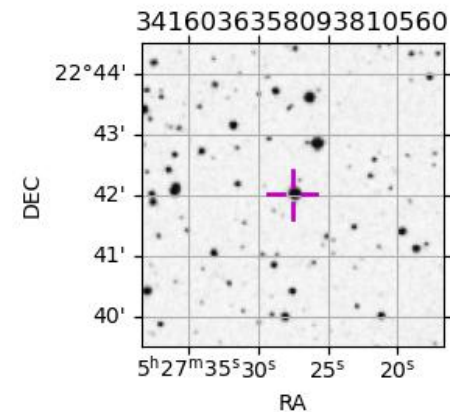


2048-08-05T07:22:27.1500 α: 05 27 27.5196 δ: +22 42 01.092 C/A \*\*\*\*\* PA 176.63 deg v\_sky +31.71 km/s D 05.65 AU  
 Credit: Styled after SORA/Lucky Star



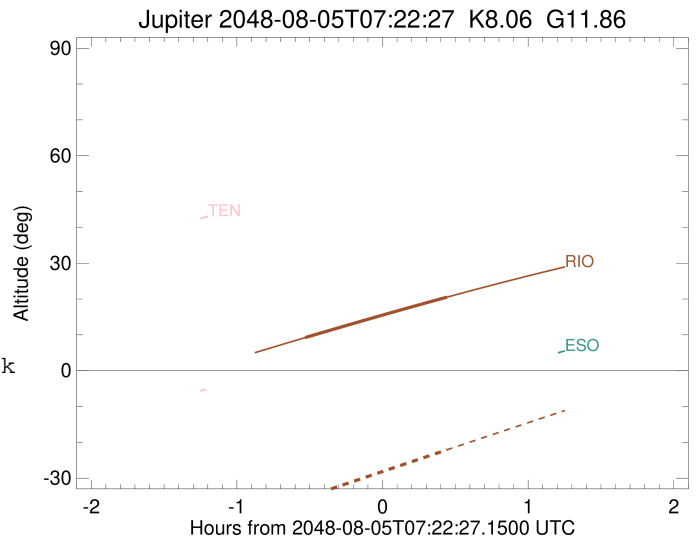
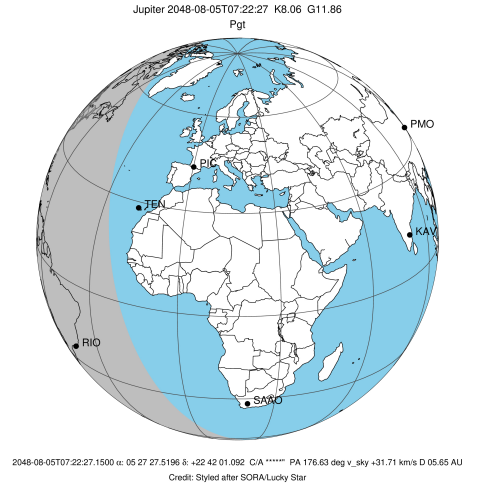
Observable events with sun below -5 deg and altitude above 5 deg

| 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 |        |                             | Pnn   |
| KAV  | Kavalur Observatory               | 12.6  | 78.8  |        |                             | Pnn   |
| RIO  | Rio de Janeiro                    | -22.9 | 316.8 | + +    | AUG 05 06:50 - AUG 05 07:48 | Pie   |
| 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             : 2048-08-05T07:19:46.130
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: 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        : 3416036358093810560
2Mass ID (if available) : 05272750+2242009
ICRS Star Coord at Epoch: 05h 27m 27.51957s +22:42:01.09213s
RUWE (>1.4 is poor) : 1.09
K magnitude           : 8.064
G magnitude           : 11.856
RP magnitude          : 10.833
BP magnitude          : 12.936
DUPflag              : 0
Distance (au)         : 5.648
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 31.71
Sun-Target sep (deg)  : 50.39
Sun-Moon sep (deg)    : 1.99
B (ring opening deg) : 2.67
PA of pole (deg)      : -2.66
Pole direction: RA (deg): 268.05732
Dec (deg): 64.49722
C/A sky separation (") : 11.122
C/A sky separation (km) : 45561.0
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   | 2048-08-05T06:50:39.546 | 9.24  | -35.44  | 71487.9 | 40.54   | 44.25        |
| Jupiter | E   | 2048-08-05T07:48:55.796 | 20.50 | -22.11  | 71488.2 | 38.56   | 42.24        |