

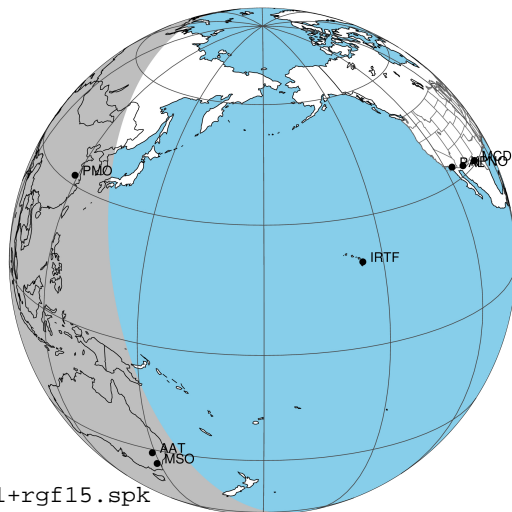
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2024-07-29T20:20:21.240
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3412770847215323008
 2Mass ID (if available) : 04493189+2145200

Jupiter 2024-07-29T20:20:21 K6.84 G10.39 Pgt

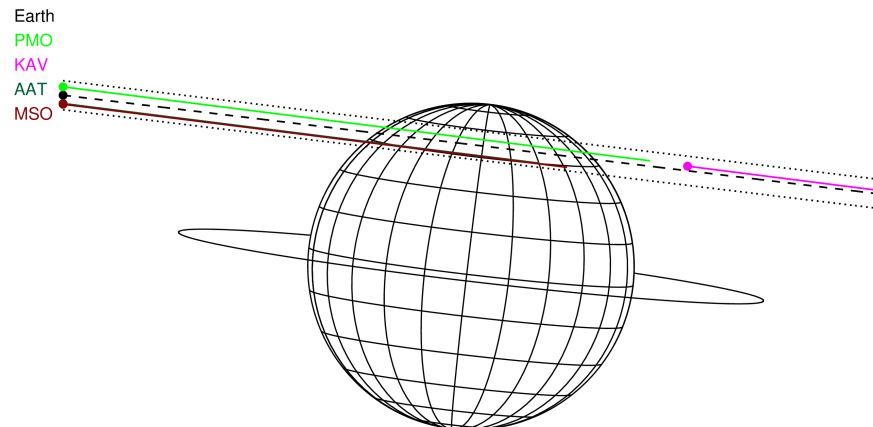
ICRS Star Coord at Epoch: 04h 49m 31.88351s +21:45:19.86642s

RUWE (>1.4 is poor) : 1.02
 K magnitude : 6.838
 G magnitude : 10.389
 RP magnitude : 9.397
 BP magnitude : 11.412
 DUPflag : 0
 Distance (au) : 5.577
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 30.66
 Sun-Target sep (deg) : 53.18
 Sun-Moon sep (deg) : 15.35
 B (ring opening deg) : 2.89
 PA of pole (deg) : -6.69
 Pole direction: RA (deg): 268.05791
 Dec (deg): 64.49674
 C/A sky separation (") : 13.107
 C/A sky separation (km) : 53021.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2024-07-29T20:20:21 K6.84 G10.39
 Pgt

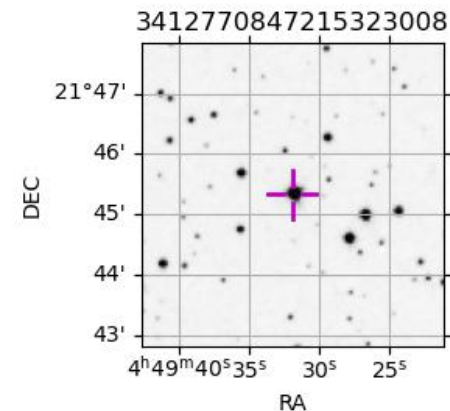


2024-07-29T20:20:21.2400 α: 04 49 31.8835 δ: +21 45 19.866 C/A ***** PA 173.10 deg v_sky +30.66 km/s D 05.58 AU
 Credit: Styled after SORA/Lucky Star



