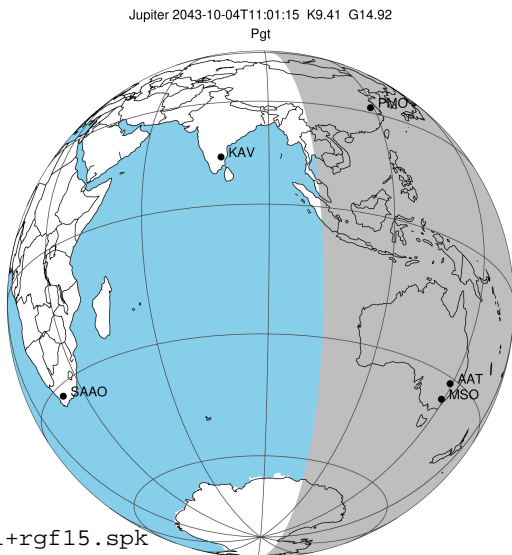


target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-10-04T11:01:15.740  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4116477977164990720  
 2Mass ID (if available) : 17425994-2317481

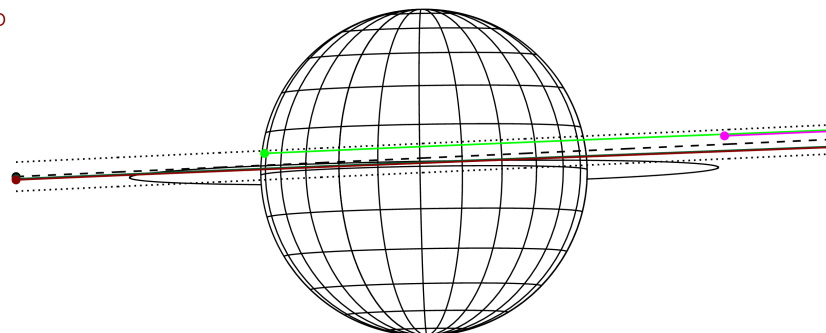
Jupiter 2043-10-04T11:01:15 K9.41 G14.92 Pgt

ICRS Star Coord at Epoch: 17h 42m 59.94644s -23:17:48.56973s  
 RUWE (>1.4 is poor) : 1.20  
 K magnitude : 9.411  
 G magnitude : 14.918  
 RP magnitude : 13.587  
 BP magnitude : 16.439  
 DUPflag : 0  
 Distance (au) : 5.388  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 20.54  
 Sun-Target sep (deg) : 75.58  
 Sun-Moon sep (deg) : 60.62  
 B (ring opening deg) : -2.19  
 PA of pole (deg) : 0.99  
 Pole direction: RA (deg): 268.05674  
 Dec (deg): 64.49731  
 C/A sky separation (") : 1.624  
 C/A sky separation (km) : 6343.9  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk  
 URKALLv1.spk  
 naif0012.tls  
 nep097.bsp  
 nep101.bsp  
 sat4401.bsp



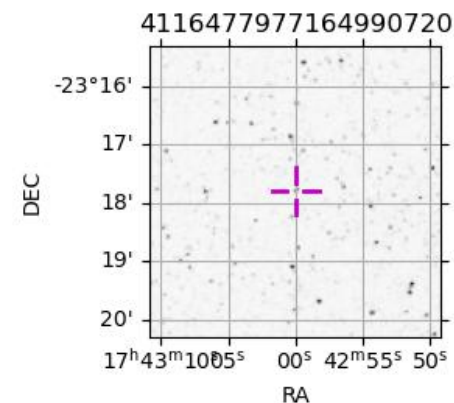
2043-10-04T11:01:15.7400 cc: 17 42 59.9464 s: -23 17 48.570 C/A 1.615" PA 182.62 deg v\_sky +20.54 km/s D 05.39 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 PMO  
 KAV  
 AAT  
 MSO



