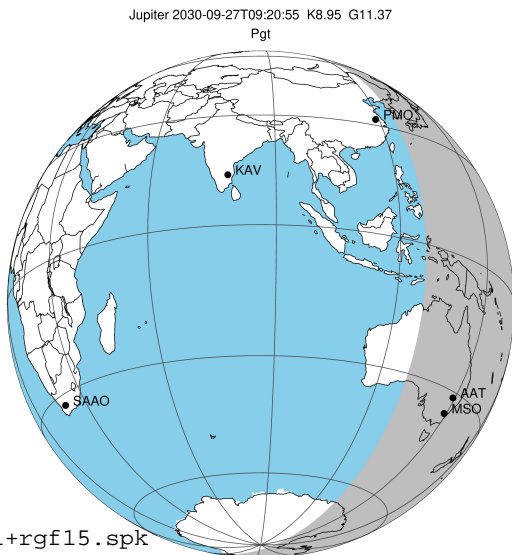


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2030-09-27T09:20:55.630
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 6255302455662991232
 2Mass ID (if available) : 15295187-1813562

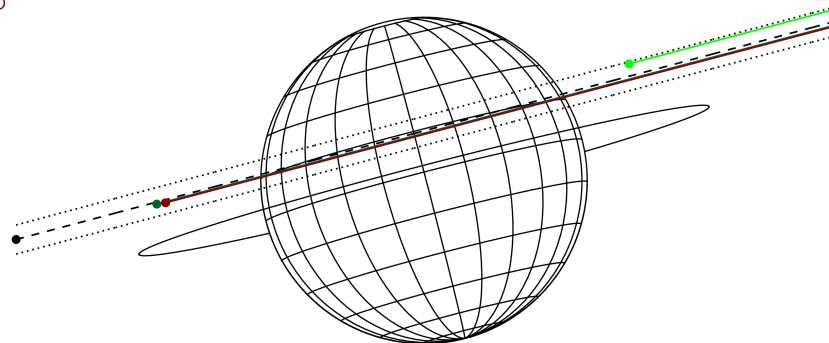
Jupiter 2030-09-27T09:20:55 K8.95 G11.37 Pgt

ICRS Star Coord at Epoch: 15h 29m 51.82096s -18:13:56.00899s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 8.953
 G magnitude : 11.371
 RP magnitude : 10.631
 BP magnitude : 11.963
 DUPflag : 0
 Distance (au) : 5.939
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 31.65
 Sun-Target sep (deg) : 50.75
 Sun-Moon sep (deg) : 51.28
 B (ring opening deg) : -2.88
 PA of pole (deg) : 14.53
 Pole direction: RA (deg): 268.05714
 Dec (deg): 64.49651
 C/A sky separation (") : 4.878
 C/A sky separation (km) : 21011.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp



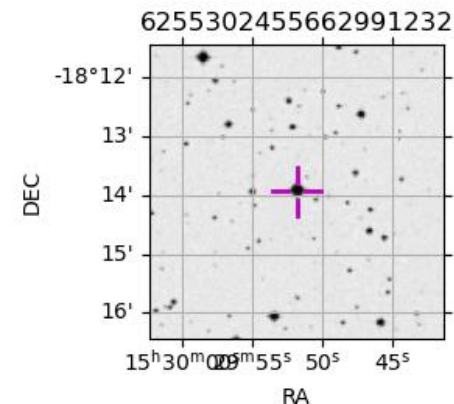
2030-09-27T09:20:55.6300 ex: 15 29 51.8210 s: -18 13 56.009 C/A 4.866" PA 194.91 deg v_sky +31.65 km/s D 05.94 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PMO
 AAT
 MSO



