

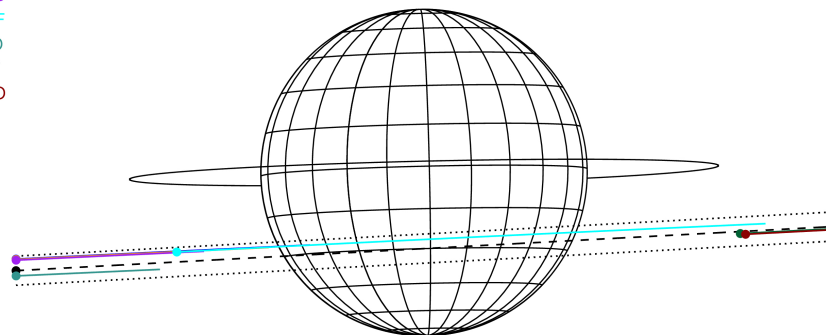
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-09-28T06:13:05.850
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116517112992465408
 2Mass ID (if available) : 17394781-2315469

Jupiter 2043-09-28T06:13:05 K8.20 G13.69 Pgt

ICRS Star Coord at Epoch: 17h 39m 47.81751s -23:15:47.12680s
 RUWE (>1.4 is poor) : 0.94
 K magnitude : 8.195
 G magnitude : 13.687
 RP magnitude : 12.272
 BP magnitude : 16.193
 DUPflag : 0
 Distance (au) : 5.295
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 17.78
 Sun-Target sep (deg) : 80.94
 Sun-Moon sep (deg) : 138.99
 B (ring opening deg) : -2.21
 PA of pole (deg) : 1.34
 Pole direction: RA (deg): 268.05674
 Dec (deg): 64.49731
 C/A sky separation (") : 8.671
 C/A sky separation (km) : 33296.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



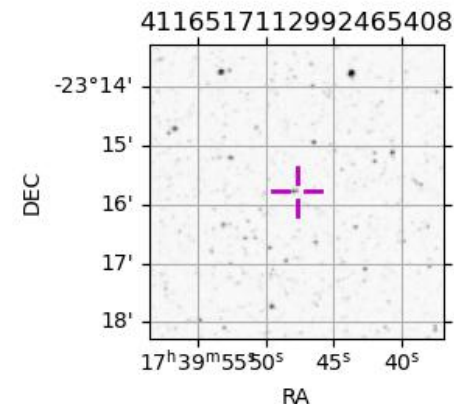
Earth
 PAL
 KPNO
 MCD
 IRTF
 ESO
 AAT
 MSO



2043-09-28T06:13:05.8500 @: 17 39 47.8175 & -23 15 47.127 C/A 8.679° PA 3.09 deg v_sky +17.78 km/s D 05.29 AU
 Credit: Styled after SORA/Lucky Star

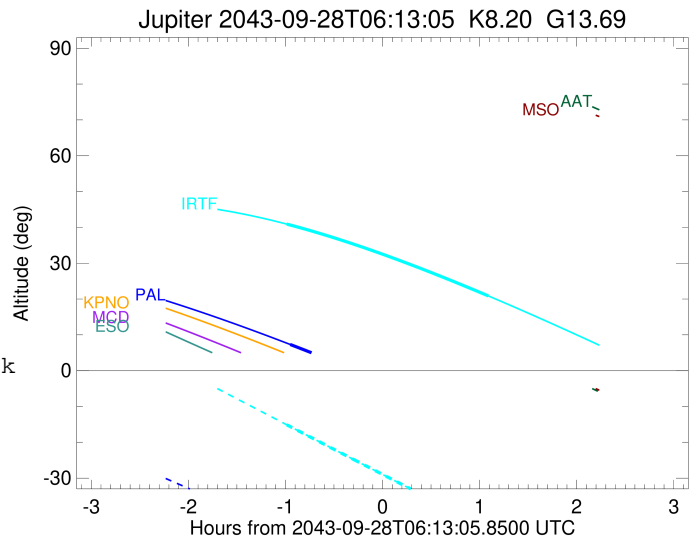
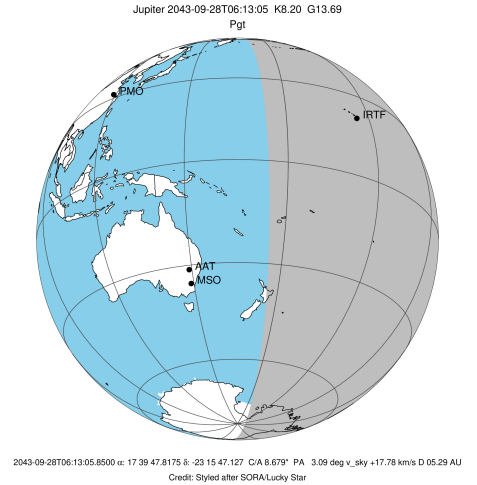
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+	SEP 28 05:16 - SEP 28 05:16	Pin
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	+ +	SEP 28 05:13 - SEP 28 07:18	Pie
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			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-28T06:17:36.060
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : PAL
Location            : Palomar Mt (200")
Latitude (deg)      : 33.35622
E. Longitude (deg)  : 243.13601
Altitude (km)       : 1.706
Gaia source ID      : 4116517112992465408
2Mass ID (if available) : 17394781-2315469
ICRS Star Coord at Epoch: 17h 39m 47.81751s -23:15:47.12680s
RUWE (>1.4 is poor) : 0.94
K magnitude          : 8.195
G magnitude          : 13.687
RP magnitude         : 12.272
BP magnitude         : 16.193
DUPflag             : 0
Distance (au)       : 5.295
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.78
Sun-Target sep (deg) : 80.94
Sun-Moon sep (deg)   : 138.43
B (ring opening deg) : -2.21
PA of pole (deg)     : 1.34
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation ("): 7.665
C/A sky separation (km): 29433.1
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
    
