

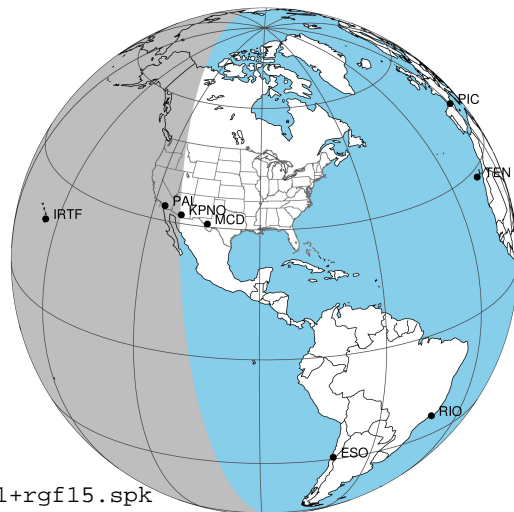
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2048-08-30T13:05:53.260
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3427527182319733248
 2Mass ID (if available) : 05452643+2252438

Jupiter 2048-08-30T13:05:53 K8.28 G10.93 Pgt

ICRS Star Coord at Epoch: 05h 45m 26.44131s +22:52:43.41944s

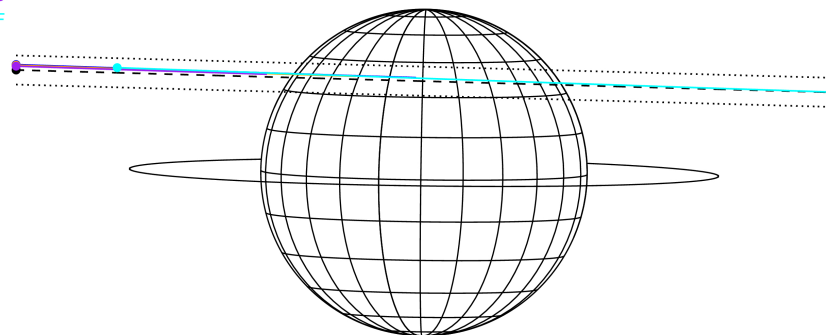
RUWE (>1.4 is poor) : 1.18
 K magnitude : 8.282
 G magnitude : 10.927
 RP magnitude : 10.128
 BP magnitude : 11.610
 DUPflag : 0
 Distance (au) : 5.317
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 22.52
 Sun-Target sep (deg) : 70.52
 Sun-Moon sep (deg) : 28.08
 B (ring opening deg) : 2.61
 PA of pole (deg) : -0.73
 Pole direction: RA (deg): 268.05733
 Dec (deg): 64.49722
 C/A sky separation (") : 10.369
 C/A sky separation (km) : 39982.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2048-08-30T13:05:53 K8.28 G10.93
 Pgt



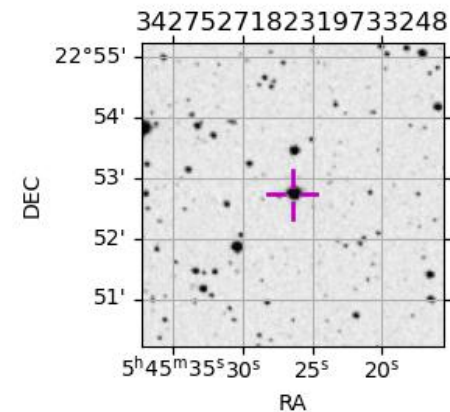
2048-08-30T13:05:53.2600 α: 05 45 26.4413 δ: +22 52 43.419 C/A ***** PA 178.43 deg v_sky +22.52 km/s D 05.32 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PAL
 KPNO
 MCD
 IRTF



