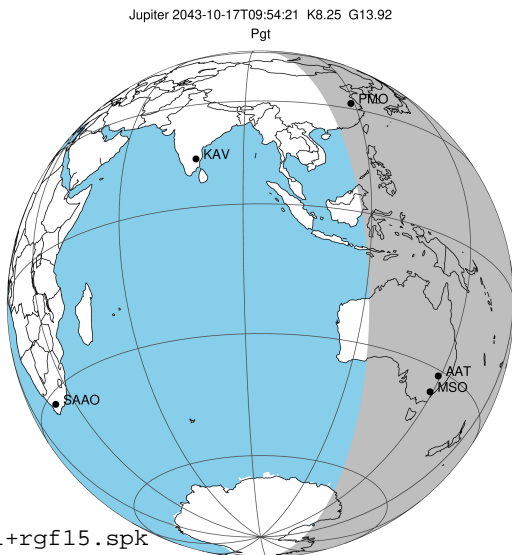


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-10-17T09:54:21.790
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068661075535231744
 2Mass ID (if available) : 17505537-2321418

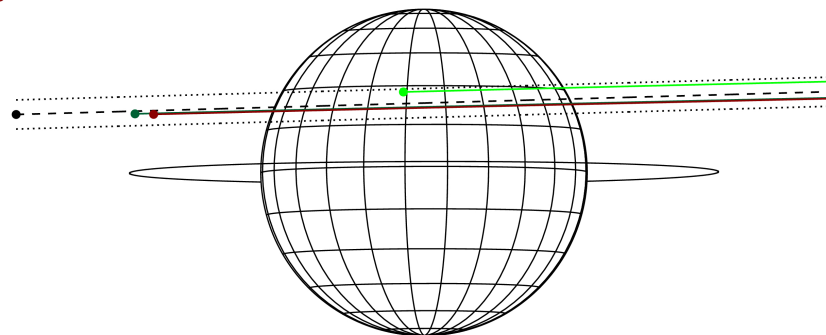
Jupiter 2043-10-17T09:54:21 K8.25 G13.92 Pgt

ICRS Star Coord at Epoch: 17h 50m 55.37411s -23:21:42.04380s
 RUWE (>1.4 is poor) : 0.92
 K magnitude : 8.249
 G magnitude : 13.916
 RP magnitude : 12.550
 BP magnitude : 16.148
 DUPflag : 0
 Distance (au) : 5.574
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 25.95
 Sun-Target sep (deg) : 64.60
 Sun-Moon sep (deg) : 100.54
 B (ring opening deg) : -2.14
 PA of pole (deg) : 0.14
 Pole direction: RA (deg): 268.05675
 Dec (deg): 64.49731
 C/A sky separation (") : 7.522
 C/A sky separation (km) : 30408.8
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp



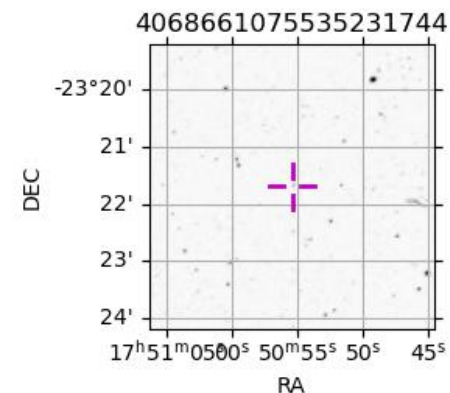
2043-10-17T09:54:21.7900 cc: 17 50 55.3741 s: -23 21 42.044 C/A 7.514" PA 181.60 deg v_sky +25.95 km/s D 05.57 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PMO
 AAT
 MSO



