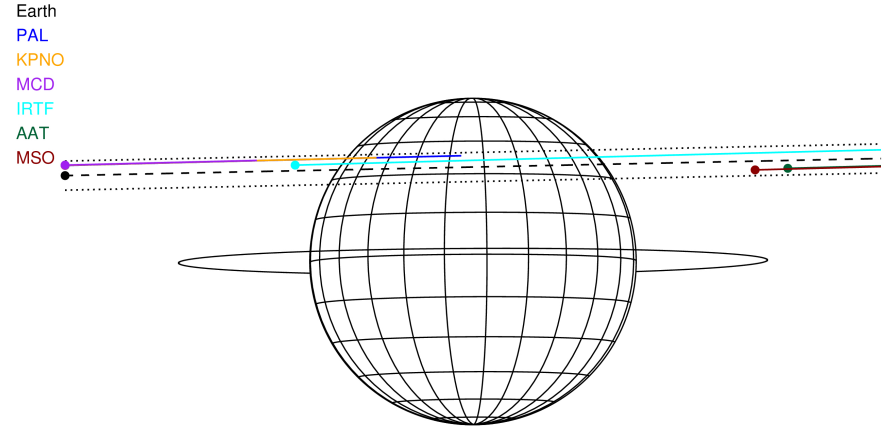
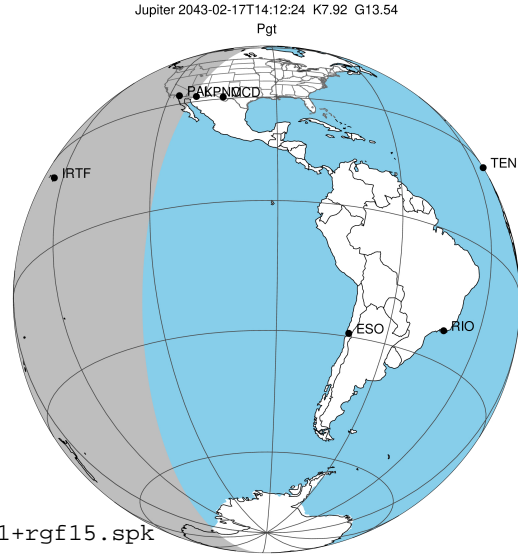


target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2043-02-17T14:12:24.860
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Gaia source ID : 4068877060795299712
2Mass ID (if available) : 17493271-2257169

Jupiter 2043-02-17T14:12:24 K7.92 G13.54 Pgt

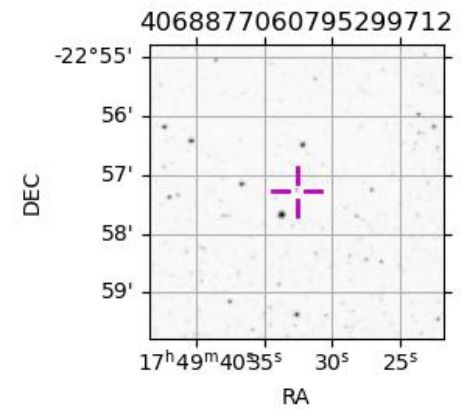
ICRS Star Coord at Epoch: 17h 49m 32.71504s -22:57:17.09402s
RUWE (>1.4 is poor) : 0.88
K magnitude : 7.925
G magnitude : 13.544
RP magnitude : 12.167
BP magnitude : 15.895
DUPflag : 0
Distance (au) : 5.722
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 27.80
Sun-Target sep (deg) : 60.61
Sun-Moon sep (deg) : 161.44
B (ring opening deg) : -2.55
PA of pole (deg) : 0.29
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 9.968
C/A sky separation (km) : 41366.0
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp



2043-02-17T14:12:24.8600 ex: 17 49 32.7150 s: -22 57 17.094 C/A 9.958" PA 181.20 deg v_sky +27.80 km/s D 05.72 AU
Credit: Styled after SORA/Lucky Star

