

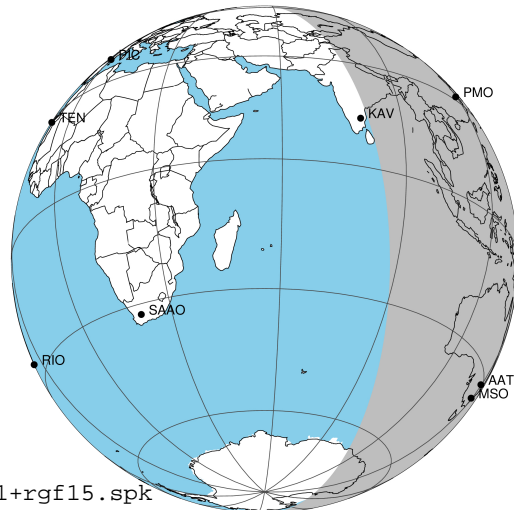
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-10-22T12:09:45.580
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4067875848029453184
 2Mass ID (if available) : 17542699-2322484

Jupiter 2043-10-22T12:09:45 K9.91 G14.57 Pgt

ICRS Star Coord at Epoch: 17h 54m 26.98783s -23:22:48.54350s

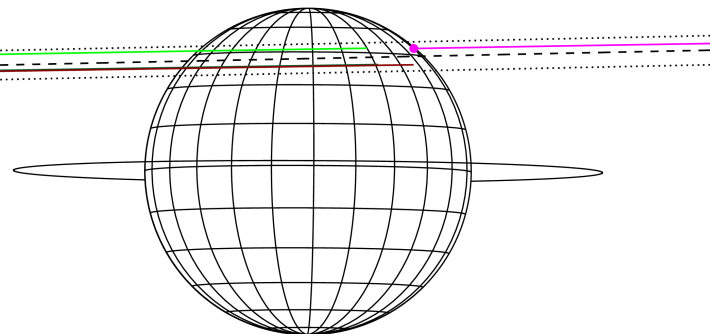
RUWE (>1.4 is poor) : 1.02
 K magnitude : 9.911
 G magnitude : 14.571
 RP magnitude : 13.847
 BP magnitude : 15.127
 DUPflag : 0
 Distance (au) : 5.643
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 27.92
 Sun-Target sep (deg) : 60.35
 Sun-Moon sep (deg) : 173.06
 B (ring opening deg) : -2.12
 PA of pole (deg) : -0.24
 Pole direction: RA (deg): 268.05675
 Dec (deg): 64.49731
 C/A sky separation (") : 12.081
 C/A sky separation (km) : 49443.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-10-22T12:09:45 K9.91 G14.57
 Pgt



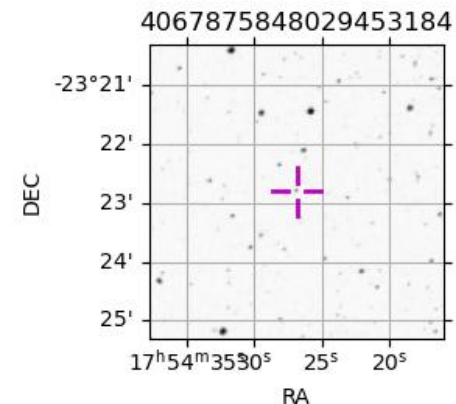
2043-10-22T12:09:45.5800 α: 17 54 26.9878 δ: -23 22 48.544 C/A ***** PA 181.20 deg v_sky +27.92 km/s D 05.64 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PMO
 KAV
 AAT
 MSO



