

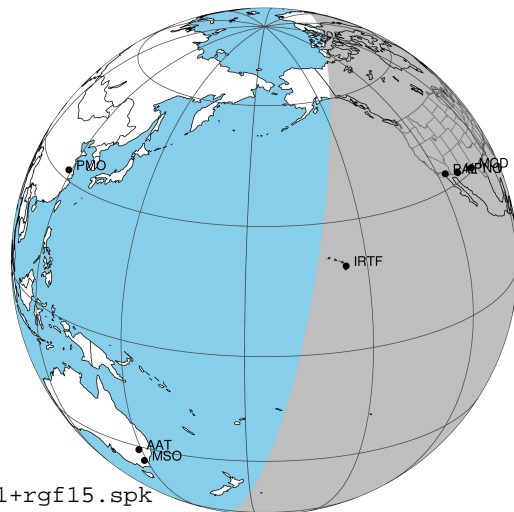
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2038-04-24T05:08:11.520  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 865597095974649216  
 2Mass ID (if available) : 07332921+2210386

Jupiter 2038-04-24T05:08:11 K9.19 G12.86 Pgt

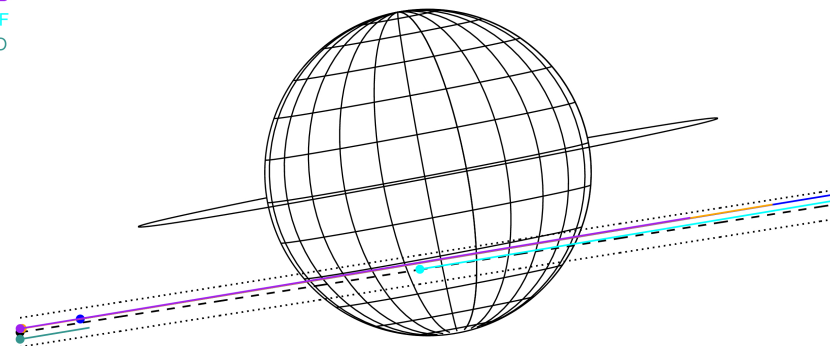
ICRS Star Coord at Epoch: 07h 33m 29.22837s +22:10:38.51965s

RUWE (>1.4 is poor) : 0.00  
 K magnitude : 9.192  
 G magnitude : 12.861  
 RP magnitude : 11.399  
 BP magnitude : 13.553  
 DUPflag : 0  
 Distance (au) : 5.385  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 18.49  
 Sun-Target sep (deg) : 77.95  
 Sun-Moon sep (deg) : 167.16  
 B (ring opening deg) : 1.13  
 PA of pole (deg) : 10.61  
 Pole direction: RA (deg): 268.05619  
 Dec (deg): 64.49692  
 C/A sky separation (") : 10.618  
 C/A sky separation (km) : 41472.5  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2038-04-24T05:08:11 K9.19 G12.86  
 Pgt



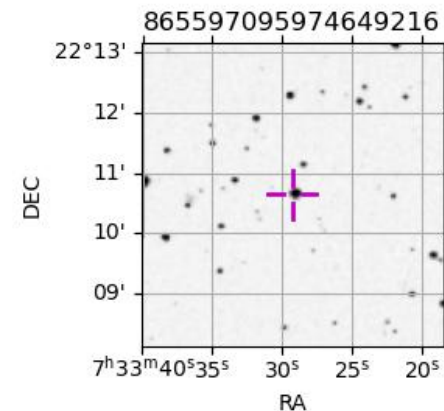
Earth  
 PAL  
 KPNO  
 MCD  
 IRTF  
 ESO



2038-04-24T05:08:11.5200 α: 07 33 29.2284 δ: +22 10 38.520 C/A \*\*\*\*\* PA 8.92 deg v\_sky +18.49 km/s D 05.39 AU  
 Credit: Styled after SORA/Lucky Star

