

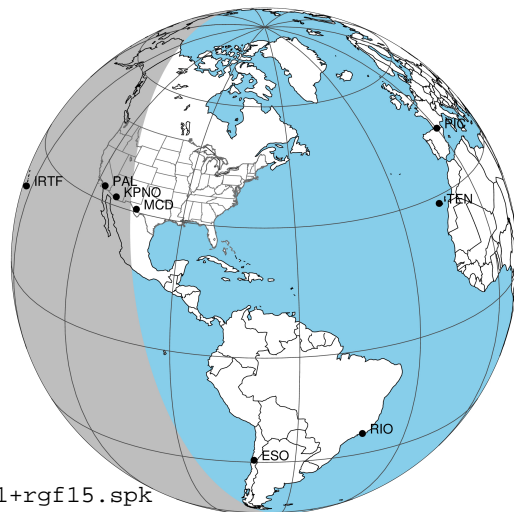
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2036-08-10T12:30:55.520  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3415444614679633792  
 2Mass ID (if available) : 05150652+2225293

Jupiter 2036-08-10T12:30:55 K7.99 G11.69 Pgt

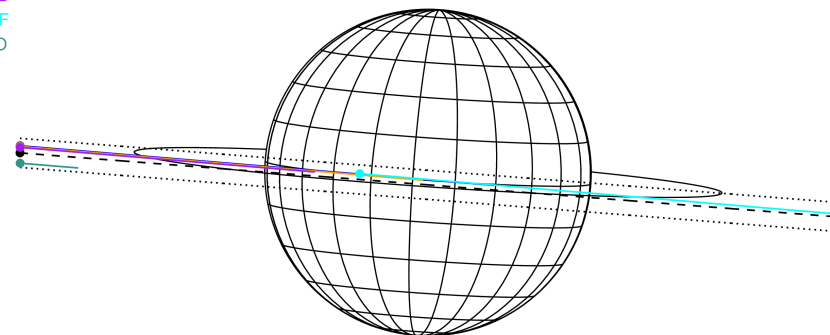
ICRS Star Coord at Epoch: 05h 15m 06.52768s +22:25:29.40237s

RUWE (>1.4 is poor) : 1.09  
 K magnitude : 7.991  
 G magnitude : 11.687  
 RP magnitude : 10.683  
 BP magnitude : 12.734  
 DUPflag : 0  
 Distance (au) : 5.511  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 28.34  
 Sun-Target sep (deg) : 58.33  
 Sun-Moon sep (deg) : 84.46  
 B (ring opening deg) : 2.78  
 PA of pole (deg) : -3.99  
 Pole direction: RA (deg): 268.05634  
 Dec (deg): 64.49686  
 C/A sky separation (") : 1.352  
 C/A sky separation (km) : 5402.5  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2036-08-10T12:30:55 K7.99 G11.69  
 Pgt



Earth  
 PAL  
 KPNO  
 MCD  
 IRTF  
 ESO

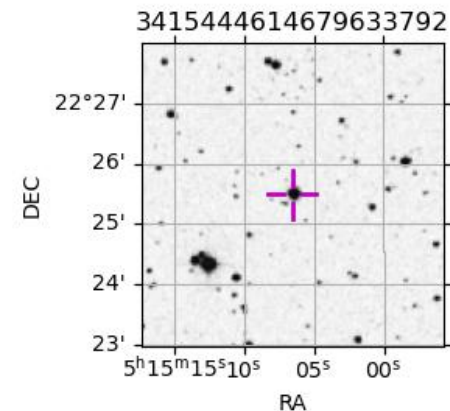


2036-08-10T12:30:55.5200 ex: 05 15 06.5277 & +22 25 29.402 C/A 1.342" PA 355.51 deg v\_sky +28.34 km/s D 05.51 AU