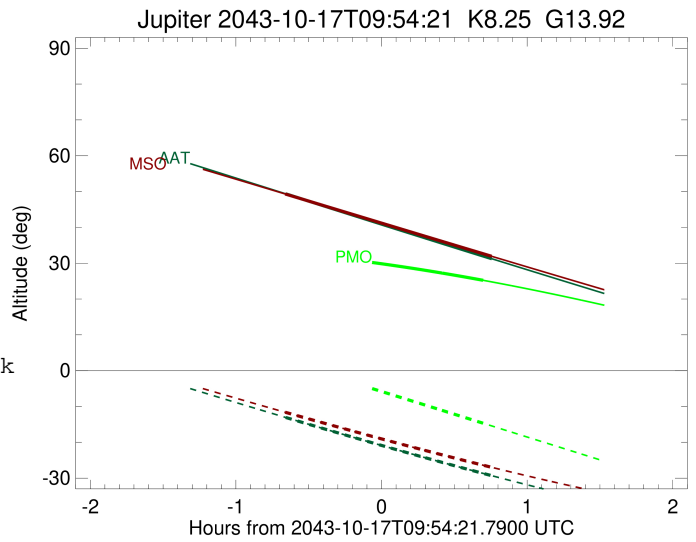
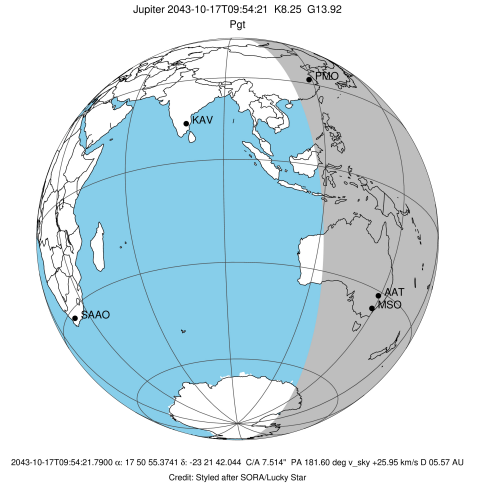
Observable events with sun below -5 deg and altitude above 5 deg

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 17 10:36 - OCT 17 10:36	Pne
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	+ +	OCT 17 09:14 - OCT 17 10:39	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	OCT 17 09:14 - OCT 17 10:39	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-17T09:55:49.150
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       : 4068661075535231744
2Mass ID (if available) : 17505537-2321418
ICRS Star Coord at Epoch: 17h 50m 55.37411s -23:21:42.04380s
RUWE (>1.4 is poor) : 0.92
K magnitude           : 8.249
G magnitude           : 13.916
RP magnitude          : 12.550
BP magnitude          : 16.148
DUPflag              : 0
Distance (au)        : 5.574
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 25.95
Sun-Target sep (deg) : 64.60
Sun-Moon sep (deg)   : 101.10
B (ring opening deg) : -2.14
PA of pole (deg)     : 0.14
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 8.780
C/A sky separation (km) : 35493.9
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
    
```

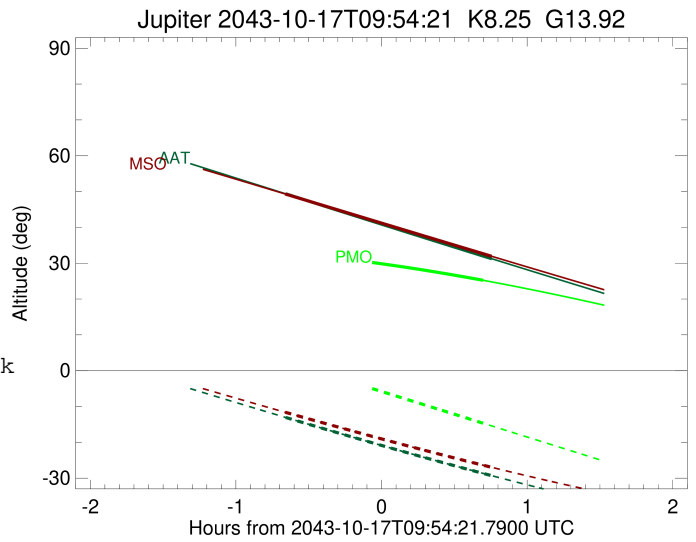
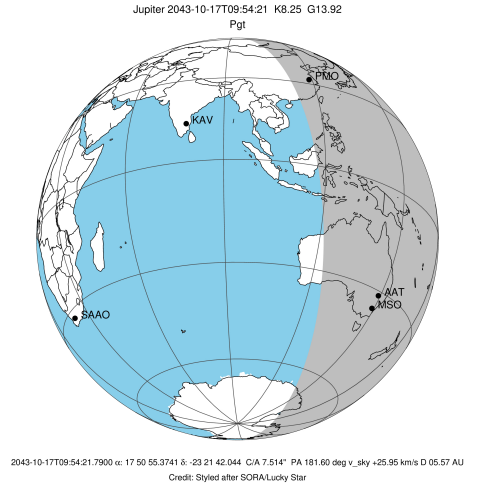


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-17T09:15:21.424	32.88	2.35x	71490.6	28.38	31.65
Jupiter	E	2043-10-17T10:36:12.850	25.23	-14.67	71490.3	31.05	34.48

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-17T09:57:22.790
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      : 4068661075535231744
2Mass ID (if available) : 17505537-2321418
ICRS Star Coord at Epoch: 17h 50m 55.37411s -23:21:42.04380s
RUWE (>1.4 is poor) : 0.92
K magnitude          : 8.249
G magnitude          : 13.916
RP magnitude         : 12.550
BP magnitude         : 16.148
DUPflag             : 0
Distance (au)       : 5.574
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 25.95
Sun-Target sep (deg) : 64.60
Sun-Moon sep (deg)  : 101.32
B (ring opening deg) : -2.14
PA of pole (deg)    : 0.14
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation ("): 7.101
C/A sky separation (km) : 28708.0
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
    
```

