

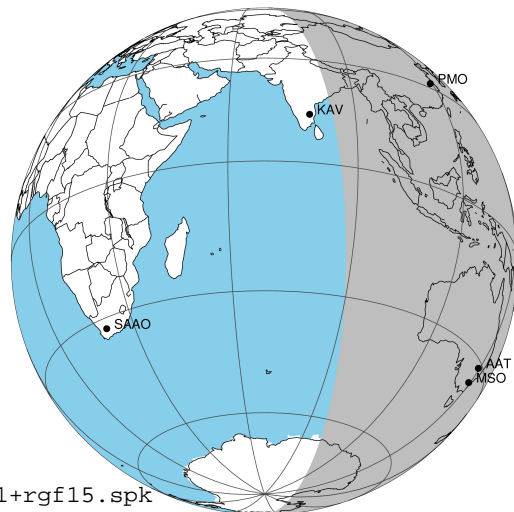
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-10-09T12:03:03.320
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068802878095431168
 2Mass ID (if available) : 17455366-2319396

Jupiter 2043-10-09T12:03:03 K9.13 G14.61 Pgt

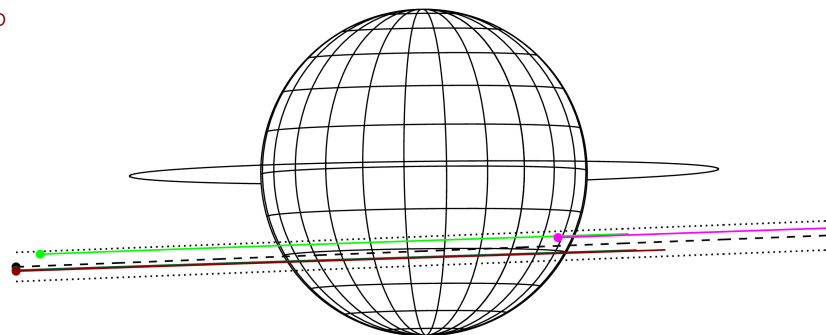
ICRS Star Coord at Epoch: 17h 45m 53.65096s -23:19:39.85402s

RUWE (>1.4 is poor) : 1.22
 K magnitude : 9.133
 G magnitude : 14.613
 RP magnitude : 13.178
 BP magnitude : 16.912
 DUPflag : 0
 Distance (au) : 5.462
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 22.71
 Sun-Target sep (deg) : 71.27
 Sun-Moon sep (deg) : 5.42
 B (ring opening deg) : -2.17
 PA of pole (deg) : 0.68
 Pole direction: RA (deg): 268.05675
 Dec (deg): 64.49731
 C/A sky separation (") : 8.684
 C/A sky separation (km) : 34398.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-10-09T12:03:03 K9.13 G14.61
 Pgt



Earth
 PMO
 KAV
 AAT
 MSO



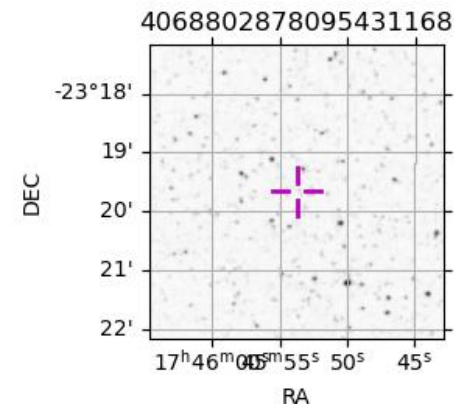
2043-10-09T12:03:03.3200 a: 17 45 53.6510 s: -23 19 39.854 C/A 8.692" PA 2.22 deg v_sky +22.71 km/s D 05.46 AU