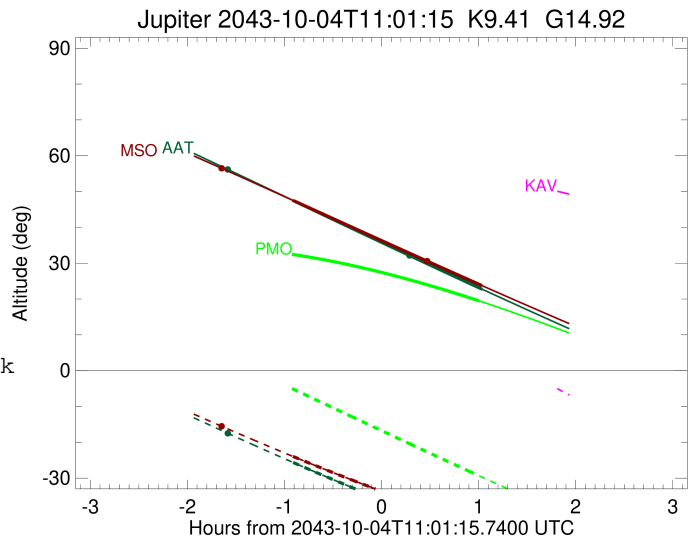
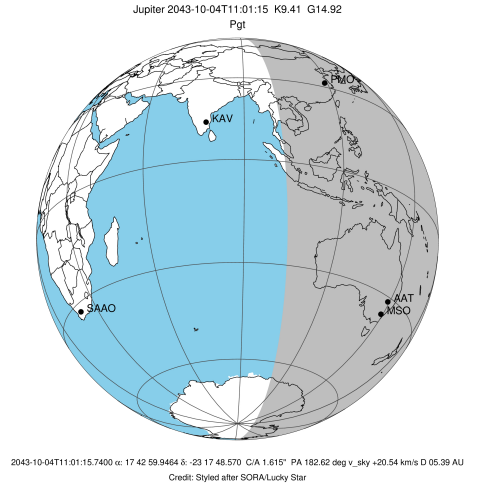
Observable events with sun below -5 deg and altitude above 5 deg

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 04 12:01 - OCT 04 12:01	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 04 10:06 - OCT 04 12:03	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	OCT 04 10:06 - OCT 04 12:03	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-04T11:03:24.550
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      : 4116477977164990720
2Mass ID (if available) : 17425994-2317481
ICRS Star Coord at Epoch: 17h 42m 59.94644s -23:17:48.56973s
RUWE (>1.4 is poor) : 1.20
K magnitude          : 9.411
G magnitude          : 14.918
RP magnitude         : 13.587
BP magnitude         : 16.439
DUPflag             : 0
Distance (au)       : 5.388
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 20.54
Sun-Target sep (deg) : 75.58
Sun-Moon sep (deg)  : 61.19
B (ring opening deg) : -2.19
PA of pole (deg)    : 0.99
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation ("): 2.911
C/A sky separation (km): 11376.6
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
    
```

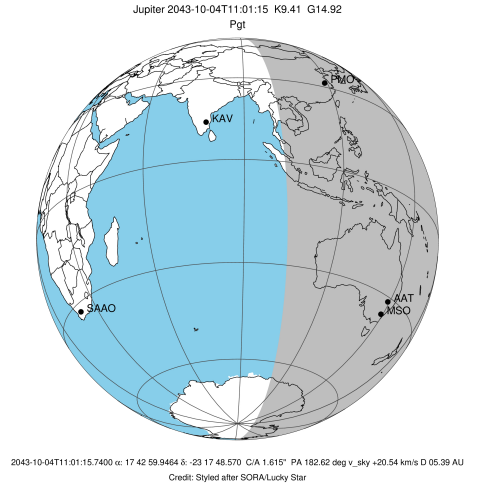


x: target alt < 5.0 deg or sun > -5.0 deg

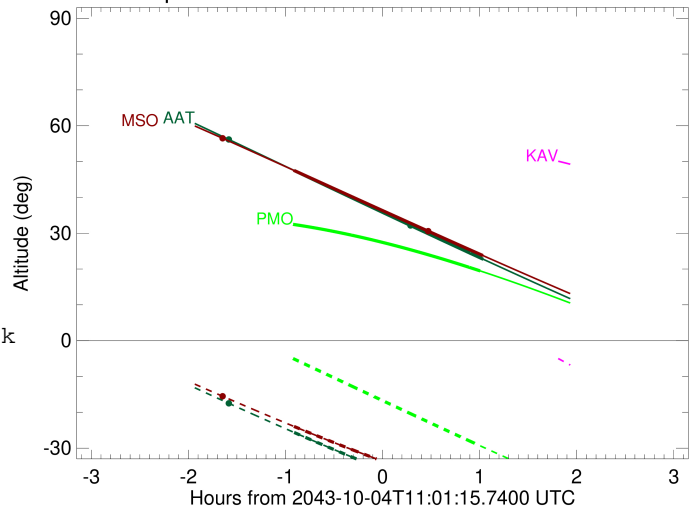
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-04T10:05:04.681	32.52	-4.79x	71491.9	7.67	8.75
Jupiter	E	2043-10-04T12:01:32.167	19.49	-29.33	71491.8	10.53	12.00

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-04T11:05:15.600
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        : 4116477977164990720
2Mass ID (if available) : 17425994-2317481
ICRS Star Coord at Epoch: 17h 42m 59.94644s -23:17:48.56973s
RUWE (>1.4 is poor) : 1.20
K magnitude           : 9.411
G magnitude           : 14.918
RP magnitude          : 13.587
BP magnitude          : 16.439
DUPflag              : 0
Distance (au)         : 5.388
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 20.54
Sun-Target sep (deg)  : 75.58
Sun-Moon sep (deg)    : 61.42
B (ring opening deg) : -2.19
PA of pole (deg)      : 0.99
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 1.160
C/A sky separation (km) : 4532.6
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
    
```



