

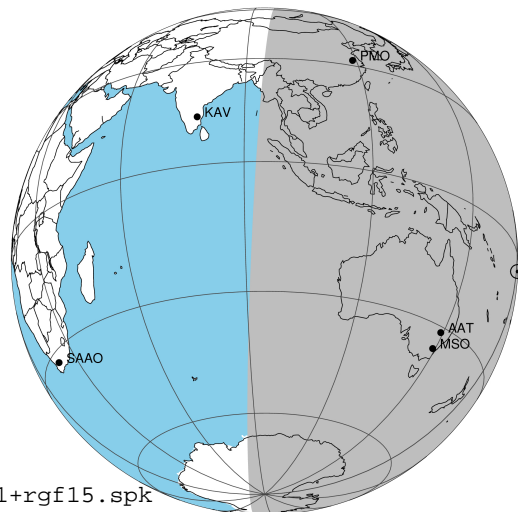
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-09-14T11:44:46.320  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4116682619433148800  
 2Mass ID (if available) : 17341326-2310433

Jupiter 2043-09-14T11:44:46 K6.66 G11.81 Pgt

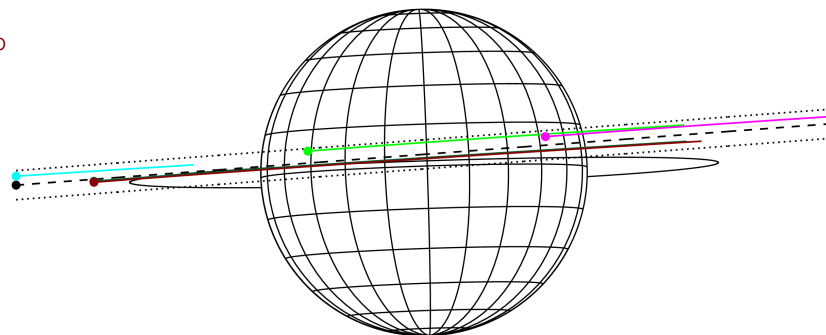
ICRS Star Coord at Epoch: 17h 34m 13.24723s -23:10:43.78518s

RUWE (>1.4 is poor) : 0.86  
 K magnitude : 6.658  
 G magnitude : 11.809  
 RP magnitude : 10.498  
 BP magnitude : 13.815  
 DUPflag : 0  
 Distance (au) : 5.084  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 11.47  
 Sun-Target sep (deg) : 93.11  
 Sun-Moon sep (deg) : 30.37  
 B (ring opening deg) : -2.25  
 PA of pole (deg) : 1.94  
 Pole direction: RA (deg): 268.05673  
 Dec (deg): 64.49731  
 C/A sky separation (") : 2.149  
 C/A sky separation (km) : 7925.4  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2043-09-14T11:44:46 K6.66 G11.81  
 Pgt



Earth  
 PMO  
 IRTF  
 KAV  
 AAT  
 MSO

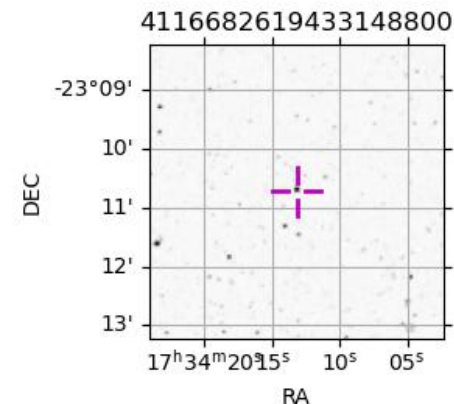


2043-09-14T11:44:46.3200 cr: 17 34 13.24723 s: -23 10 43.785 C/A 2.149° PA 184.31 deg v\_sky +11.47 km/s D 05.08 AU

