

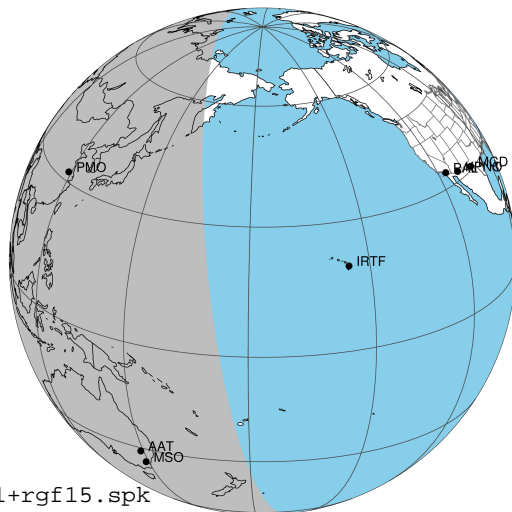
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2024-08-28T18:27:48.250
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3415283330068719104
 2Mass ID (if available) : 05092238+2213193

Jupiter 2024-08-28T18:27:48 K9.47 G12.54 Pgt

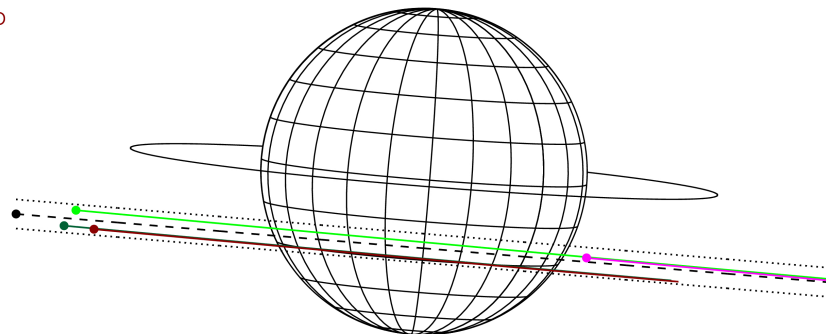
ICRS Star Coord at Epoch: 05h 09m 22.40558s +22:13:18.96623s

RUWE (>1.4 is poor) : 1.00
 K magnitude : 9.468
 G magnitude : 12.543
 RP magnitude : 11.643
 BP magnitude : 13.372
 DUPflag : 0
 Distance (au) : 5.169
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 19.21
 Sun-Target sep (deg) : 77.30
 Sun-Moon sep (deg) : 17.61
 B (ring opening deg) : 2.88
 PA of pole (deg) : -4.60
 Pole direction: RA (deg): 268.05789
 Dec (deg): 64.49673
 C/A sky separation (") : 8.942
 C/A sky separation (km) : 33520.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2024-08-28T18:27:48 K9.47 G12.54
 Pgt



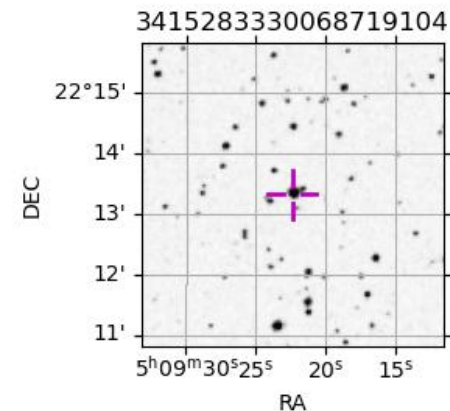
Earth
 PMO
 KAV
 AAT
 MSO



2024-08-28T18:27:48.2500 cc: 05 09 22.4056 s: +22 13 18.9662 C/A 8.932" PA 355.20 deg v_sky +19.21 km/s D 05.17 AU
 Credit: Styled after SORA/Lucky Star

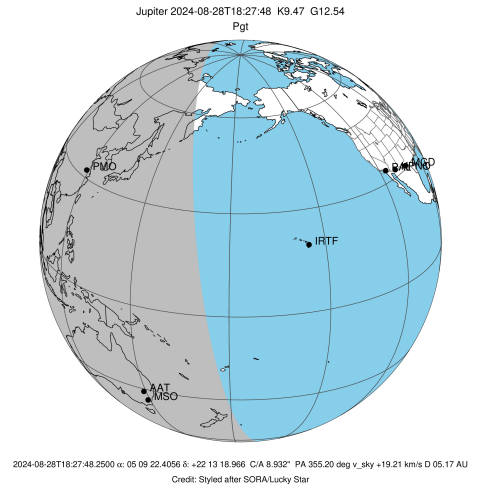
Observable events with sun below -5 deg and altitude above 5 deg