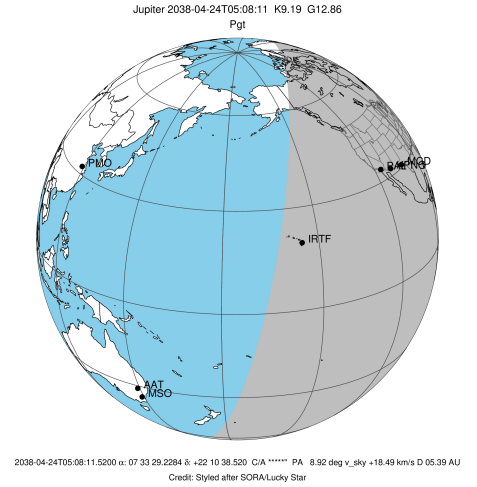
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	APR 24 04:17 - APR 24 06:06	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	APR 24 04:17 - APR 24 06:07	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	APR 24 04:17 - APR 24 06:07	Pie
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			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

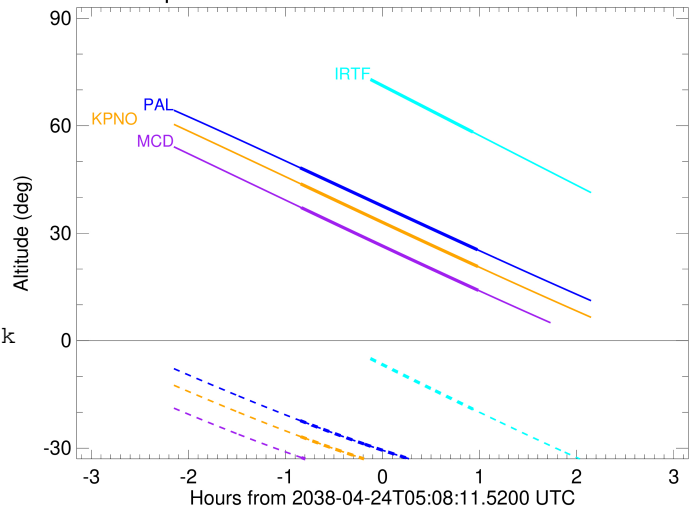


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2038-04-24T05:12:16.010
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PAL
Location              : Palomar Mt (200")
Latitude (deg)        : 33.35622
E. Longitude (deg)    : 243.13601
Altitude (km)         : 1.706
Gaia source ID        : 865597095974649216
2Mass ID (if available) : 07332921+2210386
ICRS Star Coord at Epoch: 07h 33m 29.22837s +22:10:38.51965s
RUWE (>1.4 is poor) : 0.00
K magnitude           : 9.192
G magnitude           : 12.861
RP magnitude          : 11.399
BP magnitude          : 13.553
DUPflag              : 0
Distance (au)         : 5.385
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 18.49
Sun-Target sep (deg)  : 77.95
Sun-Moon sep (deg)   : 167.92
B (ring opening deg) : 1.13
PA of pole (deg)     : 10.61
Pole direction: RA (deg): 268.05619
Dec (deg): 64.49692
C/A sky separation (") : 9.871
C/A sky separation (km) : 38554.4
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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Jupiter 2038-04-24T05:08:11 K9.19 G12.86

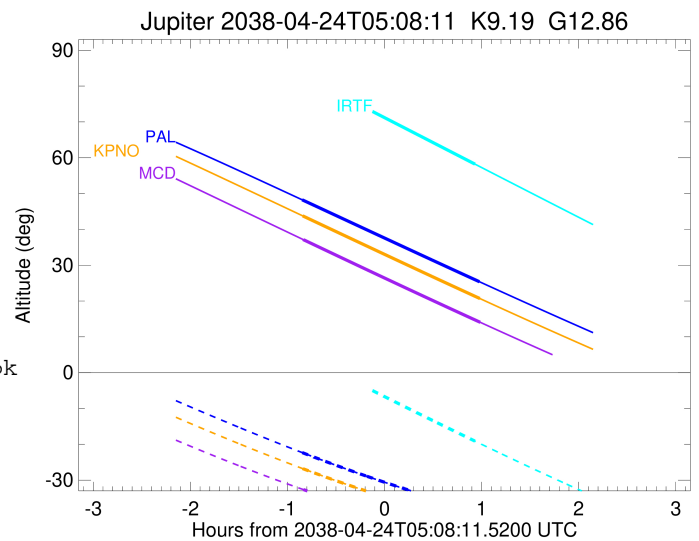
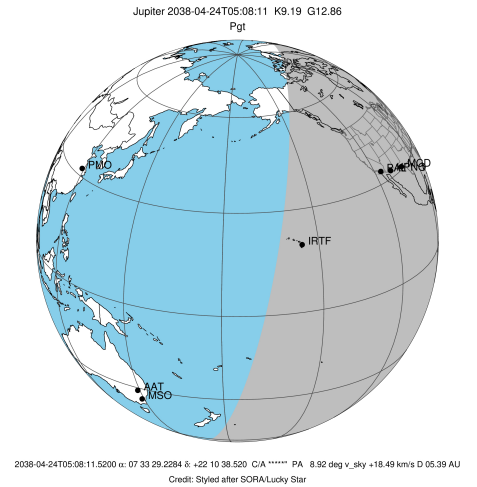


