

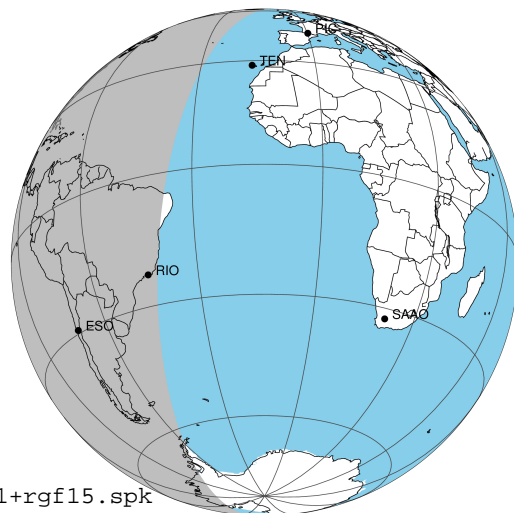
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2031-02-18T08:36:34.440
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4117460455184702208
 2Mass ID (if available) : 17335914-2245450

Jupiter 2031-02-18T08:36:34 K7.82 G12.91 Pgt

ICRS Star Coord at Epoch: 17h 33m 59.13882s -22:45:45.01865s

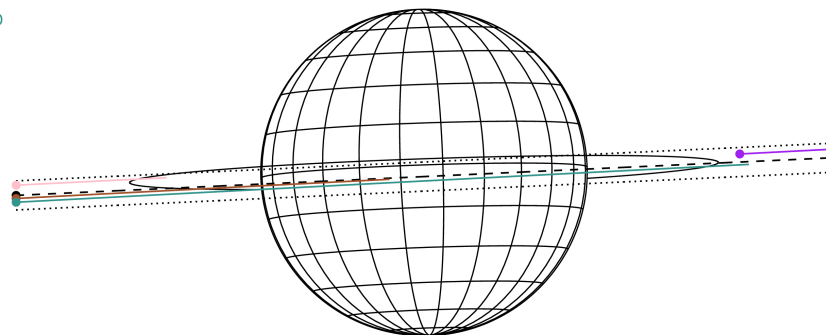
RUWE (>1.4 is poor) : 0.95
 K magnitude : 7.817
 G magnitude : 12.912
 RP magnitude : 11.587
 BP magnitude : 14.917
 DUPflag : 0
 Distance (au) : 5.660
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 25.72
 Sun-Target sep (deg) : 65.05
 Sun-Moon sep (deg) : 20.41
 B (ring opening deg) : -2.67
 PA of pole (deg) : 1.96
 Pole direction: RA (deg): 268.05702
 Dec (deg): 64.49651
 C/A sky separation (") : 0.435
 C/A sky separation (km) : 1786.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2031-02-18T08:36:34 K7.82 G12.91
 Pgt



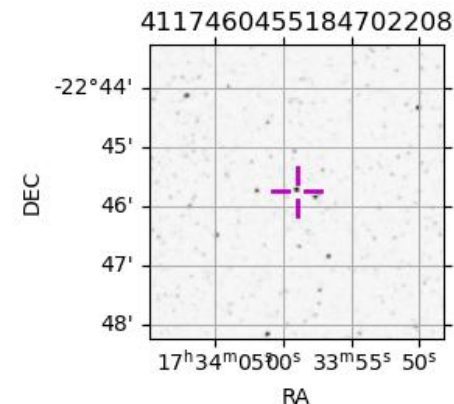
2031-02-18T08:36:34.4400 at: 17 33 59.1388 s -22 45 45.019 C/A 0.445" PA 2.62 deg v_sky +25.72 km/s D 05.66 AU
 Credit: Styled after SORA/Lucky Star

Earth
 MCD
 TEN
 RIO
 ESO



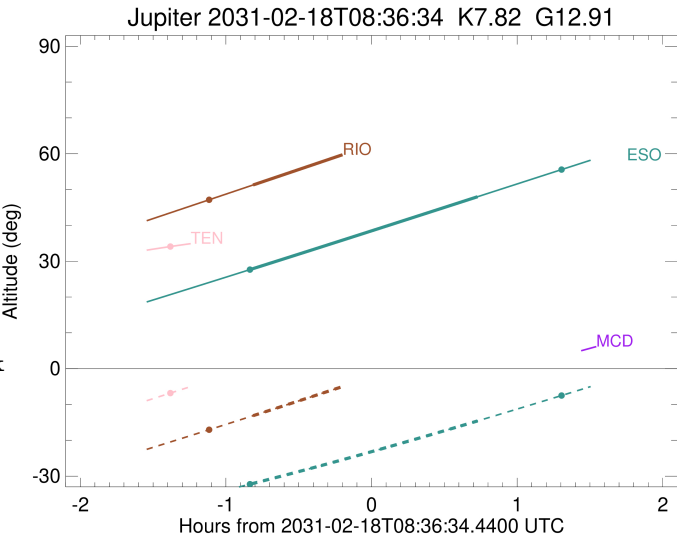
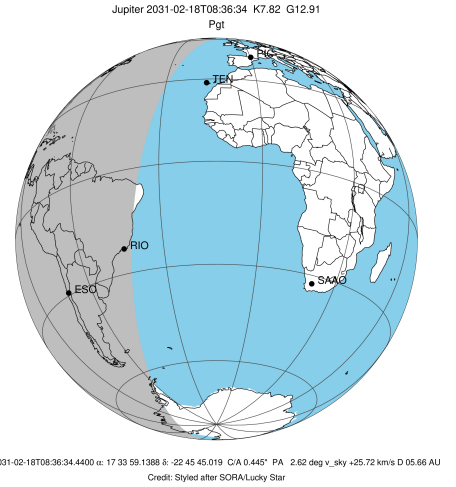
Observable events with sun below -5 deg and altitude above 5 deg