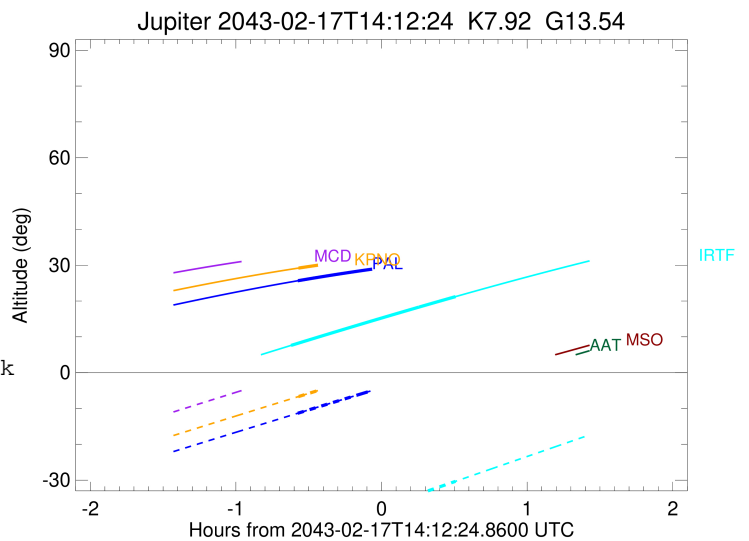
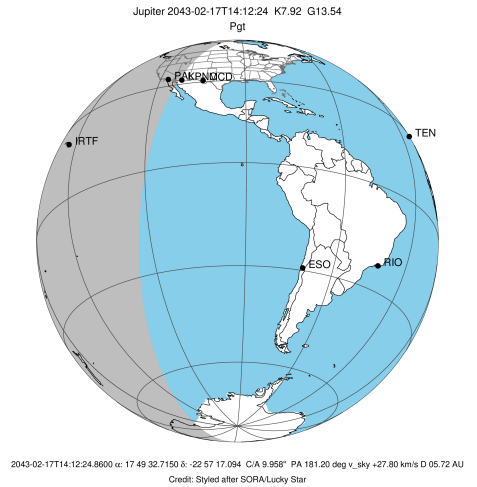
Observable events with sun below -5 deg and altitude above 5 deg

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	+	FEB 17 13:37 - FEB 17 13:37	Pin
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	FEB 17 13:38 - FEB 17 13:38	Pin
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 17 13:35 - FEB 17 14:42	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



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-17T14:10:57.500
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : PAL
Location             : Palomar Mt (200")
Latitude (deg)       : 33.35622
E. Longitude (deg)   : 243.13601
Altitude (km)        : 1.706
Gaia source ID       : 4068877060795299712
2Mass ID (if available) : 17493271-2257169
ICRS Star Coord at Epoch: 17h 49m 32.71504s -22:57:17.09402s
RUWE (>1.4 is poor) : 0.88
K magnitude          : 7.925
G magnitude          : 13.544
RP magnitude         : 12.167
BP magnitude         : 15.895
DUPflag             : 0
Distance (au)        : 5.722
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 27.80
Sun-Target sep (deg) : 60.61
Sun-Moon sep (deg)   : 161.46
B (ring opening deg) : -2.55
PA of pole (deg)     : 0.29
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation ("): 11.188
C/A sky separation (km): 46431.6
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
    
```

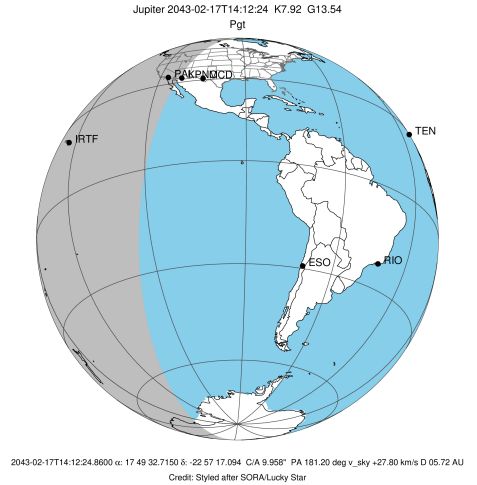


x: target alt < 5.0 deg or sun > -5.0 deg

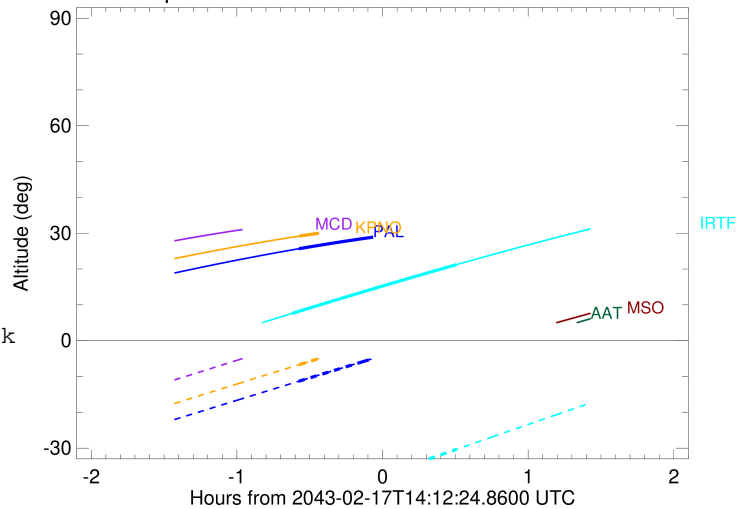
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-17T13:37:57.755	25.66	-11.32	71488.4	39.38	43.08
Jupiter	E	2043-02-17T14:43:59.741	31.71	2.23x	71488.1	41.49	45.21

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-17T14:11:13.780
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KPNO
Location             : Kitt Peak Natl Obs
Latitude (deg)       : 31.96333
E. Longitude (deg)  : 248.40000
Altitude (km)       : 2.120
Gaia source ID      : 4068877060795299712
2Mass ID (if available) : 17493271-2257169
ICRS Star Coord at Epoch: 17h 49m 32.71504s -22:57:17.09402s
RUWE (>1.4 is poor) : 0.88
K magnitude          : 7.925
G magnitude          : 13.544
RP magnitude         : 12.167
BP magnitude         : 15.895
DUPflag             : 0
Distance (au)       : 5.722
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 27.80
Sun-Target sep (deg) : 60.61
Sun-Moon sep (deg)  : 161.53
B (ring opening deg) : -2.55
PA of pole (deg)    : 0.29
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 11.186
C/A sky separation (km) : 46422.5
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
    
```