Credit: Styled after SORA/Lucky Star

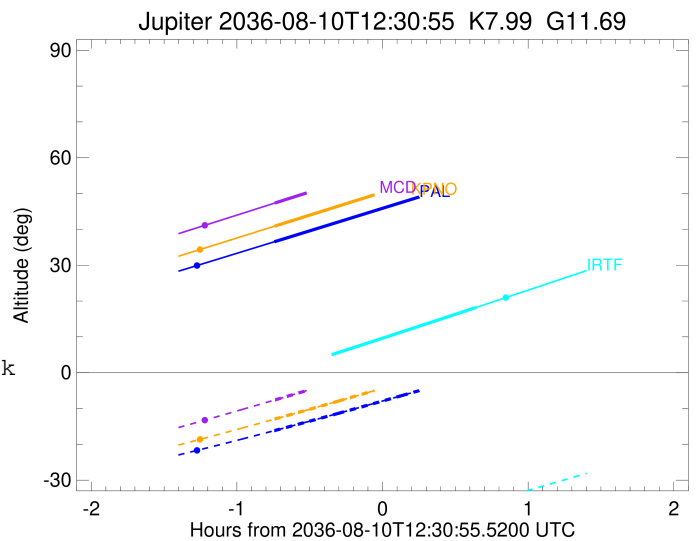
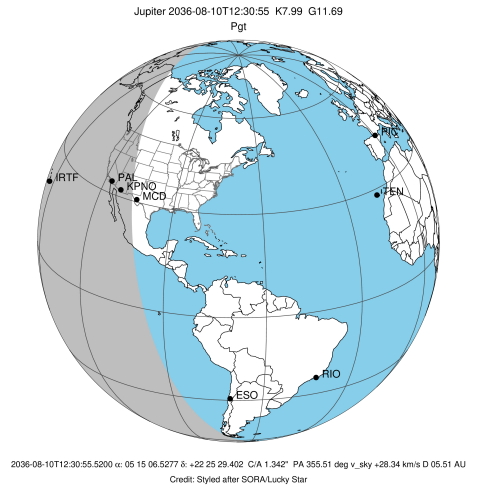
Observable events with sun below -5 deg and altitude above 5 deg

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	+	AUG 10 11:46 - AUG 10 11:46	Pin
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	AUG 10 11:46 - AUG 10 11:46	Pin
MCD	McDonald Obs. 2.7m	30.7	256.0	+	AUG 10 11:46 - AUG 10 11:46	Pin
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+	AUG 10 13:09 - AUG 10 13:09	Pne
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             : 2036-08-10T12:28:37.320
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       : 3415444614679633792
2Mass ID (if available) : 05150652+2225293
ICRS Star Coord at Epoch: 05h 15m 06.52768s +22:25:29.40237s
RUWE (>1.4 is poor) : 1.09
K magnitude           : 7.991
G magnitude           : 11.687
RP magnitude          : 10.683
BP magnitude          : 12.734
DUPflag              : 0
Distance (au)        : 5.511
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 28.34
Sun-Target sep (deg) : 58.33
Sun-Moon sep (deg)   : 85.06
B (ring opening deg) : 2.78
PA of pole (deg)     : -3.99
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (") : 0.803
C/A sky separation (km) : 3208.0
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
    
