

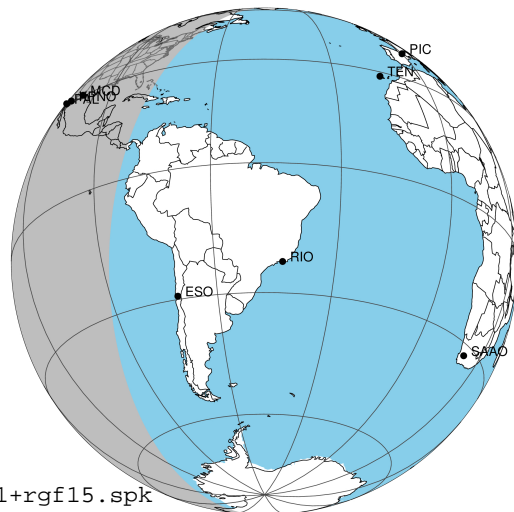
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-07T11:45:12.170
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116878646125866368
 2Mass ID (if available) : 17420643-2254247

Jupiter 2043-02-07T11:45:12 K7.06 G13.81 Pgt

ICRS Star Coord at Epoch: 17h 42m 06.42204s -22:54:25.31105s

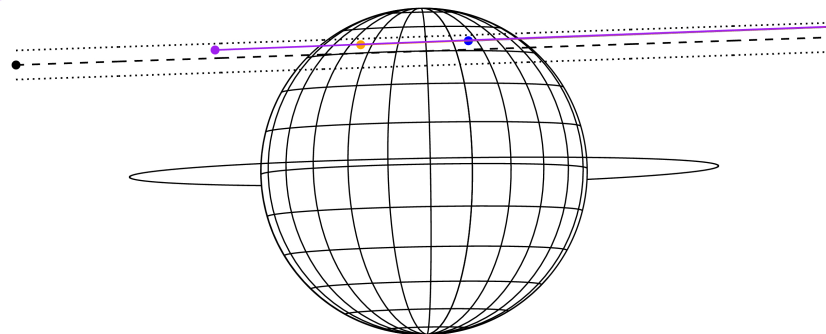
RUWE (>1.4 is poor) : 0.82
 K magnitude : 7.058
 G magnitude : 13.815
 RP magnitude : 12.231
 BP magnitude : 17.564
 DUPflag : 0
 Distance (au) : 5.859
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 31.51
 Sun-Target sep (deg) : 52.11
 Sun-Moon sep (deg) : 22.87
 B (ring opening deg) : -2.57
 PA of pole (deg) : 1.09
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 12.402
 C/A sky separation (km) : 52701.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-07T11:45:12 K7.06 G13.81
 Pgt



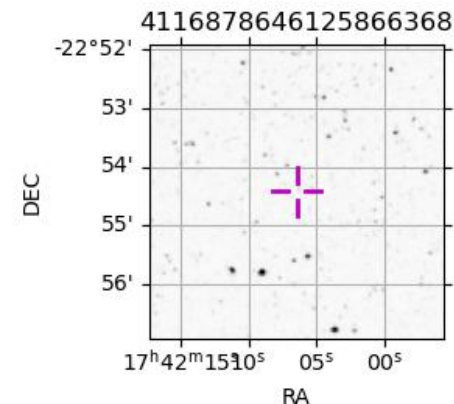
2043-02-07T11:45:12.1700 a: 17 42 06.4220 s: -22 54 25.311 C/A ***** PA 181.95 deg v_sky +31.51 km/s D 05.86 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PAL
 KPNO
 MCD