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			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	AUG 28 17:27 - AUG 28 19:20	Pie
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
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			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	+ +	AUG 28 17:31 - AUG 28 19:18	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	AUG 28 17:31 - AUG 28 19:18	Pie

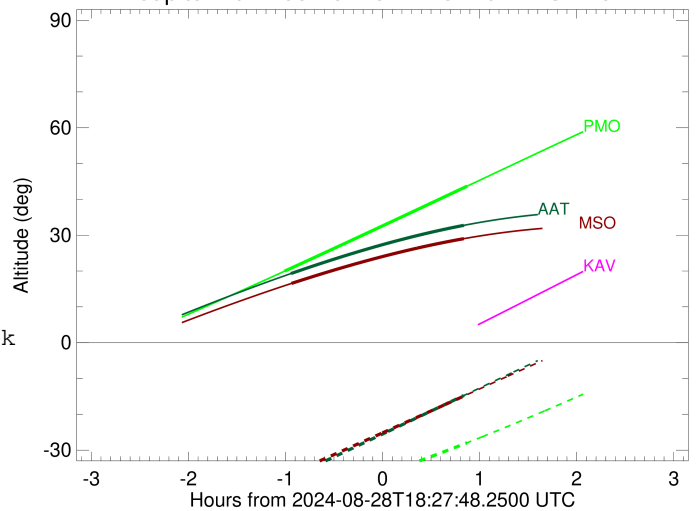


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-08-28T18:23:29.770
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : PMO
Location            : Purple Mtn Obs. Nanking
Latitude (deg)      : 32.06667
E. Longitude (deg)  : 118.82089
Altitude (km)       : 0.364
Gaia source ID      : 3415283330068719104
2Mass ID (if available) : 05092238+2213193
ICRS Star Coord at Epoch: 05h 09m 22.40558s +22:13:18.96623s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.468
G magnitude          : 12.543
RP magnitude         : 11.643
BP magnitude         : 13.372
DUPflag             : 0
Distance (au)       : 5.169
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.21
Sun-Target sep (deg) : 77.30
Sun-Moon sep (deg)   : 18.27
B (ring opening deg) : 2.88
PA of pole (deg)     : -4.60
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 8.232
C/A sky separation (km) : 30860.1
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 2024-08-28T18:27:48 K9.47 G12.54

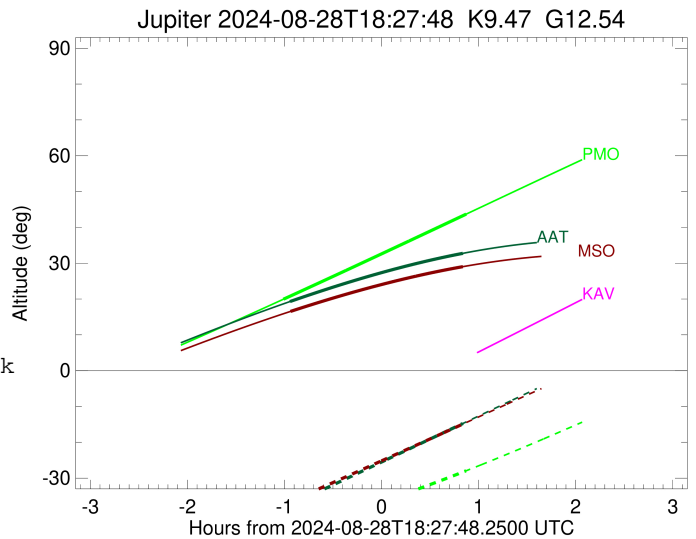
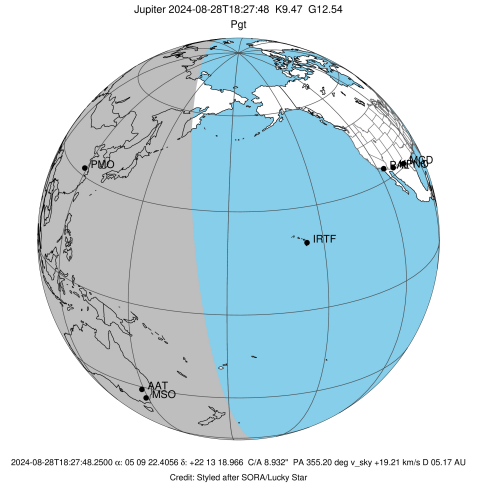