Credit: Styled after SORA/Lucky Star

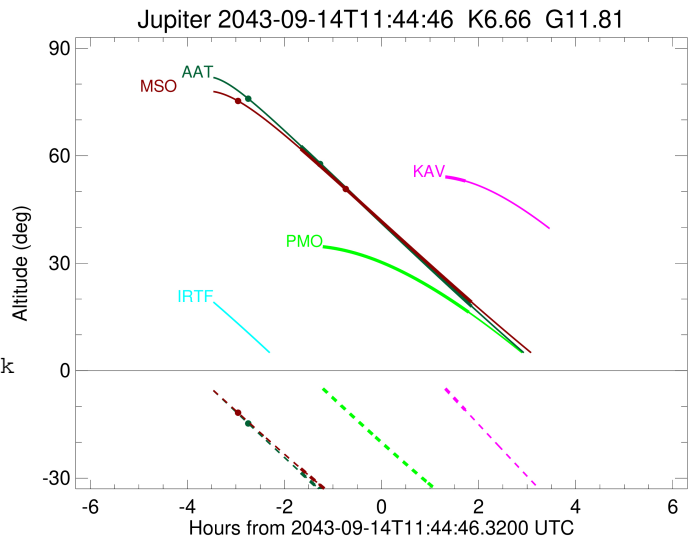
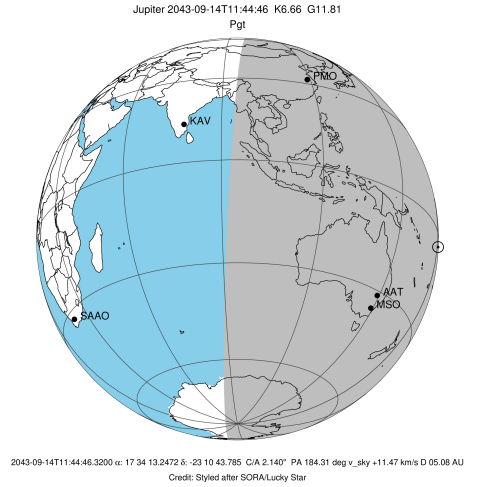
Observable events with sun below -5 deg and altitude above 5 deg

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	+	SEP 14 13:32 - SEP 14 13:32	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	+	SEP 14 13:28 - SEP 14 13:28	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	+ +	SEP 14 10:05 - SEP 14 13:36	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	SEP 14 10:05 - SEP 14 13:36	Pie



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-14T11:47:37.500
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      : 4116682619433148800
2Mass ID (if available) : 17341326-2310433
ICRS Star Coord at Epoch: 17h 34m 13.24723s -23:10:43.78518s
RUWE (>1.4 is poor) : 0.86
K magnitude          : 6.658
G magnitude          : 11.809
RP magnitude         : 10.498
BP magnitude         : 13.815
DUPflag             : 0
Distance (au)       : 5.084
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 11.47
Sun-Target sep (deg) : 93.11
Sun-Moon sep (deg)  : 30.48
B (ring opening deg) : -2.25
PA of pole (deg)    : 1.94
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation (") : 3.553
C/A sky separation (km) : 13102.2
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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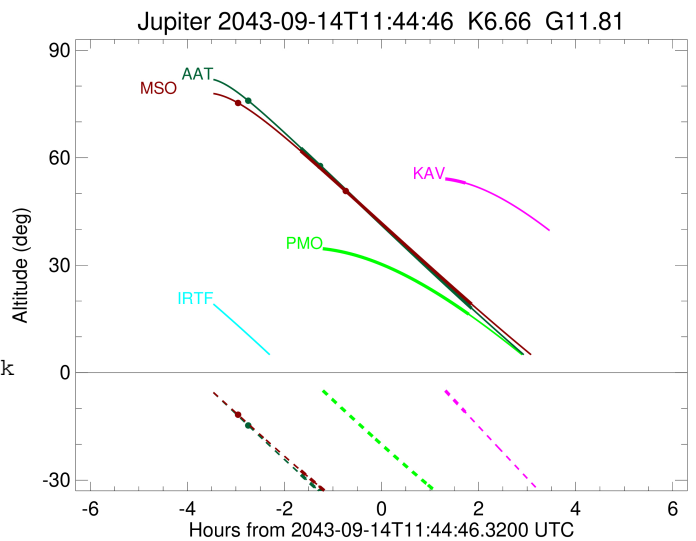
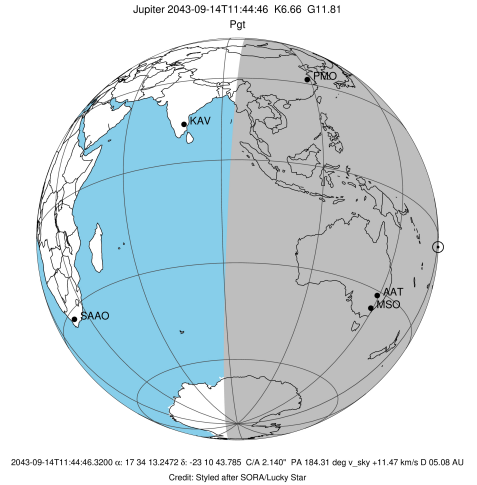