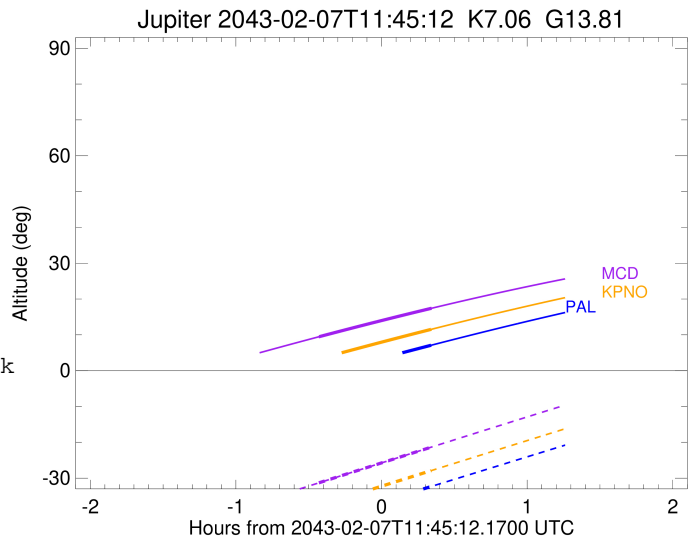
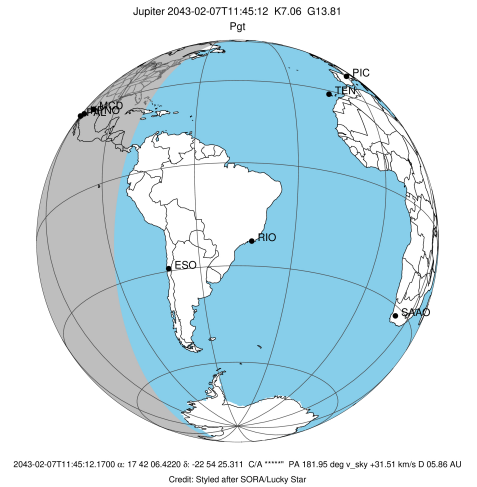
Observable events with sun below -5 deg and altitude above 5 deg

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 07 12:05 - FEB 07 12:05	Pne
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	FEB 07 12:05 - FEB 07 12:05	Pne
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	FEB 07 11:19 - FEB 07 12:05	Pie
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			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             : 2043-02-07T11:42:21.190
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        : 4116878646125866368
2Mass ID (if available) : 17420643-2254247
ICRS Star Coord at Epoch: 17h 42m 06.42204s -22:54:25.31105s
RUWE (>1.4 is poor) : 0.82
K magnitude           : 7.058
G magnitude           : 13.815
RP magnitude          : 12.231
BP magnitude          : 17.564
DUPflag               : 0
Distance (au)         : 5.859
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 31.51
Sun-Target sep (deg) : 52.11
Sun-Moon sep (deg)   : 23.69
B (ring opening deg) : -2.57
PA of pole (deg)     : 1.09
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 13.291
C/A sky separation (km) : 56477.8
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
    
```

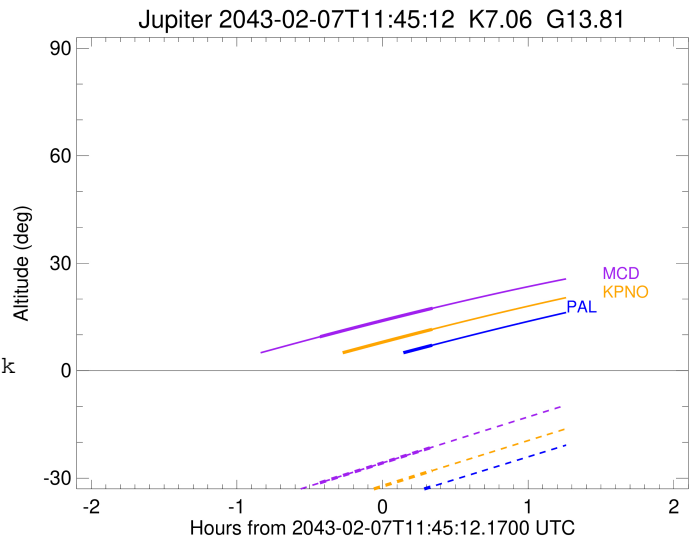
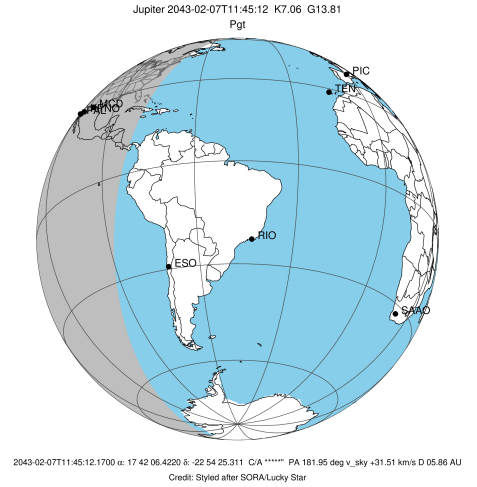


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-07T11:19:05.460	-1.36x	-42.02	71486.5	50.99	54.54
Jupiter	E	2043-02-07T12:05:38.897	7.09	-32.33	71486.2	53.23	56.69

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-07T11:42:24.840
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        : 4116878646125866368
2Mass ID (if available) : 17420643-2254247
ICRS Star Coord at Epoch: 17h 42m 06.42204s -22:54:25.31105s
RUWE (>1.4 is poor) : 0.82
K magnitude           : 7.058
G magnitude           : 13.815
RP magnitude          : 12.231
BP magnitude          : 17.564
DUPflag              : 0
Distance (au)         : 5.859
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 31.51
Sun-Target sep (deg)  : 52.11
Sun-Moon sep (deg)   : 23.71
B (ring opening deg) : -2.57
PA of pole (deg)     : 1.09
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (" ) : 13.308
C/A sky separation (km) : 56552.0
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
    
```