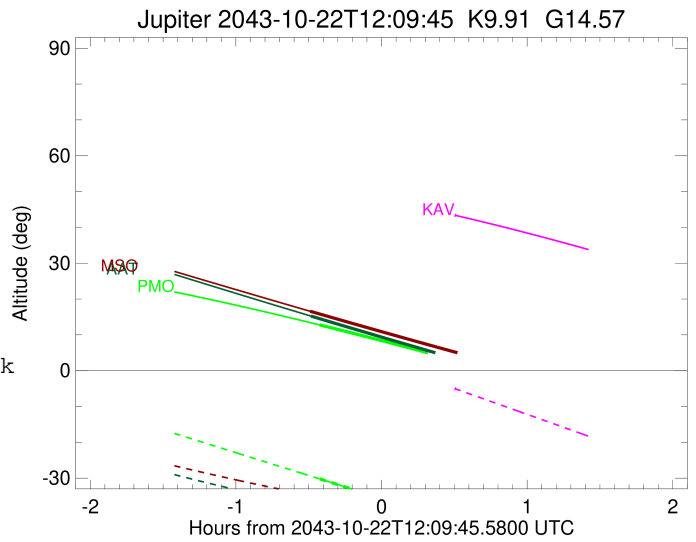
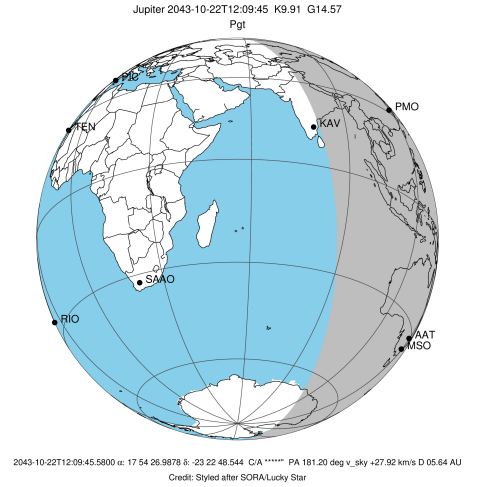
Observable events with sun below -5 deg and altitude above 5 deg

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 22 11:44 - OCT 22 11:44	Pin
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 22 12:40 - OCT 22 12:40	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 22 11:40 - OCT 22 11:40	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	OCT 22 11:40 - OCT 22 11:40	Pin



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target                : Jupiter
target radius (km)    : 71492.00
C/A epoch              : 2043-10-22T12:12:46.250
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        : 4067875848029453184
2Mass ID (if available) : 17542699-2322484
ICRS Star Coord at Epoch: 17h 54m 26.98783s -23:22:48.54350s
RUWE (>1.4 is poor)  : 1.02
K magnitude            : 9.911
G magnitude            : 14.571
RP magnitude           : 13.847
BP magnitude           : 15.127
DUPflag               : 0
Distance (au)         : 5.643
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s)  : 27.92
Sun-Target sep (deg)  : 60.35
Sun-Moon sep (deg)    : 174.05
B (ring opening deg)  : -2.12
PA of pole (deg)      : -0.24
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 13.089
C/A sky separation (km) : 53568.2
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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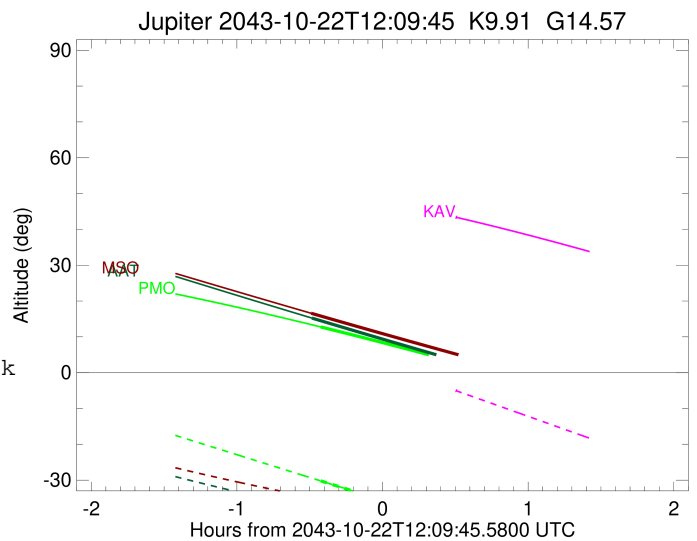
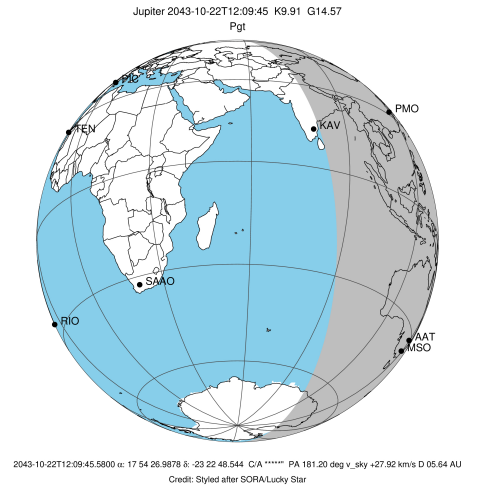