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-14T10:01:44.059	34.88	1.47x	71491.9	8.20	9.35
Jupiter	E	2043-09-14T13:32:29.824	16.32	-40.32	71491.7	12.54	14.27

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-14T11:41:42.080
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       : 4116682619433148800
2Mass ID (if available) : 17341326-2310433
ICRS Star Coord at Epoch: 17h 34m 13.24723s -23:10:43.78518s
RUWE (>1.4 is poor) : 0.86
K magnitude           : 6.658
G magnitude           : 11.809
RP magnitude          : 10.498
BP magnitude          : 13.815
DUPflag              : 0
Distance (au)         : 5.084
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 11.47
Sun-Target sep (deg) : 93.11
Sun-Moon sep (deg)   : 31.05
B (ring opening deg) : -2.25
PA of pole (deg)     : 1.94
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 3.094
C/A sky separation (km): 11411.0
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
    
```

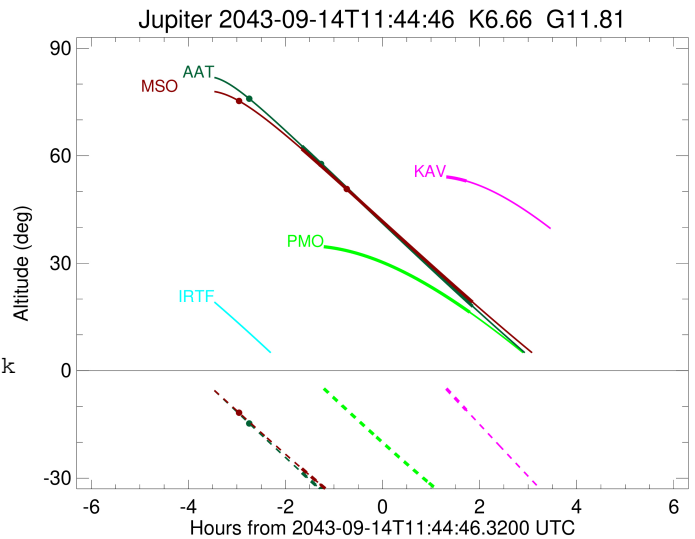
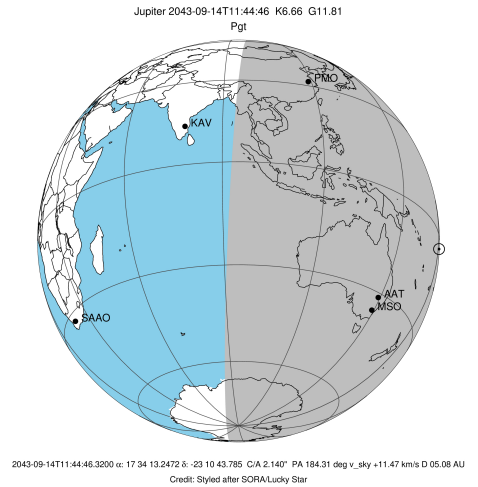


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-14T09:55:22.711	34.65	40.91x	71491.9	6.20	7.09
Jupiter	E	2043-09-14T13:28:18.479	52.95	-10.99	71491.7	11.76	13.39

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-09-14T11:51:37.270
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        : 4116682619433148800
2Mass ID (if available) : 17341326-2310433
ICRS Star Coord at Epoch: 17h 34m 13.24723s -23:10:43.78518s
RUWE (>1.4 is poor) : 0.86
K magnitude           : 6.658
G magnitude           : 11.809
RP magnitude          : 10.498
BP magnitude          : 13.815
DUPflag               : 0
Distance (au)         : 5.084
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 11.47
Sun-Target sep (deg)  : 93.11
Sun-Moon sep (deg)    : 30.09
B (ring opening deg) : -2.25
PA of pole (deg)      : 1.94
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation (") : 1.742
C/A sky separation (km) : 6422.1
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
    
```