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	+	FEB 18 07:47 - FEB 18 07:47	Pin
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	FEB 18 07:47 - FEB 18 09:20	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



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-02-18T08:34:39.730
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        : 4117460455184702208
2Mass ID (if available) : 17335914-2245450
ICRS Star Coord at Epoch: 17h 33m 59.13882s -22:45:45.01865s
RUWE (>1.4 is poor) : 0.95
K magnitude           : 7.817
G magnitude           : 12.912
RP magnitude          : 11.587
BP magnitude          : 14.917
DUPflag              : 0
Distance (au)         : 5.660
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 25.72
Sun-Target sep (deg) : 65.05
Sun-Moon sep (deg)   : 21.16
B (ring opening deg) : -2.67
PA of pole (deg)     : 1.96
Pole direction: RA (deg): 268.05702
Dec (deg): 64.49651
C/A sky separation (") : 0.542
C/A sky separation (km) : 2223.9
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
    
```

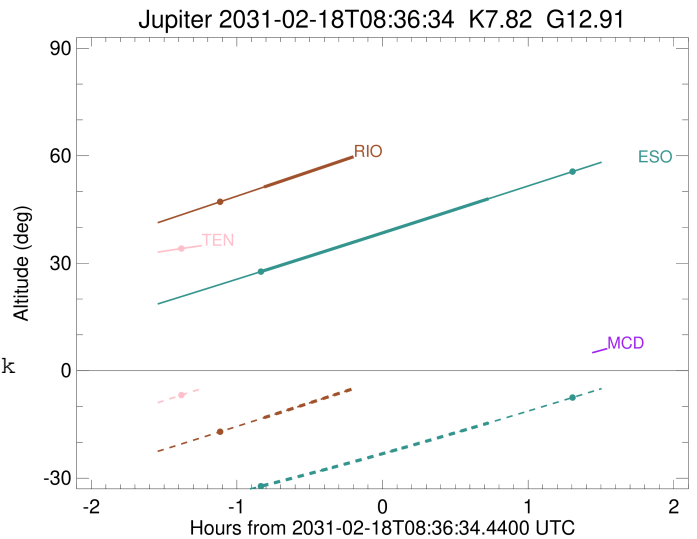
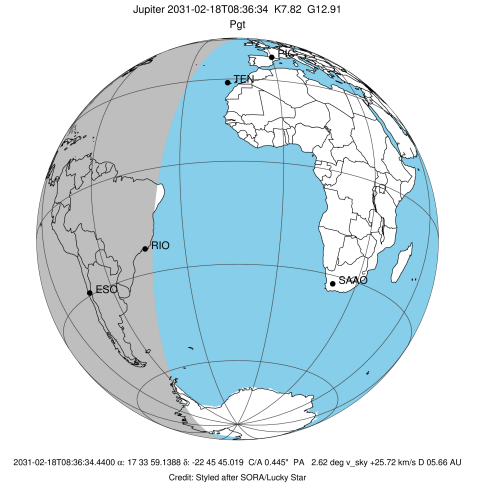


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-02-18T07:47:45.325	51.26	-13.13	71492.0	-2.71	-3.10
Jupiter	E	2031-02-18T09:21:40.935	72.84	7.85x	71492.0	-0.91	-1.05

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-02-18T08:33:34.230
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       : 4117460455184702208
2Mass ID (if available) : 17335914-2245450
ICRS Star Coord at Epoch: 17h 33m 59.13882s -22:45:45.01865s
RUWE (>1.4 is poor) : 0.95
K magnitude          : 7.817
G magnitude          : 12.912
RP magnitude         : 11.587
BP magnitude         : 14.917
DUPflag             : 0
Distance (au)        : 5.660
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 25.72
Sun-Target sep (deg) : 65.05
Sun-Moon sep (deg)   : 21.35
B (ring opening deg) : -2.67
PA of pole (deg)     : 1.96
Pole direction: RA (deg): 268.05702
Dec (deg): 64.49651
C/A sky separation ("): 0.903
C/A sky separation (km): 3708.8
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	2031-02-18T07:47:00.893	27.76	-32.16	71492.0	-3.98	-4.55
Jupiter	E	2031-02-18T09:20:17.023	47.99	-14.59	71492.0	-1.99	-2.28