```

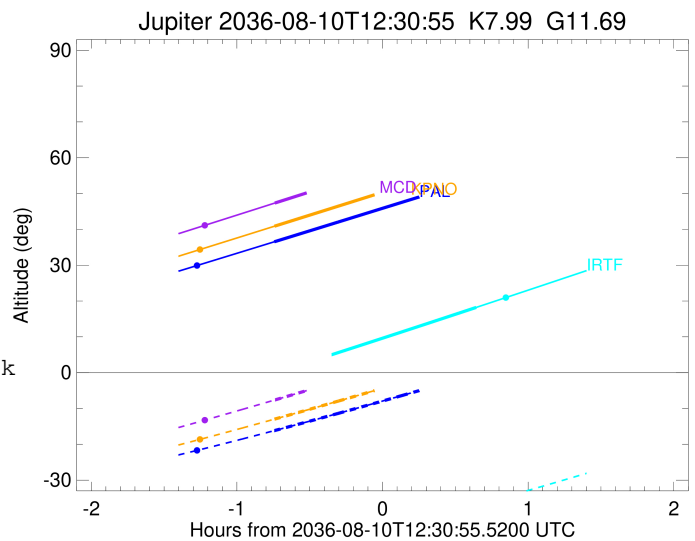
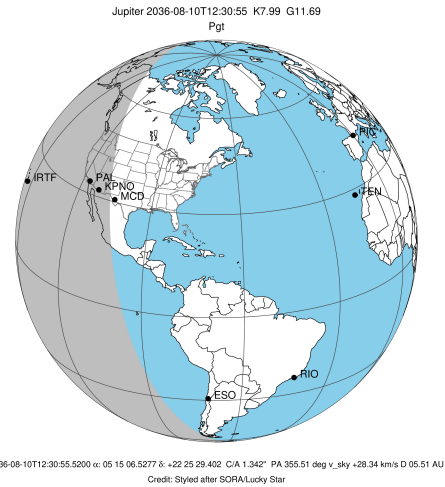


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2036-08-10T11:46:18.253	36.52	-16.19	71492.0	-1.79	-2.05
Jupiter	E	2036-08-10T13:11:02.569	54.26	-0.11x	71492.0	-3.31	-3.79

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2036-08-10T12:28:46.390
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       : 3415444614679633792
2Mass ID (if available) : 05150652+2225293
ICRS Star Coord at Epoch: 05h 15m 06.52768s +22:25:29.40237s
RUWE (>1.4 is poor) : 1.09
K magnitude           : 7.991
G magnitude           : 11.687
RP magnitude         : 10.683
BP magnitude         : 12.734
DUPflag              : 0
Distance (au)        : 5.511
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 28.34
Sun-Target sep (deg) : 58.33
Sun-Moon sep (deg)   : 85.12
B (ring opening deg) : 2.78
PA of pole (deg)     : -3.99
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (") : 0.878
C/A sky separation (km) : 3508.4
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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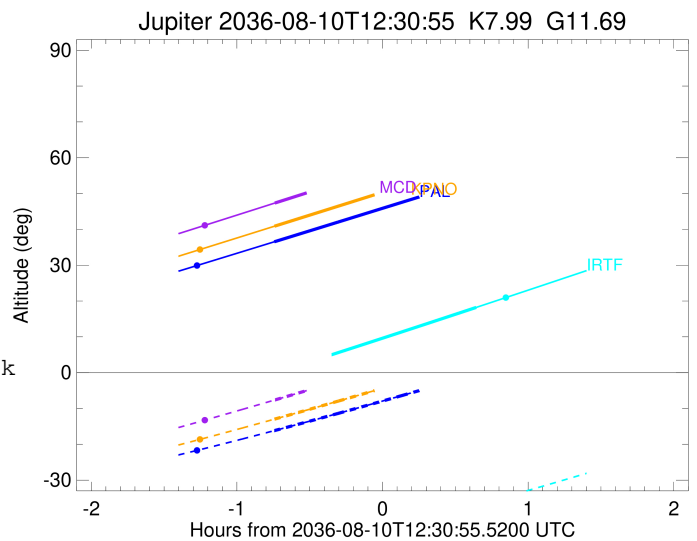
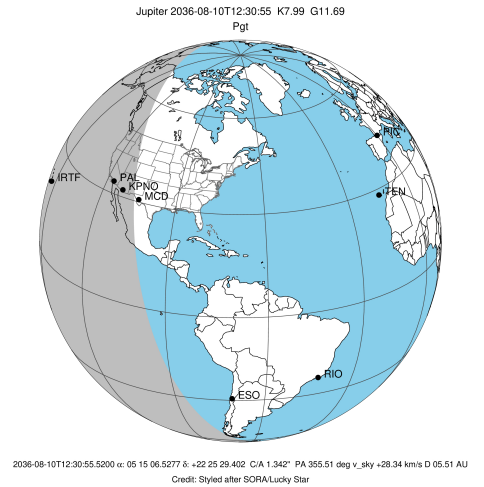


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2036-08-10T11:46:24.860	40.88	-12.97	71492.0	-2.04	-2.34
Jupiter	E	2036-08-10T13:11:13.799	58.89	3.77x	71492.0	-3.54	-4.05

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2036-08-10T12:29:03.390
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        : 3415444614679633792
2Mass ID (if available) : 05150652+2225293
ICRS Star Coord at Epoch: 05h 15m 06.52768s +22:25:29.40237s
RUWE (>1.4 is poor) : 1.09
K magnitude           : 7.991
G magnitude           : 11.687
RP magnitude          : 10.683
BP magnitude          : 12.734
DUPflag              : 0
Distance (au)         : 5.511
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 28.34
Sun-Target sep (deg)  : 58.33
Sun-Moon sep (deg)    : 85.18
B (ring opening deg) : 2.78
PA of pole (deg)      : -3.99
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (") : 0.966
C/A sky separation (km) : 3859.9
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
    
```