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-22T11:44:17.946	12.76	-30.21	71488.7	47.33	50.99
Jupiter	E	2043-10-22T12:41:11.250	2.74x	-42.09	71488.4	49.63	53.23

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-22T12:11:15.860
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       : 4067875848029453184
2Mass ID (if available) : 17542699-2322484
ICRS Star Coord at Epoch: 17h 54m 26.98783s -23:22:48.54350s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 9.911
G magnitude           : 14.571
RP magnitude         : 13.847
BP magnitude         : 15.127
DUPflag              : 0
Distance (au)        : 5.643
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 27.92
Sun-Target sep (deg) : 60.35
Sun-Moon sep (deg)   : 173.80
B (ring opening deg) : -2.12
PA of pole (deg)     : -0.24
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 12.955
C/A sky separation (km) : 53021.1
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
    
```

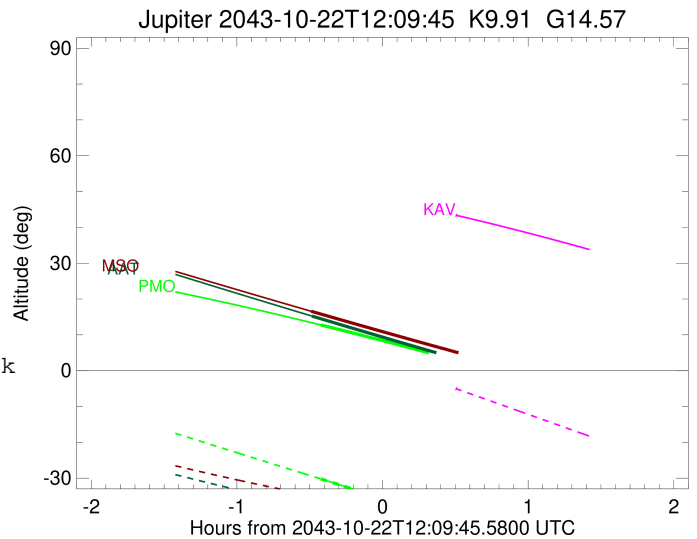
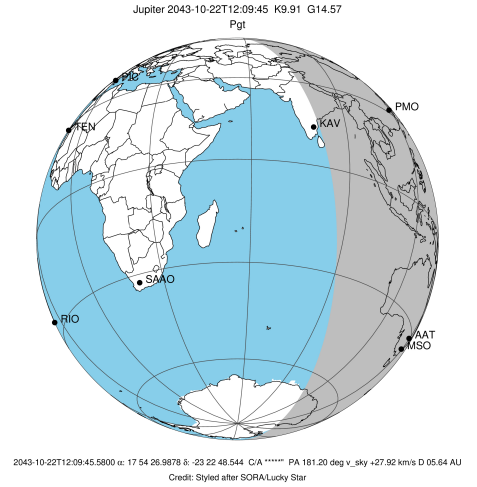


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-22T11:42:10.577	50.88	8.79x	71488.8	46.51	50.18
Jupiter	E	2043-10-22T12:40:19.110	43.33	-5.10	71488.5	49.11	52.72

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-22T12:13:11.780
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        : 4067875848029453184
2Mass ID (if available) : 17542699-2322484
ICRS Star Coord at Epoch: 17h 54m 26.98783s -23:22:48.54350s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 9.911
G magnitude           : 14.571
RP magnitude          : 13.847
BP magnitude          : 15.127
DUPflag              : 0
Distance (au)         : 5.643
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 27.92
Sun-Target sep (deg) : 60.35
Sun-Moon sep (deg)   : 173.20
B (ring opening deg) : -2.12
PA of pole (deg)     : -0.24
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 11.328
C/A sky separation (km) : 46362.3
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
    
```