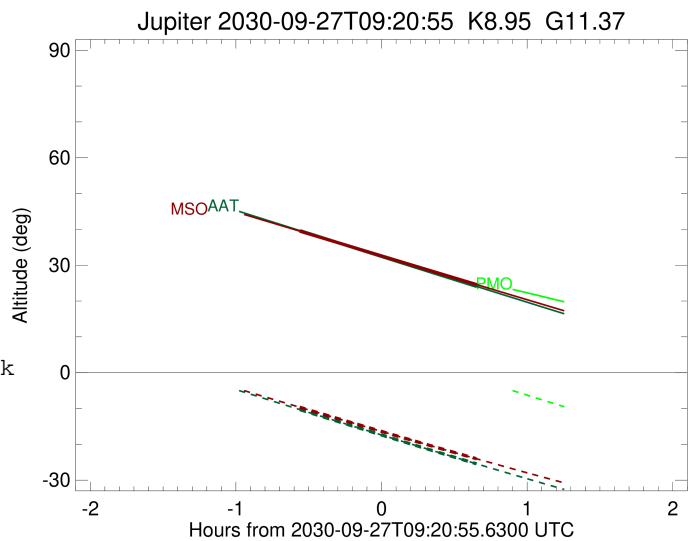
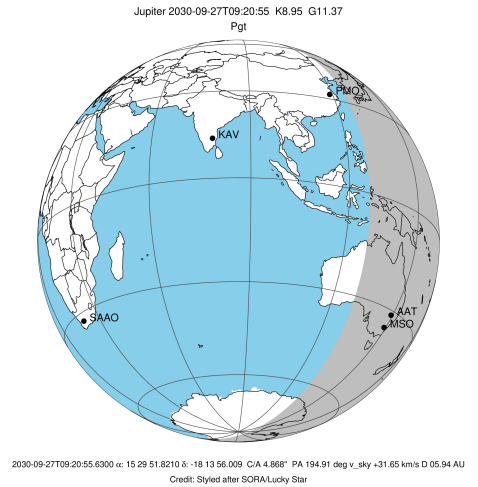
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
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			Pnn
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	+ +	SEP 27 08:47 - SEP 27 10:00	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	SEP 27 08:47 - SEP 27 10:00	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2030-09-27T09:23:44.810
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       : 6255302455662991232
2Mass ID (if available) : 15295187-1813562
ICRS Star Coord at Epoch: 15h 29m 51.82096s -18:13:56.00899s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 8.953
G magnitude           : 11.371
RP magnitude         : 10.631
BP magnitude         : 11.963
DUPflag              : 0
Distance (au)        : 5.939
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 31.65
Sun-Target sep (deg) : 50.75
Sun-Moon sep (deg)   : 52.18
B (ring opening deg) : -2.88
PA of pole (deg)     : 14.53
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49651
C/A sky separation ("): 4.638
C/A sky separation (km): 19976.9
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
    
```

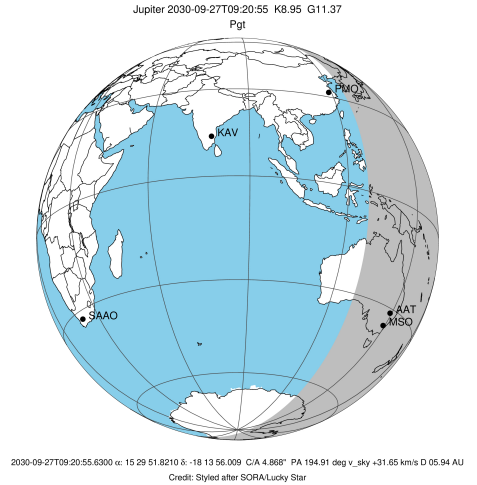


x: target alt < 5.0 deg or sun > -5.0 deg

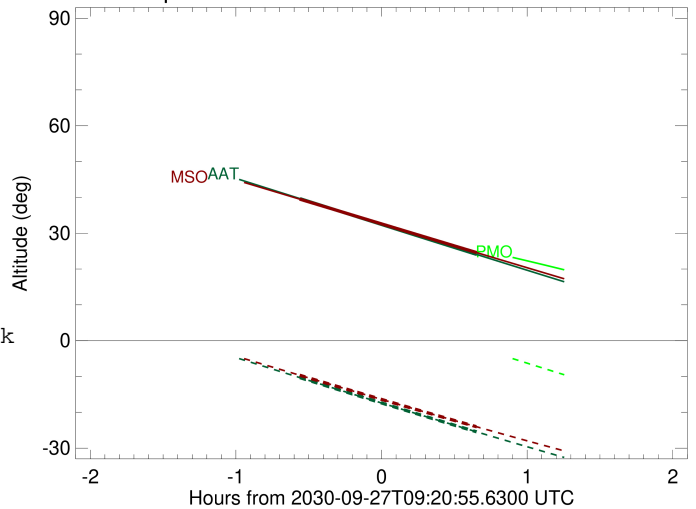
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2030-09-27T08:47:19.901	39.64	-10.33	71491.1	15.92	18.05
Jupiter	E	2030-09-27T10:00:05.382	24.08	-25.44	71491.1	16.45	18.64

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2030-09-27T09:23:41.030
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       : 6255302455662991232
2Mass ID (if available) : 15295187-1813562
ICRS Star Coord at Epoch: 15h 29m 51.82096s -18:13:56.00899s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 8.953
G magnitude          : 11.371
RP magnitude         : 10.631
BP magnitude         : 11.963
DUPflag             : 0
Distance (au)        : 5.939
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 31.65
Sun-Target sep (deg) : 50.75
Sun-Moon sep (deg)   : 52.16
B (ring opening deg) : -2.88
PA of pole (deg)     : 14.53
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49651
C/A sky separation ("): 4.537
C/A sky separation (km): 19544.3
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
    
```



Jupiter 2030-09-27T09:20:55 K8.95 G11.37



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	2030-09-27T08:47:12.859	39.50	-9.65	71491.2	15.55	17.64
Jupiter	E	2030-09-27T10:00:05.022	24.60	-24.02	71491.1	16.09	18.25