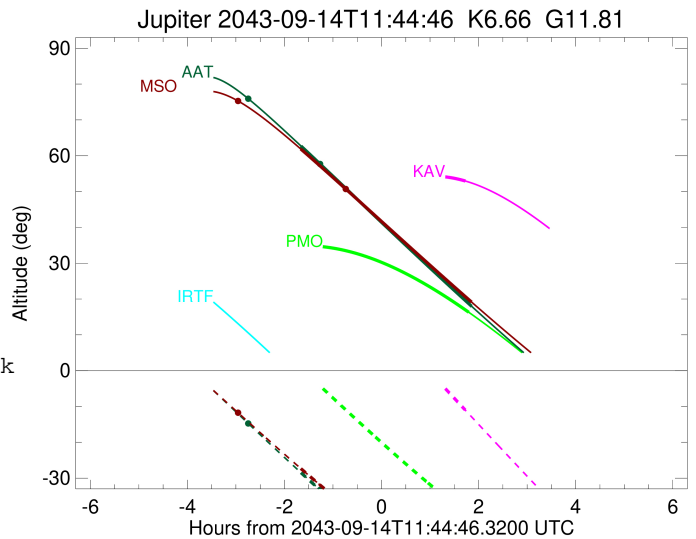
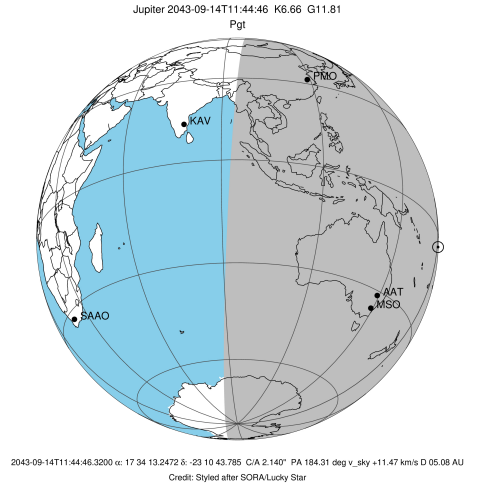


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-14T10:05:14.718	62.71	-28.48	71492.0	3.21	3.67
Jupiter	E	2043-09-14T13:36:16.249	17.95	-61.68	71491.9	6.83	7.80

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-09-14T11:51:20.730
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        : 4116682619433148800
2Mass ID (if available) : 17341326-2310433
ICRS Star Coord at Epoch: 17h 34m 13.24723s -23:10:43.78518s
RUWE (>1.4 is poor) : 0.86
K magnitude           : 6.658
G magnitude           : 11.809
RP magnitude          : 10.498
BP magnitude          : 13.815
DUPflag              : 0
Distance (au)         : 5.084
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 11.47
Sun-Target sep (deg)  : 93.11
Sun-Moon sep (deg)   : 30.10
B (ring opening deg) : -2.25
PA of pole (deg)     : 1.94
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation (") : 1.631
C/A sky separation (km) : 6013.5
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	2043-09-14T10:05:02.418	61.86	-27.32	71492.0	2.86	3.27
Jupiter	E	2043-09-14T13:35:59.523	19.17	-57.71	71491.9	6.54	7.46