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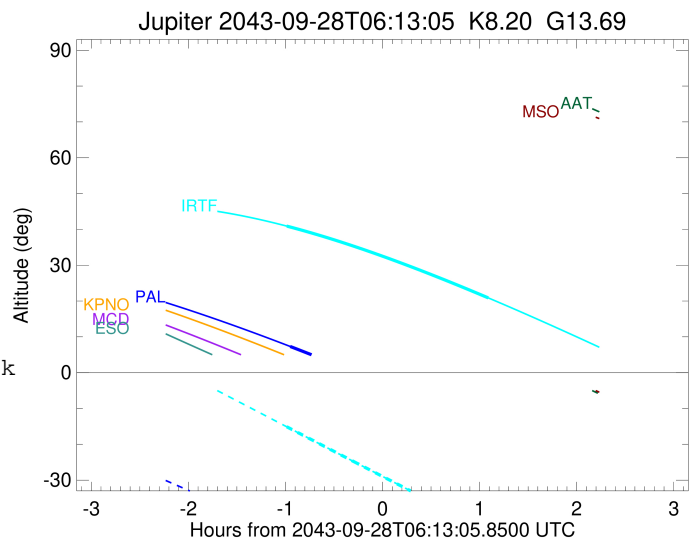
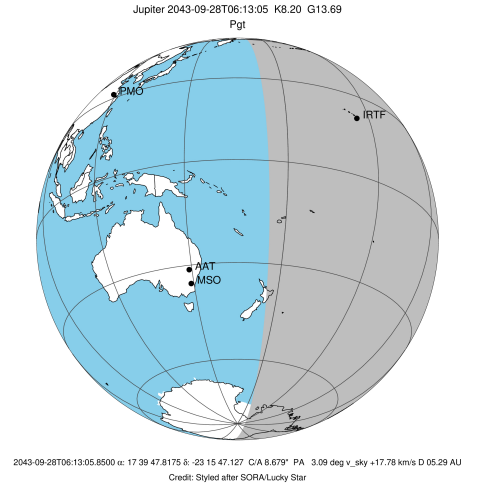


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-28T05:16:03.736	7.31	-44.41	71490.8	-25.60	-28.67
Jupiter	E	2043-09-28T07:18:43.245	-15.81x	-58.51	71491.0	-23.03	-25.89

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-09-28T06:16:23.050
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : IRTF
Location              : Mauna Kea/IRTF
Latitude (deg)       : 19.82622
E. Longitude (deg)   : 204.52800
Altitude (km)        : 4.168
Gaia source ID       : 4116517112992465408
2Mass ID (if available) : 17394781-2315469
ICRS Star Coord at Epoch: 17h 39m 47.81751s -23:15:47.12680s
RUWE (>1.4 is poor) : 0.94
K magnitude           : 8.195
G magnitude           : 13.687
RP magnitude         : 12.272
BP magnitude         : 16.193
DUPflag              : 0
Distance (au)        : 5.295
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.78
Sun-Target sep (deg) : 80.94
Sun-Moon sep (deg)   : 138.96
B (ring opening deg) : -2.21
PA of pole (deg)     : 1.34
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 7.634
C/A sky separation (km) : 29315.6
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	2043-09-28T05:13:57.485	40.90	-15.11	71490.7	-25.70	-28.78
Jupiter	E	2043-09-28T07:18:28.321	20.87	-43.96	71491.0	-22.81	-25.65