Credit: Styled after SORA/Lucky Star

URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

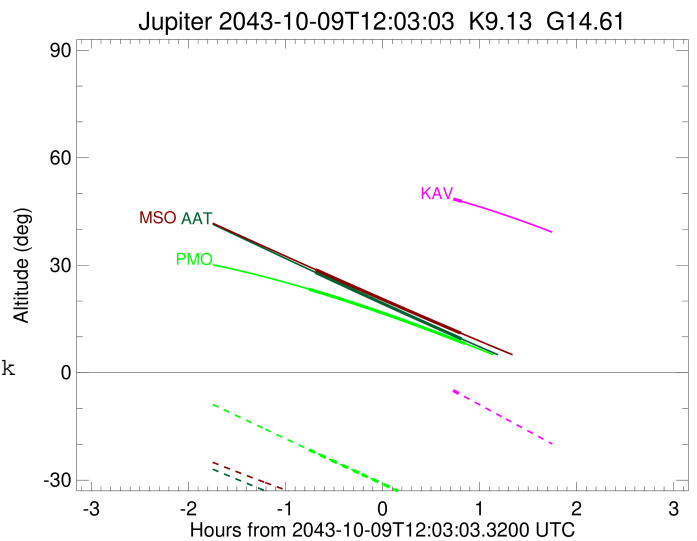
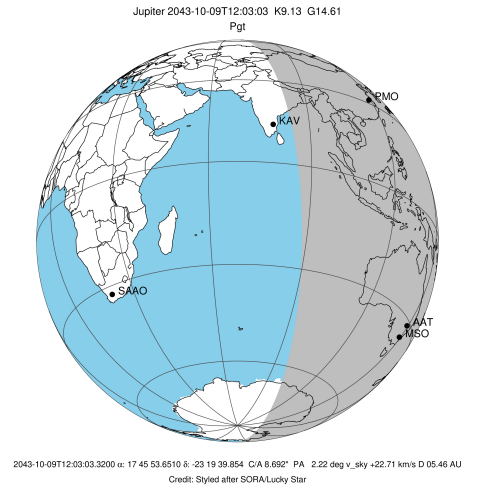
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
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	+ +	OCT 09 11:17 - OCT 09 12:54	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	+ +	OCT 09 12:52 - OCT 09 12:52	Pne
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	+ +	OCT 09 11:21 - OCT 09 12:51	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	OCT 09 11:21 - OCT 09 12:51	Pie



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-09T12:05:55.560
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        : 4068802878095431168
2Mass ID (if available) : 17455366-2319396
ICRS Star Coord at Epoch: 17h 45m 53.65096s -23:19:39.85402s
RUWE (>1.4 is poor) : 1.22
K magnitude           : 9.133
G magnitude           : 14.613
RP magnitude          : 13.178
BP magnitude          : 16.912
DUPflag              : 0
Distance (au)         : 5.462
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 22.71
Sun-Target sep (deg) : 71.27
Sun-Moon sep (deg)   : 6.21
B (ring opening deg) : -2.17
PA of pole (deg)     : 0.68
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 7.529
C/A sky separation (km) : 29822.7
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
    