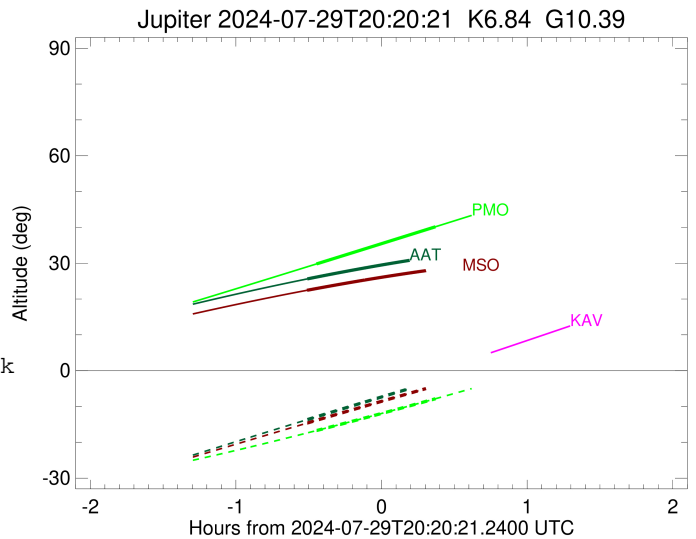
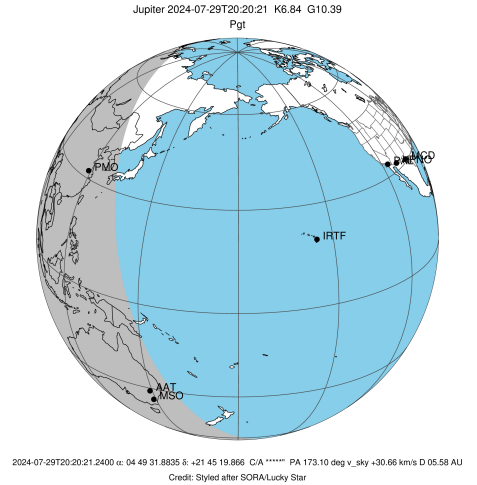
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	JUL 29 19:53 - JUL 29 20:42	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	+	JUL 29 19:49 - JUL 29 19:49	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	JUL 29 19:49 - JUL 29 19:49	Pin



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-07-29T20:18:04.560
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        : 3412770847215323008
2Mass ID (if available) : 04493189+2145200
ICRS Star Coord at Epoch: 04h 49m 31.88351s +21:45:19.86642s
RUWE (>1.4 is poor)  : 1.02
K magnitude           : 6.838
G magnitude           : 10.389
RP magnitude          : 9.397
BP magnitude          : 11.412
DUPflag              : 0
Distance (au)         : 5.578
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 30.66
Sun-Target sep (deg)  : 53.18
Sun-Moon sep (deg)    : 14.76
B (ring opening deg) : 2.89
PA of pole (deg)      : -6.69
Pole direction: RA (deg): 268.05791
Dec (deg): 64.49674
C/A sky separation (") : 13.777
C/A sky separation (km) : 55731.8
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
    
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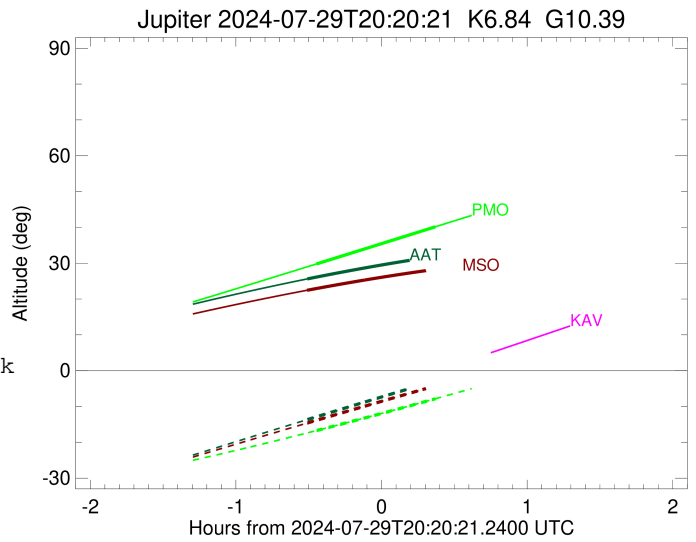
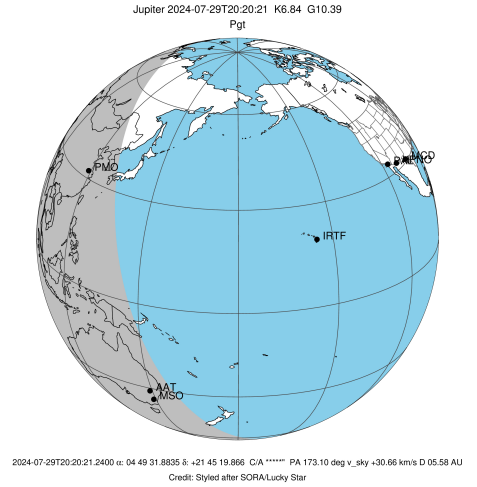


