

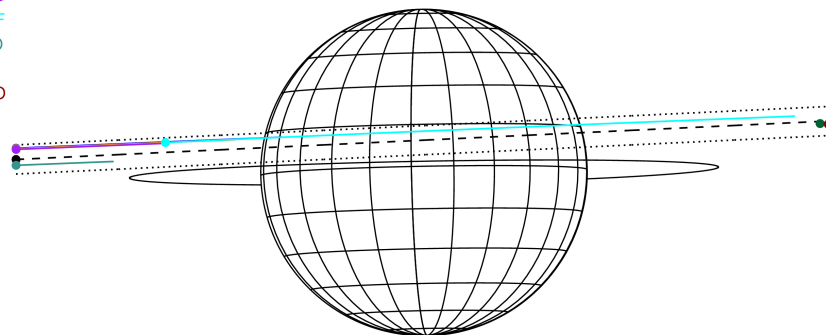
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-10-03T05:59:09.630
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116481649322093824
 2Mass ID (if available) : 17422054-2317211

Jupiter 2043-10-03T05:59:09 K8.46 G12.89 Pgt

ICRS Star Coord at Epoch: 17h 42m 20.56302s -23:17:21.34020s
 RUWE (>1.4 is poor) : 0.83
 K magnitude : 8.458
 G magnitude : 12.886
 RP magnitude : 11.723
 BP magnitude : 14.336
 DUPflag : 0
 Distance (au) : 5.370
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 20.01
 Sun-Target sep (deg) : 76.62
 Sun-Moon sep (deg) : 75.30
 B (ring opening deg) : -2.19
 PA of pole (deg) : 1.06
 Pole direction: RA (deg): 268.05674
 Dec (deg): 64.49731
 C/A sky separation (") : 3.635
 C/A sky separation (km) : 14155.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



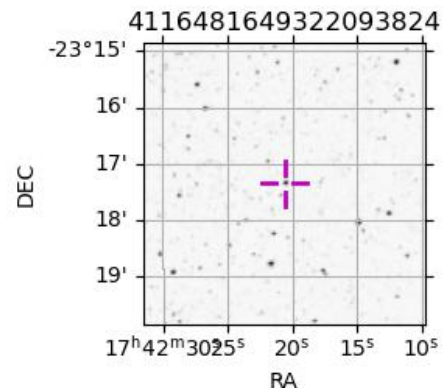
Earth
 PAL
 KPNO
 MCD
 IRTF
 ESO
 AAT
 MSO



2043-10-03T05:59:09.6300 cc: -23 17 21.340 C/A 3.626" PA 182.71 deg v_sky +20.01 km/s D 05.37 AU
 Credit: Styled after SORA/Lucky Star

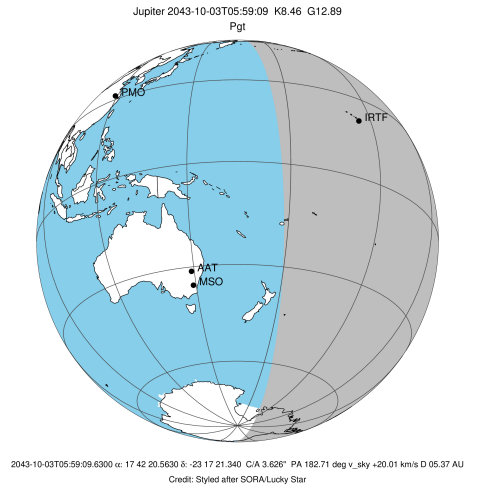
Observable events with sun below -5 deg and altitude above 5 deg

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	+	OCT 03 05:05 - OCT 03 05:05	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	+ +	OCT 03 05:03 - OCT 03 07:00	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