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2038-04-24T04:17:19.315	48.24	-22.31	71491.5	-31.41	-34.86
Jupiter	E	2038-04-24T06:06:54.274	25.37	-38.25	71491.5	-33.83	-37.38

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2038-04-24T05:12:32.460
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        : 865597095974649216
2Mass ID (if available) : 07332921+2210386
ICRS Star Coord at Epoch: 07h 33m 29.22837s +22:10:38.51965s
RUWE (>1.4 is poor) : 0.00
K magnitude           : 9.192
G magnitude           : 12.861
RP magnitude          : 11.399
BP magnitude          : 13.553
DUPflag              : 0
Distance (au)         : 5.385
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 18.49
Sun-Target sep (deg)  : 77.95
Sun-Moon sep (deg)    : 167.95
B (ring opening deg) : 1.13
PA of pole (deg)      : 10.61
Pole direction: RA (deg): 268.05619
Dec (deg): 64.49692
C/A sky separation (") : 9.850
C/A sky separation (km) : 38474.6
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
    
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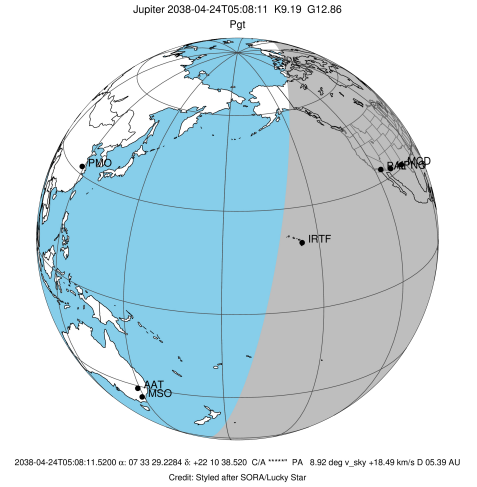


x: target alt < 5.0 deg or sun > -5.0 deg

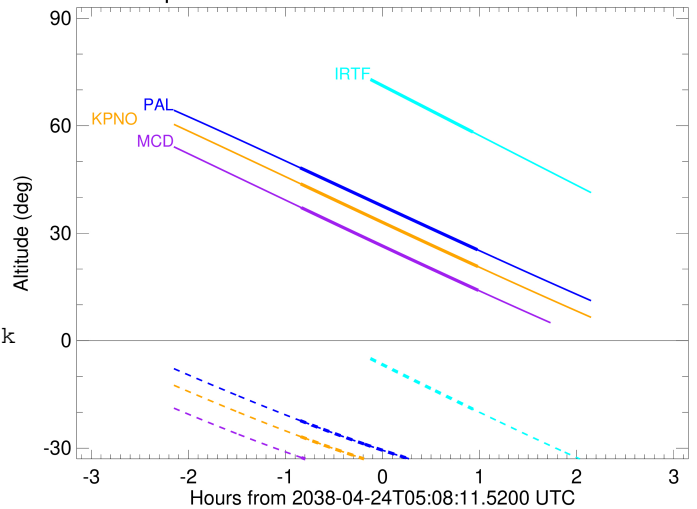
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2038-04-24T04:17:38.201	43.77	-26.78	71491.5	-31.35	-34.80
Jupiter	E	2038-04-24T06:07:07.489	20.69	-41.61	71491.5	-33.75	-37.30