```

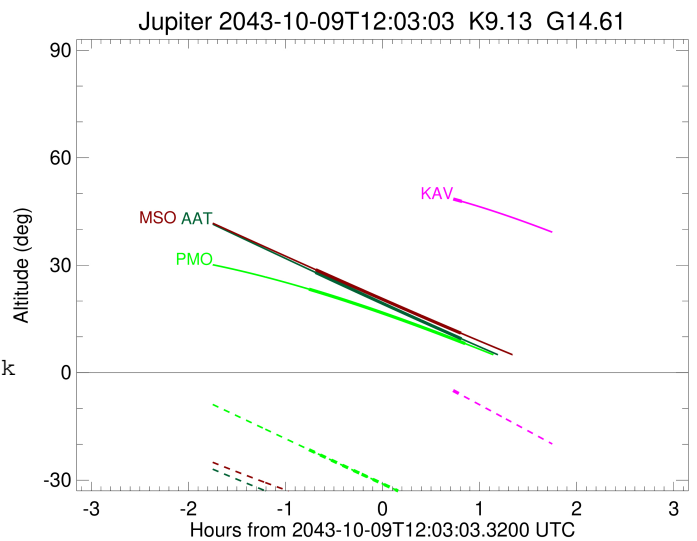
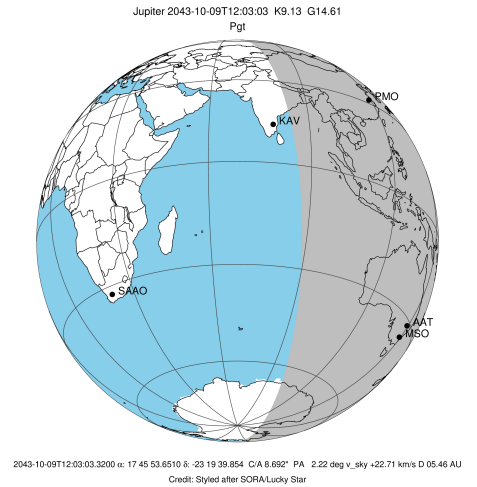


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-09T11:17:38.827	23.31	-21.50	71490.8	-25.92	-29.01
Jupiter	E	2043-10-09T12:54:02.098	8.14	-41.35	71491.0	-23.42	-26.31

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-09T12:03:47.410
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : KAV
Location            : Kavalur Observatory
Latitude (deg)      : 12.57556
E. Longitude (deg)  : 78.83167
Altitude (km)       : 0.722
Gaia source ID      : 4068802878095431168
2Mass ID (if available) : 17455366-2319396
ICRS Star Coord at Epoch: 17h 45m 53.65096s -23:19:39.85402s
RUWE (>1.4 is poor) : 1.22
K magnitude          : 9.133
G magnitude          : 14.613
RP magnitude         : 13.178
BP magnitude         : 16.912
DUPflag             : 0
Distance (au)       : 5.462
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.71
Sun-Target sep (deg) : 71.27
Sun-Moon sep (deg)  : 6.04
B (ring opening deg) : -2.17
PA of pole (deg)    : 0.68
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (" ) : 7.742
C/A sky separation (km) : 30669.7
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
    
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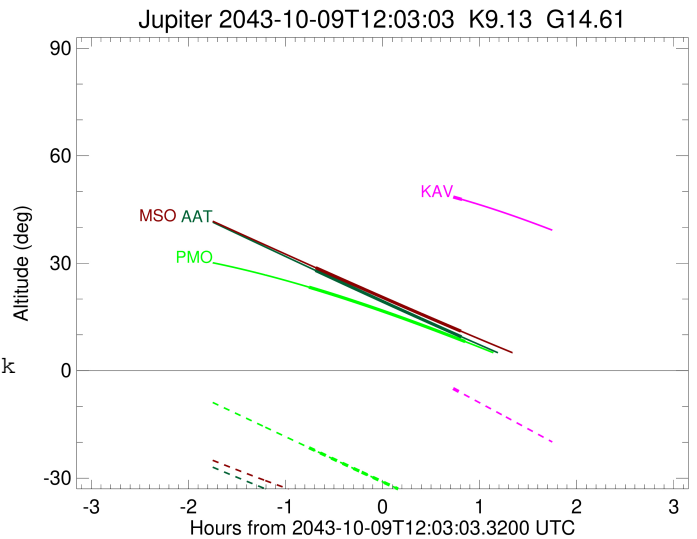
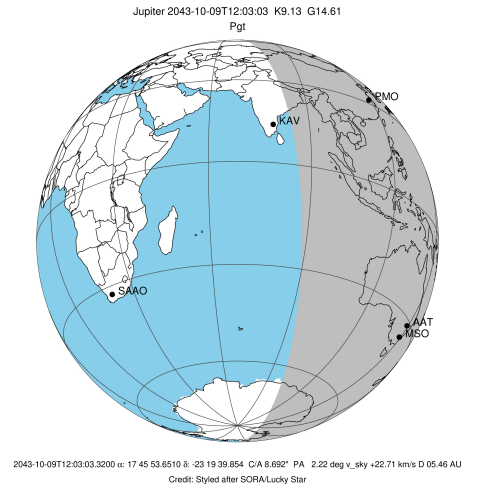


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-09T11:15:26.582	54.14	17.09x	71490.7	-26.93	-30.10
Jupiter	E	2043-10-09T12:52:04.025	47.80	-6.28	71490.9	-23.94	-26.88

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-09T12:06:53.930
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      : 4068802878095431168
2Mass ID (if available) : 17455366-2319396
ICRS Star Coord at Epoch: 17h 45m 53.65096s -23:19:39.85402s
RUWE (>1.4 is poor) : 1.22
K magnitude         : 9.133
G magnitude         : 14.613
RP magnitude        : 13.178
BP magnitude        : 16.912
DUPflag            : 0
Distance (au)       : 5.462
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 22.71
Sun-Target sep (deg) : 71.27
Sun-Moon sep (deg)  : 5.32
B (ring opening deg) : -2.17
PA of pole (deg)    : 0.68
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 9.321
C/A sky separation (km) : 36923.9
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
    
```