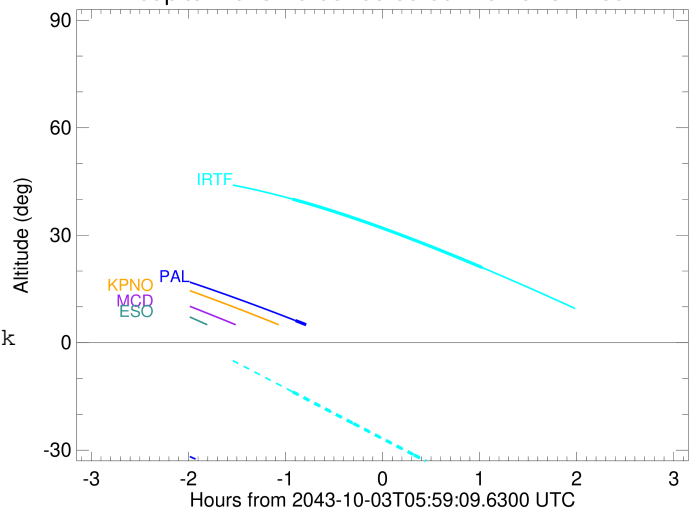


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-03T06:03:30.650
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PAL
Location              : Palomar Mt (200")
Latitude (deg)        : 33.35622
E. Longitude (deg)    : 243.13601
Altitude (km)         : 1.706
Gaia source ID        : 4116481649322093824
2Mass ID (if available) : 17422054-2317211
ICRS Star Coord at Epoch: 17h 42m 20.56302s -23:17:21.34020s
RUWE (>1.4 is poor) : 0.83
K magnitude           : 8.458
G magnitude           : 12.886
RP magnitude          : 11.723
BP magnitude          : 14.336
DUPflag              : 0
Distance (au)         : 5.370
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 20.01
Sun-Target sep (deg)  : 76.62
Sun-Moon sep (deg)    : 75.44
B (ring opening deg) : -2.19
PA of pole (deg)      : 1.06
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (" ) : 4.611
C/A sky separation (km) : 17959.2
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
    
```



Jupiter 2043-10-03T05:59:09 K8.46 G12.89

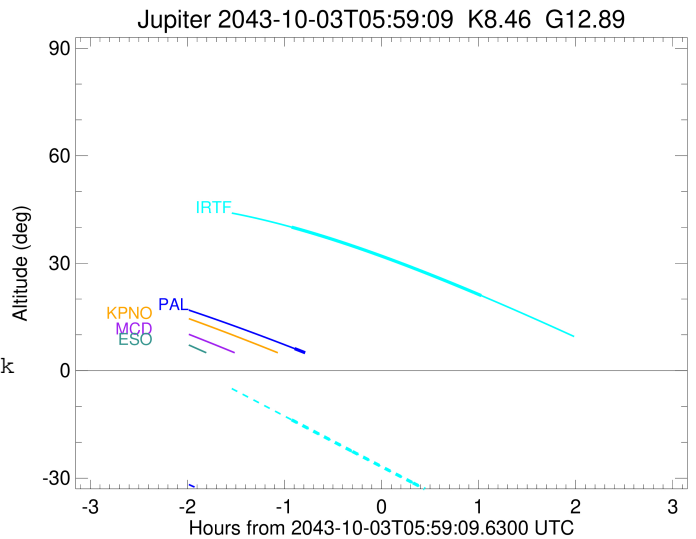
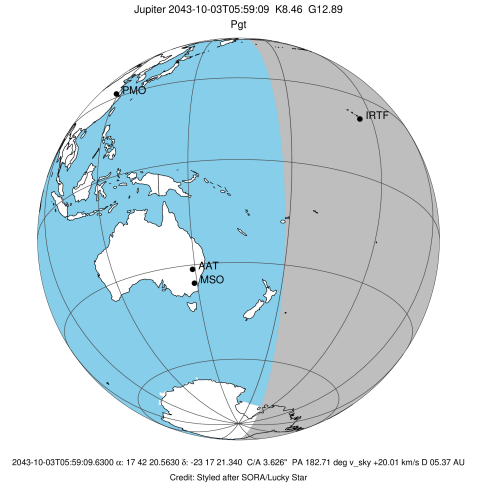


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-03T05:05:29.221	6.15	-44.24	71491.7	13.30	15.12
Jupiter	E	2043-10-03T07:01:11.715	-15.75x	-59.63	71491.5	15.74	17.86

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-03T06:02:21.820
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      : 4116481649322093824
2Mass ID (if available) : 17422054-2317211
ICRS Star Coord at Epoch: 17h 42m 20.56302s -23:17:21.34020s
RUWE (>1.4 is poor) : 0.83
K magnitude          : 8.458
G magnitude          : 12.886
RP magnitude         : 11.723
BP magnitude         : 14.336
DUPflag             : 0
Distance (au)       : 5.370
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 20.01
Sun-Target sep (deg) : 76.62
Sun-Moon sep (deg)  : 75.91
B (ring opening deg) : -2.19
PA of pole (deg)    : 1.06
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (" ) : 4.646
C/A sky separation (km) : 18095.3
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
    
```



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	2043-10-03T05:03:38.051	40.06	-13.72	71491.7	13.24	15.05
Jupiter	E	2043-10-03T07:00:49.074	20.96	-41.11	71491.5	15.96	18.09