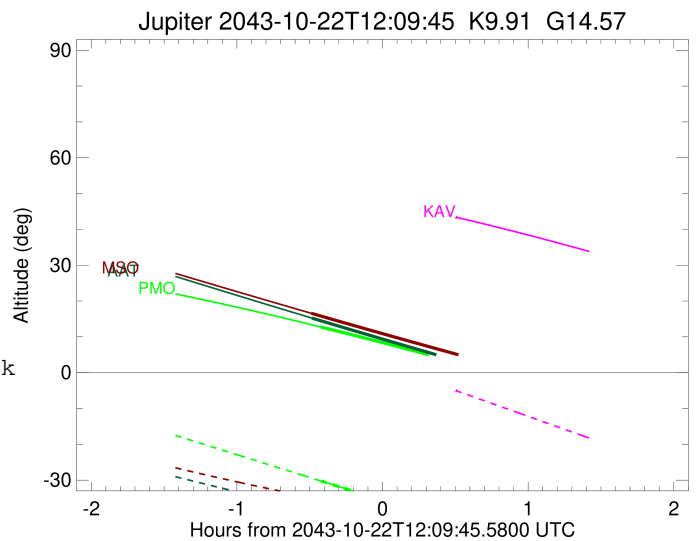
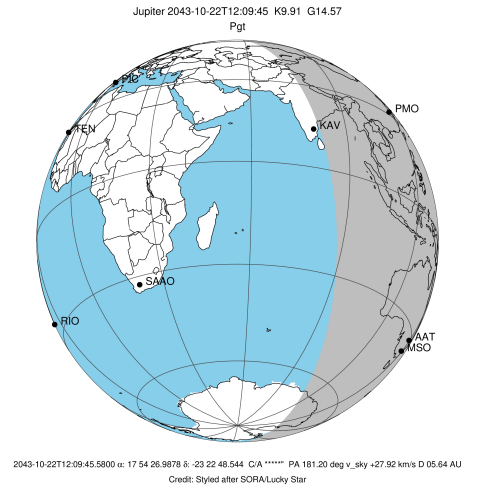


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-22T11:40:42.206	15.23	-37.89	71489.5	39.28	42.98
Jupiter	E	2043-10-22T12:45:36.651	2.34x	-45.19	71489.3	41.51	45.23

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-22T12:13:02.700
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        : 4067875848029453184
2Mass ID (if available) : 17542699-2322484
ICRS Star Coord at Epoch: 17h 54m 26.98783s -23:22:48.54350s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 9.911
G magnitude           : 14.571
RP magnitude          : 13.847
BP magnitude          : 15.127
DUPflag              : 0
Distance (au)         : 5.643
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 27.92
Sun-Target sep (deg)  : 60.35
Sun-Moon sep (deg)    : 173.14
B (ring opening deg) : -2.12
PA of pole (deg)      : -0.24
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 11.246
C/A sky separation (km) : 46024.6
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
    
```



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	2043-10-22T11:40:22.831	16.58	-34.73	71489.6	38.92	42.61
Jupiter	E	2043-10-22T12:45:37.998	4.15x	-41.42	71489.3	41.17	44.89