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-07-29T19:53:37.233	29.80	-16.71	71484.9	51.63	55.15
Jupiter	E	2024-07-29T20:42:34.001	40.16	-7.84	71485.1	50.65	54.21

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-07-29T20:18:37.700
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       : 3412770847215323008
2Mass ID (if available) : 04493189+2145200
ICRS Star Coord at Epoch: 04h 49m 31.88351s +21:45:19.86642s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 6.838
G magnitude          : 10.389
RP magnitude         : 9.397
BP magnitude         : 11.412
DUPflag             : 0
Distance (au)        : 5.578
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 30.66
Sun-Target sep (deg) : 53.18
Sun-Moon sep (deg)   : 15.23
B (ring opening deg) : 2.89
PA of pole (deg)     : -6.69
Pole direction: RA (deg): 268.05791
Dec (deg): 64.49674
C/A sky separation (") : 12.012
C/A sky separation (km) : 48593.0
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
    
```

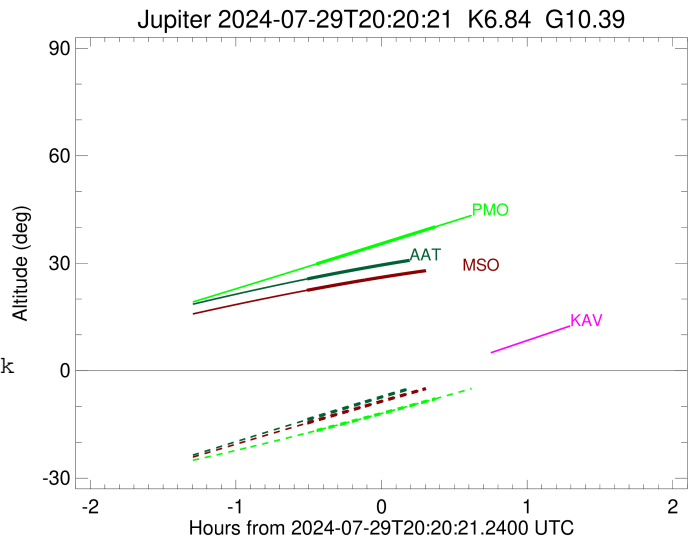
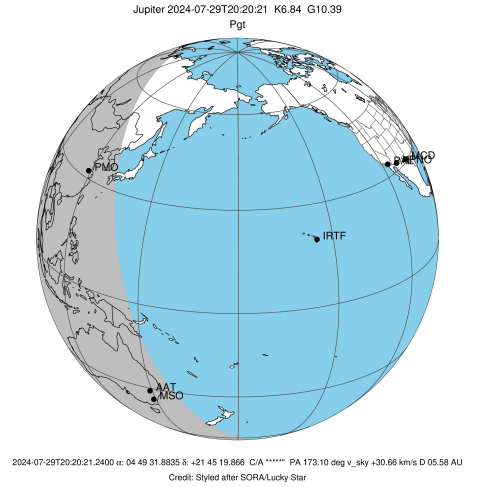


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-07-29T19:49:50.233	25.62	-13.65	71486.6	43.19	46.91
Jupiter	E	2024-07-29T20:47:27.173	32.37	-1.85x	71486.8	42.34	46.06

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-07-29T20:18:40.370
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      : 3412770847215323008
2Mass ID (if available) : 04493189+2145200
ICRS Star Coord at Epoch: 04h 49m 31.88351s +21:45:19.86642s
RUWE (>1.4 is poor) : 1.02
K magnitude         : 6.838
G magnitude         : 10.389
RP magnitude        : 9.397
BP magnitude        : 11.412
DUPflag            : 0
Distance (au)       : 5.578
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : 30.66
Sun-Target sep (deg) : 53.18
Sun-Moon sep (deg)  : 15.24
B (ring opening deg) : 2.89
PA of pole (deg)    : -6.69
Pole direction: RA (deg): 268.05791
Dec (deg): 64.49674
C/A sky separation (") : 11.943
C/A sky separation (km) : 48311.7
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	2024-07-29T19:49:45.164	22.45	-14.62	71486.7	42.88	46.60
Jupiter	E	2024-07-29T20:47:37.522	28.74	-3.27x	71486.8	42.05	45.77