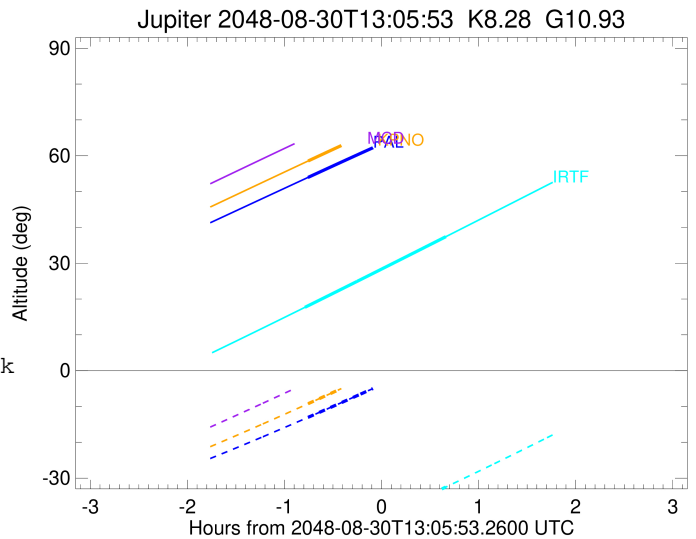
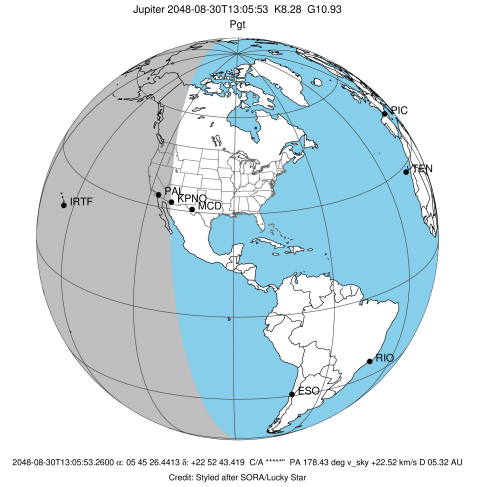
Observable events with sun below -5 deg and altitude above 5 deg

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	+	AUG 30 12:20 - AUG 30 12:20	Pin
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	AUG 30 12:20 - AUG 30 12:20	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	+ +	AUG 30 12:18 - AUG 30 13:45	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             : 2048-08-30T13:04:08.260
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        : 3427527182319733248
2Mass ID (if available) : 05452643+2252438
ICRS Star Coord at Epoch: 05h 45m 26.44131s +22:52:43.41944s
RUWE (>1.4 is poor) : 1.18
K magnitude           : 8.282
G magnitude           : 10.927
RP magnitude          : 10.128
BP magnitude          : 11.610
DUPflag              : 0
Distance (au)         : 5.317
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 22.52
Sun-Target sep (deg)  : 70.52
Sun-Moon sep (deg)   : 28.14
B (ring opening deg) : 2.61
PA of pole (deg)     : -0.73
Pole direction: RA (deg): 268.05733
Dec (deg): 64.49722
C/A sky separation (") : 10.744
C/A sky separation (km) : 41427.9
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
    
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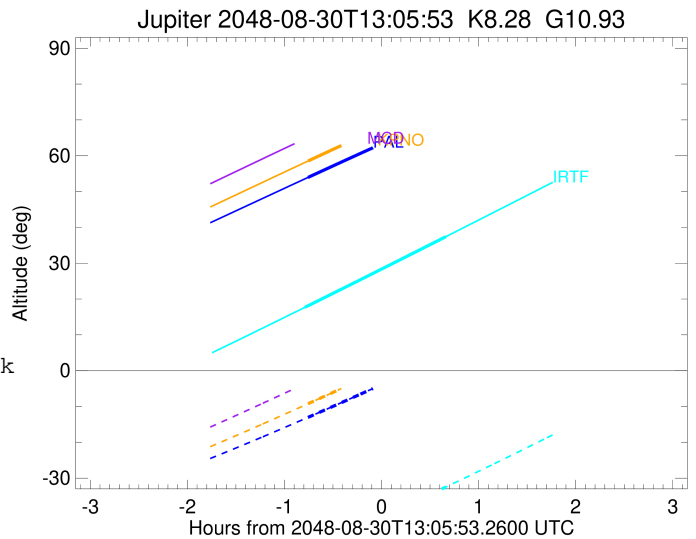
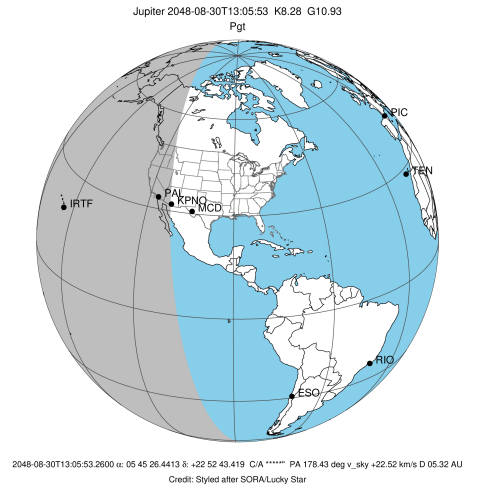