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-28T17:27:16.391	19.96	-44.39	71490.0	-24.88	-27.89
Jupiter	E	2024-08-28T19:20:02.614	43.67	-27.95	71489.8	-26.18	-29.29

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-08-28T18:24:33.850
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : AAT
Location            : Siding Spring (AAT)
Latitude (deg)      : -31.27703
E. Longitude (deg)  : 149.06608
Altitude (km)       : 1.164
Gaia source ID      : 3415283330068719104
2Mass ID (if available) : 05092238+2213193
ICRS Star Coord at Epoch: 05h 09m 22.40558s +22:13:18.96623s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.468
G magnitude          : 12.543
RP magnitude         : 11.643
BP magnitude         : 13.372
DUPflag             : 0
Distance (au)       : 5.169
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.21
Sun-Target sep (deg) : 77.30
Sun-Moon sep (deg)  : 18.42
B (ring opening deg) : 2.88
PA of pole (deg)    : -4.60
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (" ) : 10.134
C/A sky separation (km) : 37990.0
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
    
```

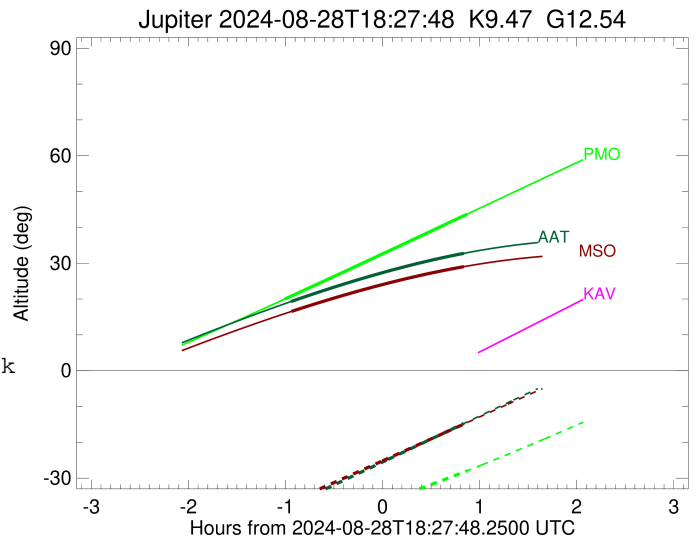
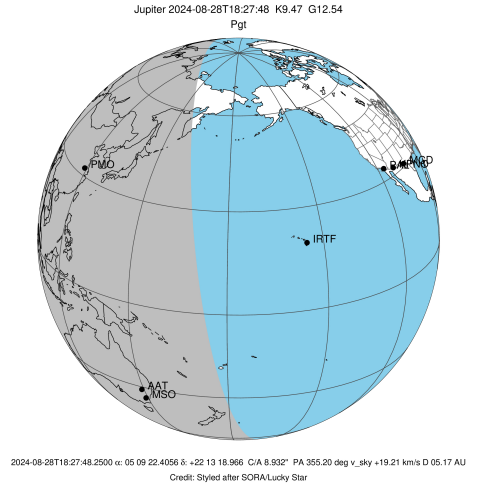


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-28T17:31:14.359	19.29	-37.48	71488.9	-31.47	-34.92
Jupiter	E	2024-08-28T19:18:06.037	32.75	-14.74	71488.7	-32.56	-36.07

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-08-28T18:24:40.380
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : MSO
Location            : Mt. Stromlo Observatory
Latitude (deg)      : -35.32000
E. Longitude (deg)  : 149.00833
Altitude (km)       : 0.770
Gaia source ID      : 3415283330068719104
2Mass ID (if available) : 05092238+2213193
ICRS Star Coord at Epoch: 05h 09m 22.40558s +22:13:18.96623s
RUWE (>1.4 is poor) : 1.00
K magnitude         : 9.468
G magnitude         : 12.543
RP magnitude        : 11.643
BP magnitude        : 13.372
DUPflag            : 0
Distance (au)       : 5.169
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 19.21
Sun-Target sep (deg) : 77.30
Sun-Moon sep (deg)  : 18.40
B (ring opening deg) : 2.88
PA of pole (deg)    : -4.60
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 10.209
C/A sky separation (km) : 38270.0
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	2024-08-28T17:31:32.443	16.54	-36.46	71488.9	-31.76	-35.22
Jupiter	E	2024-08-28T19:18:00.502	29.02	-14.92	71488.7	-32.81	-36.33