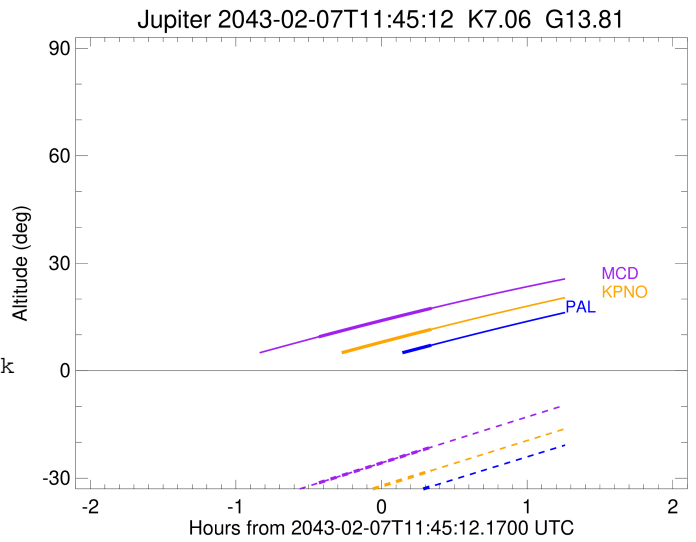
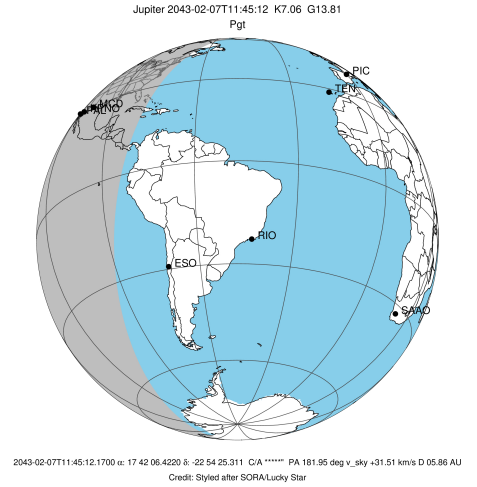


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-07T11:19:10.520	3.23x	-37.78	71486.5	51.09	54.64
Jupiter	E	2043-02-07T12:05:41.106	11.53	-27.90	71486.2	53.32	56.78

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-07T11:42:34.200
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : MCD
Location              : McDonald Obs. 2.7m
Latitude (deg)       : 30.67158
E. Longitude (deg)   : 255.97844
Altitude (km)        : 2.075
Gaia source ID       : 4116878646125866368
2Mass ID (if available) : 17420643-2254247
ICRS Star Coord at Epoch: 17h 42m 06.42204s -22:54:25.31105s
RUWE (>1.4 is poor) : 0.82
K magnitude           : 7.058
G magnitude           : 13.815
RP magnitude          : 12.231
BP magnitude          : 17.564
DUPflag              : 0
Distance (au)        : 5.859
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 31.51
Sun-Target sep (deg) : 52.11
Sun-Moon sep (deg)   : 23.71
B (ring opening deg) : -2.57
PA of pole (deg)     : 1.09
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 13.345
C/A sky separation (km) : 56708.3
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	2043-02-07T11:19:24.065	9.46	-31.31	71486.5	51.31	54.85
Jupiter	E	2043-02-07T12:05:46.169	17.41	-21.33	71486.2	53.51	56.96