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2048-08-30T12:20:25.624	53.93	-13.04	71488.7	36.45	40.09
Jupiter	E	2048-08-30T13:47:56.788	71.47	4.74x	71489.0	34.36	37.94

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2048-08-30T13:04:25.450
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      : 3427527182319733248
2Mass ID (if available) : 05452643+2252438
ICRS Star Coord at Epoch: 05h 45m 26.44131s +22:52:43.41944s
RUWE (>1.4 is poor) : 1.18
K magnitude          : 8.282
G magnitude          : 10.927
RP magnitude         : 10.128
BP magnitude         : 11.610
DUPflag             : 0
Distance (au)       : 5.317
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.52
Sun-Target sep (deg) : 70.52
Sun-Moon sep (deg)  : 28.21
B (ring opening deg) : 2.61
PA of pole (deg)    : -0.73
Pole direction: RA (deg): 268.05733
Dec (deg): 64.49722
C/A sky separation (") : 10.681
C/A sky separation (km) : 41184.9
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
    
```

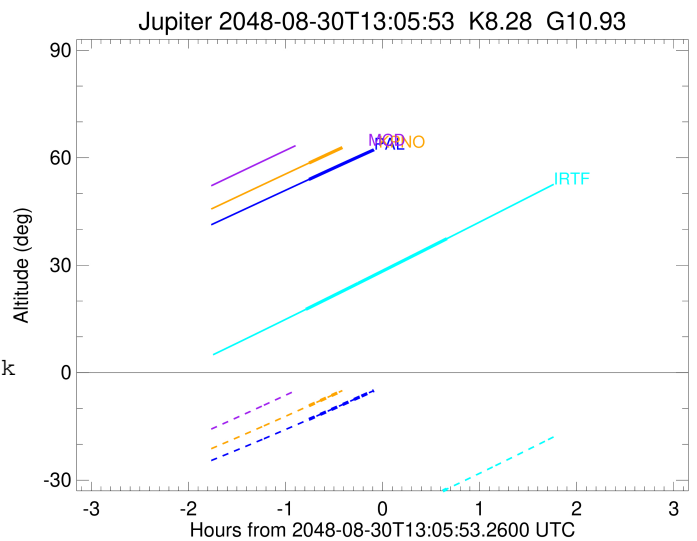
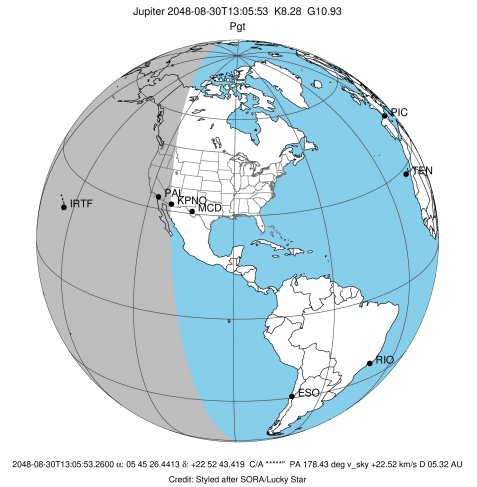


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2048-08-30T12:20:32.250	58.53	-9.22	71488.7	36.18	39.82
Jupiter	E	2048-08-30T13:48:23.919	76.04	9.11x	71489.0	34.16	37.72

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2048-08-30T13:02:00.940
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       : 3427527182319733248
2Mass ID (if available) : 05452643+2252438
ICRS Star Coord at Epoch: 05h 45m 26.44131s +22:52:43.41944s
RUWE (>1.4 is poor) : 1.18
K magnitude           : 8.282
G magnitude           : 10.927
RP magnitude         : 10.128
BP magnitude         : 11.610
DUPflag              : 0
Distance (au)        : 5.317
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.52
Sun-Target sep (deg) : 70.52
Sun-Moon sep (deg)   : 27.58
B (ring opening deg) : 2.61
PA of pole (deg)     : -0.73
Pole direction: RA (deg): 268.05733
Dec (deg): 64.49722
C/A sky separation (") : 10.684
C/A sky separation (km) : 41198.8
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	2048-08-30T12:18:33.541	17.68	-49.71	71488.7	36.41	40.05
Jupiter	E	2048-08-30T13:45:38.876	37.39	-32.48	71489.1	33.91	37.47