Jupiter 2043-10-04T11:01:15 K9.41 G14.92

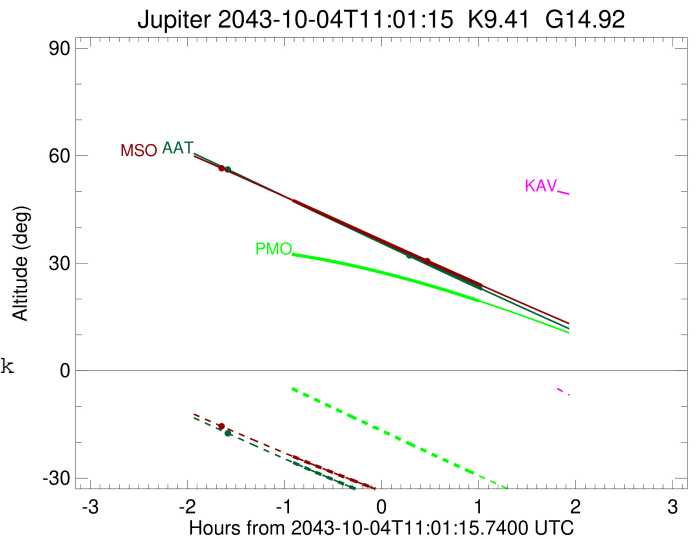
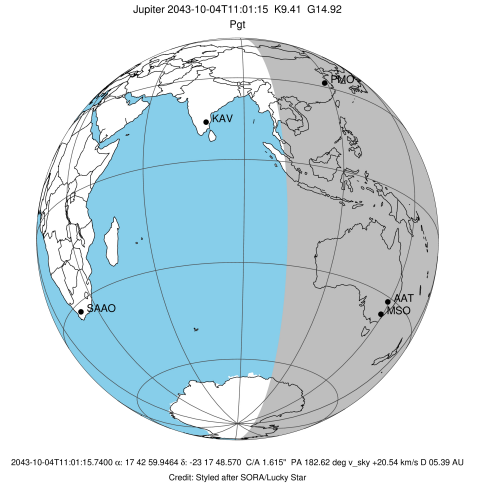


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-04T10:06:40.412	47.50	-25.63	71492.0	2.35	2.68
Jupiter	E	2043-10-04T12:03:32.034	22.72	-46.00	71492.0	4.85	5.55

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-04T11:05:05.390
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       : 4116477977164990720
2Mass ID (if available) : 17425994-2317481
ICRS Star Coord at Epoch: 17h 42m 59.94644s -23:17:48.56973s
RUWE (>1.4 is poor) : 1.20
K magnitude           : 9.411
G magnitude           : 14.918
RP magnitude          : 13.587
BP magnitude          : 16.439
DUPflag              : 0
Distance (au)        : 5.388
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 20.54
Sun-Target sep (deg) : 75.58
Sun-Moon sep (deg)   : 61.41
B (ring opening deg) : -2.19
PA of pole (deg)     : 0.99
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation ("): 1.059
C/A sky separation (km): 4137.2
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	2043-10-04T10:06:30.763	47.52	-23.93	71492.0	2.01	2.30
Jupiter	E	2043-10-04T12:03:21.979	23.75	-42.85	71492.0	4.56	5.21