Jupiter 2043-02-17T14:12:24 K7.92 G13.54

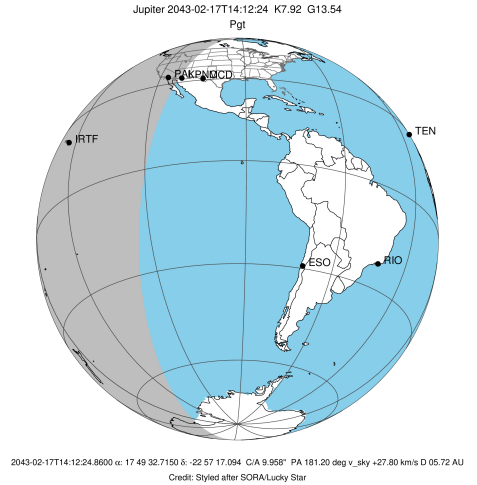


x: target alt < 5.0 deg or sun > -5.0 deg

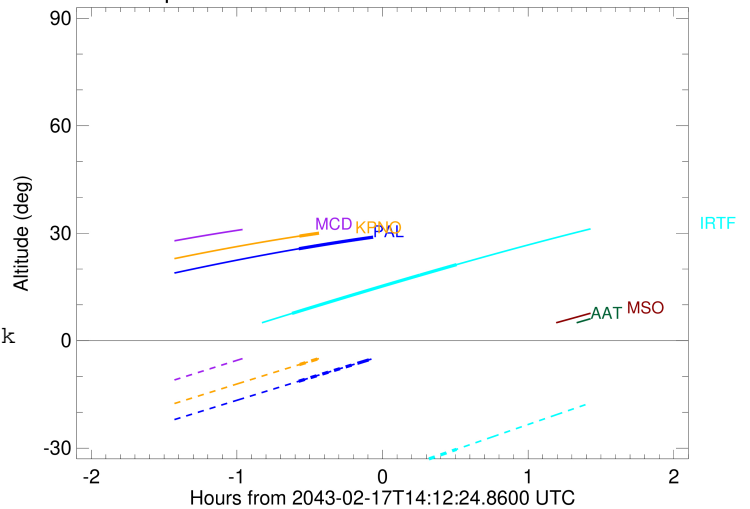
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-17T13:38:12.142	29.19	-6.67	71488.4	39.40	43.10
Jupiter	E	2043-02-17T14:44:17.596	34.22	6.94x	71488.1	41.45	45.17

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-17T14:09:00.240
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      : 4068877060795299712
2Mass ID (if available) : 17493271-2257169
ICRS Star Coord at Epoch: 17h 49m 32.71504s -22:57:17.09402s
RUWE (>1.4 is poor) : 0.88
K magnitude          : 7.925
G magnitude          : 13.544
RP magnitude         : 12.167
BP magnitude         : 15.895
DUPflag             : 0
Distance (au)       : 5.722
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 27.80
Sun-Target sep (deg) : 60.61
Sun-Moon sep (deg)  : 160.88
B (ring opening deg) : -2.55
PA of pole (deg)    : 0.29
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 10.673
C/A sky separation (km) : 44293.7
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
    
```



Jupiter 2043-02-17T14:12:24 K7.92 G13.54



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	2043-02-17T13:35:10.128	7.61	-46.27	71488.8	37.00	40.65
Jupiter	E	2043-02-17T14:42:55.490	21.23	-30.33	71488.4	39.46	43.16