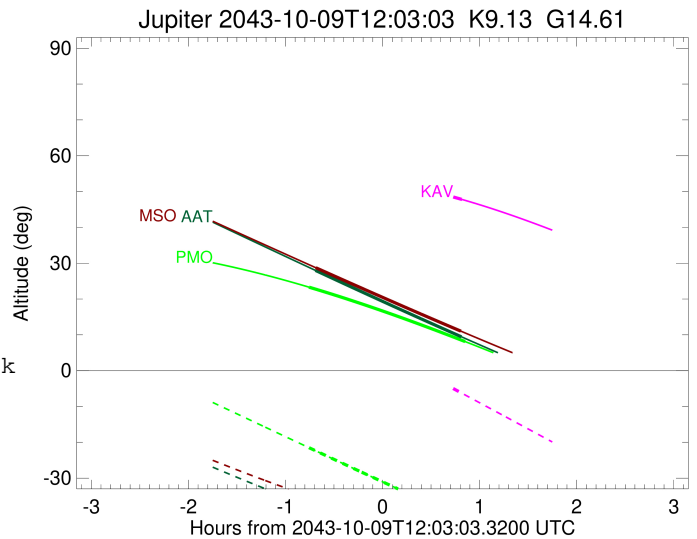
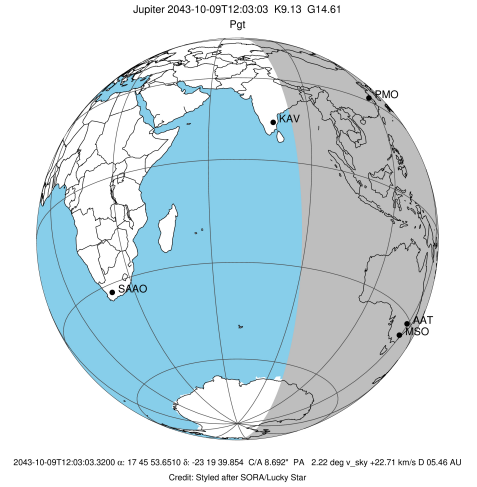


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-09T11:21:46.244	27.95	-38.33	71490.2	-32.23	-35.72
Jupiter	E	2043-10-09T12:51:50.782	9.45	-49.97	71490.4	-29.93	-33.30

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-09T12:06:44.080
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       : 4068802878095431168
2Mass ID (if available) : 17455366-2319396
ICRS Star Coord at Epoch: 17h 45m 53.65096s -23:19:39.85402s
RUWE (>1.4 is poor) : 1.22
K magnitude          : 9.133
G magnitude          : 14.613
RP magnitude         : 13.178
BP magnitude         : 16.912
DUPflag             : 0
Distance (au)        : 5.462
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.71
Sun-Target sep (deg) : 71.27
Sun-Moon sep (deg)   : 5.26
B (ring opening deg) : -2.17
PA of pole (deg)     : 0.68
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 9.413
C/A sky separation (km) : 37286.5
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	2043-10-09T11:21:46.596	28.74	-35.65	71490.1	-32.59	-36.09
Jupiter	E	2043-10-09T12:51:31.208	11.03	-46.20	71490.4	-30.25	-33.64