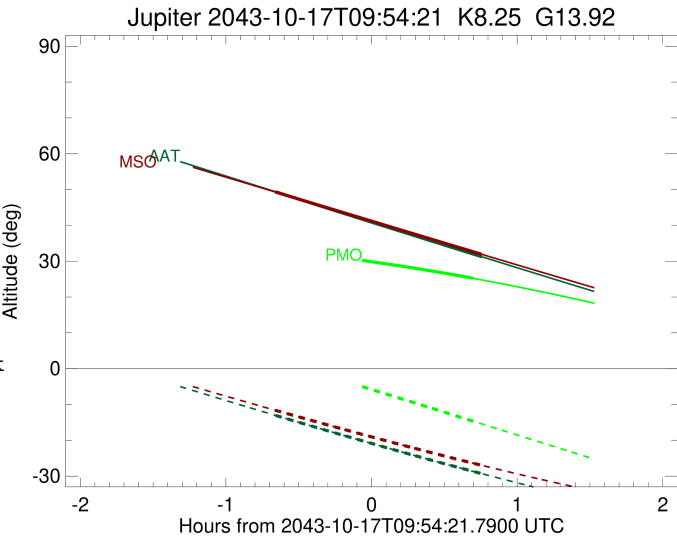
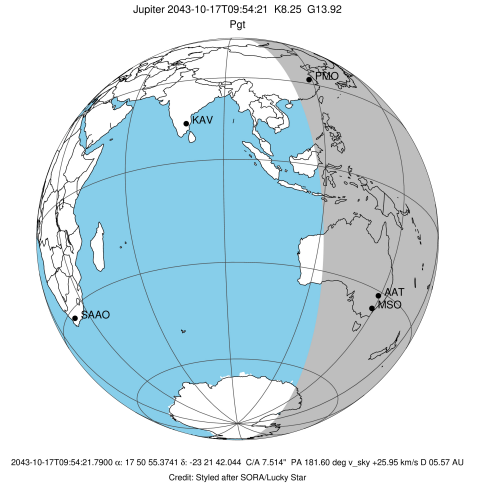


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-17T09:14:53.311	49.36	-13.06	71491.1	22.45	25.26
Jupiter	E	2043-10-17T10:39:44.857	31.26	-29.30	71490.9	24.82	27.84

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-17T09:57:14.790
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      : 4068661075535231744
2Mass ID (if available) : 17505537-2321418
ICRS Star Coord at Epoch: 17h 50m 55.37411s -23:21:42.04380s
RUWE (>1.4 is poor) : 0.92
K magnitude          : 8.249
G magnitude          : 13.916
RP magnitude         : 12.550
BP magnitude         : 16.148
DUPflag             : 0
Distance (au)       : 5.574
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 25.95
Sun-Target sep (deg) : 64.60
Sun-Moon sep (deg)  : 101.32
B (ring opening deg) : -2.14
PA of pole (deg)    : 0.14
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 7.002
C/A sky separation (km) : 28307.2
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
    
```



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	2043-10-17T09:14:39.629	49.32	-11.60	71491.1	22.09	24.87
Jupiter	E	2043-10-17T10:39:42.779	31.93	-26.97	71490.9	24.49	27.47