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2038-04-24T05:12:49.130
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        : 865597095974649216
2Mass ID (if available) : 07332921+2210386
ICRS Star Coord at Epoch: 07h 33m 29.22837s +22:10:38.51965s
RUWE (>1.4 is poor) : 0.00
K magnitude           : 9.192
G magnitude           : 12.861
RP magnitude          : 11.399
BP magnitude          : 13.553
DUPflag              : 0
Distance (au)         : 5.385
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 18.49
Sun-Target sep (deg)  : 77.95
Sun-Moon sep (deg)    : 167.98
B (ring opening deg) : 1.13
PA of pole (deg)      : 10.61
Pole direction: RA (deg): 268.05619
Dec (deg): 64.49692
C/A sky separation (") : 9.804
C/A sky separation (km) : 38291.9
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
    
```



Jupiter 2038-04-24T05:08:11 K9.19 G12.86

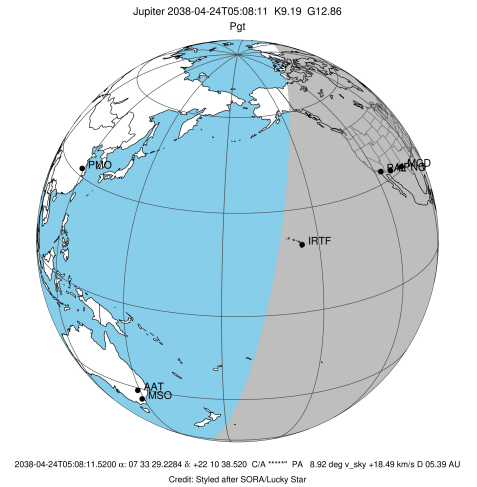


x: target alt < 5.0 deg or sun > -5.0 deg

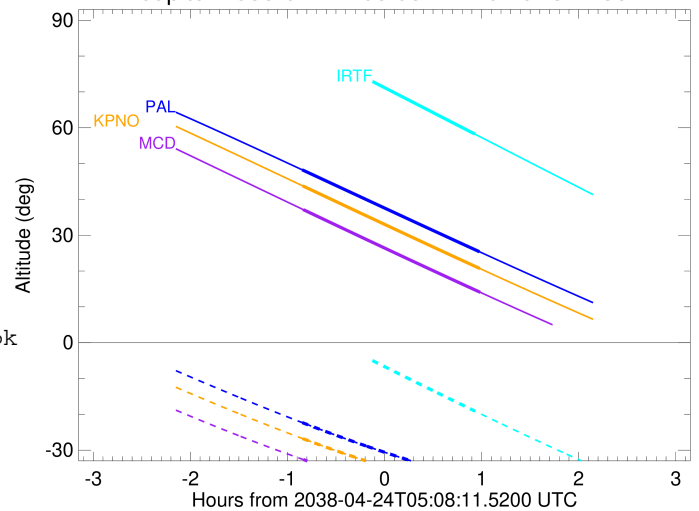
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2038-04-24T04:17:57.002	37.15	-32.61	71491.5	-31.19	-34.63
Jupiter	E	2038-04-24T06:07:21.217	14.06	-45.15	71491.5	-33.58	-37.12

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2038-04-24T05:10:20.130
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       : 865597095974649216
2Mass ID (if available) : 07332921+2210386
ICRS Star Coord at Epoch: 07h 33m 29.22837s +22:10:38.51965s
RUWE (>1.4 is poor) : 0.00
K magnitude          : 9.192
G magnitude          : 12.861
RP magnitude         : 11.399
BP magnitude         : 13.553
DUPflag             : 0
Distance (au)        : 5.385
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 18.49
Sun-Target sep (deg) : 77.95
Sun-Moon sep (deg)   : 167.66
B (ring opening deg) : 1.13
PA of pole (deg)     : 10.61
Pole direction: RA (deg): 268.05619
Dec (deg): 64.49692
C/A sky separation ("): 10.564
C/A sky separation (km): 41260.0
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
    
```



Jupiter 2038-04-24T05:08:11 K9.19 G12.86



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	2038-04-24T04:16:26.115	83.02	5.13x	71491.5	-33.89	-37.44
Jupiter	E	2038-04-24T06:04:03.136	58.22	-19.10	71491.4	-36.50	-40.14