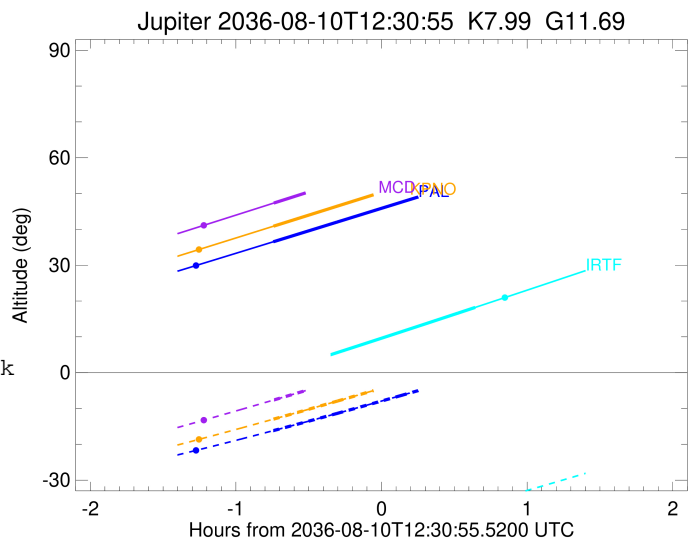
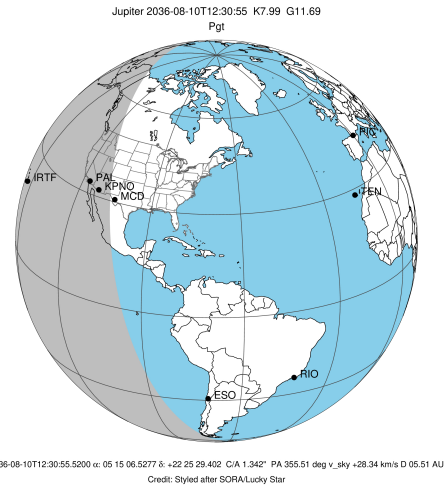


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2036-08-10T11:46:38.643	47.36	-7.60	71492.0	-2.34	-2.68
Jupiter	E	2036-08-10T13:11:33.448	65.57	9.83x	71492.0	-3.80	-4.34

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2036-08-10T12:27:28.640
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        : 3415444614679633792
2Mass ID (if available) : 05150652+2225293
ICRS Star Coord at Epoch: 05h 15m 06.52768s +22:25:29.40237s
RUWE (>1.4 is poor) : 1.09
K magnitude           : 7.991
G magnitude           : 11.687
RP magnitude          : 10.683
BP magnitude          : 12.734
DUPflag              : 0
Distance (au)         : 5.511
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 28.34
Sun-Target sep (deg) : 58.33
Sun-Moon sep (deg)   : 84.53
B (ring opening deg) : 2.78
PA of pole (deg)     : -3.99
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (") : 0.761
C/A sky separation (km) : 3039.9
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	2036-08-10T11:45:32.143	-0.29x	-50.05	71492.0	-1.61	-1.84
Jupiter	E	2036-08-10T13:09:33.360	18.22	-36.92	71492.0	-3.27	-3.74