

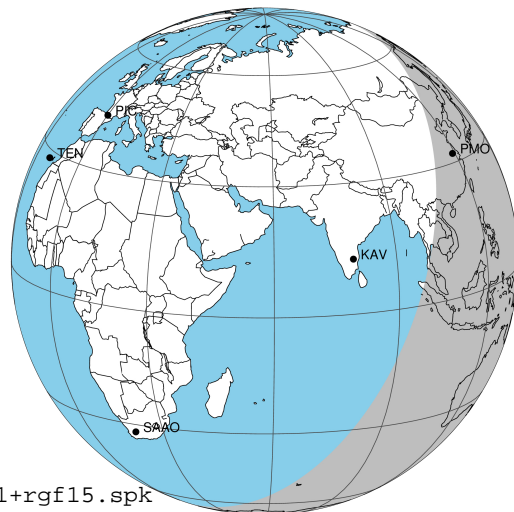
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2039-06-29T11:43:03.170
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3881537729816697600
 2Mass ID (if available) : 10015190+1305582

Jupiter 2039-06-29T11:43:03 K8.59 G10.61 Pgt

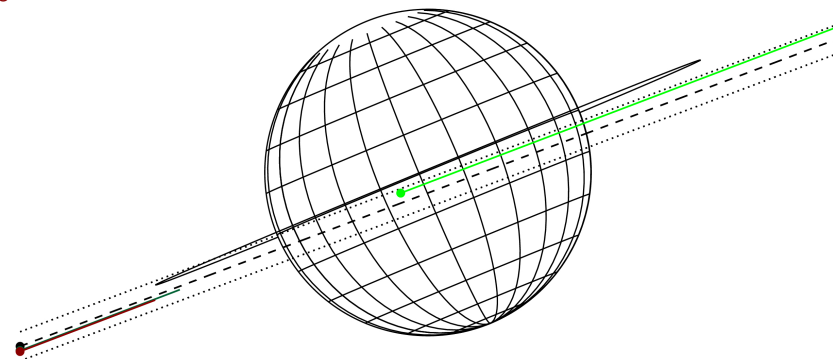
ICRS Star Coord at Epoch: 10h 01m 51.91700s +13:05:57.81508s

RUWE (>1.4 is poor) : 1.04
 K magnitude : 8.586
 G magnitude : 10.609
 RP magnitude : 9.968
 BP magnitude : 11.085
 DUPflag : 0
 Distance (au) : 5.978
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 30.96
 Sun-Target sep (deg) : 50.87
 Sun-Moon sep (deg) : 39.50
 B (ring opening deg) : -0.59
 PA of pole (deg) : 22.43
 Pole direction: RA (deg): 268.05613
 Dec (deg): 64.49700
 C/A sky separation (") : 1.935
 C/A sky separation (km) : 8387.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2039-06-29T11:43:03 K8.59 G10.61
 Pgt



Earth
 PMO
 AAT
 MSO

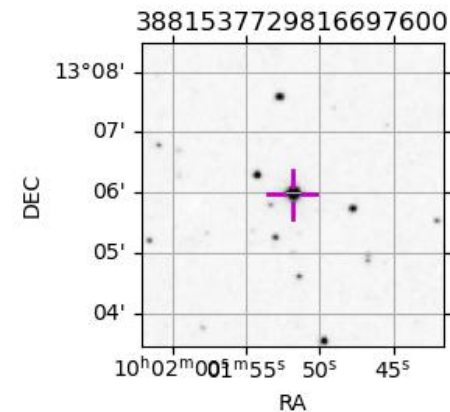


2039-06-29T11:43:03.1700 : 10 01 51.9170 : +13 05 57.815 C/A 1.936" PA 20.60 deg v_sky +30.96 km/s D 05.98 AU

Credit: Styled after SORA/Lucky Star

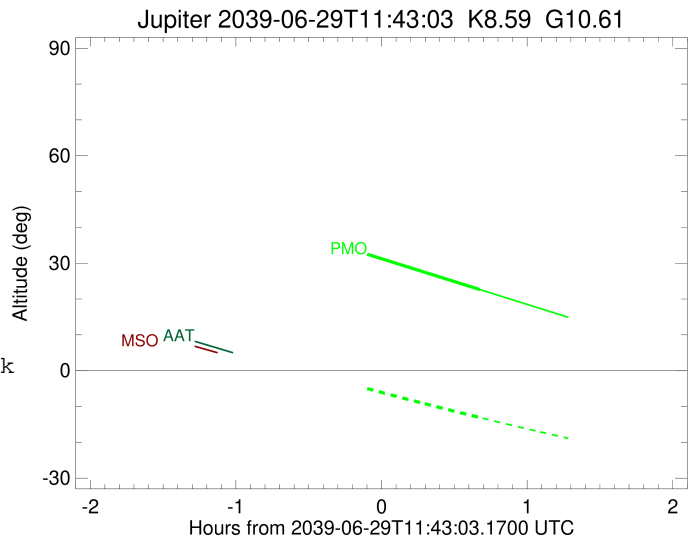
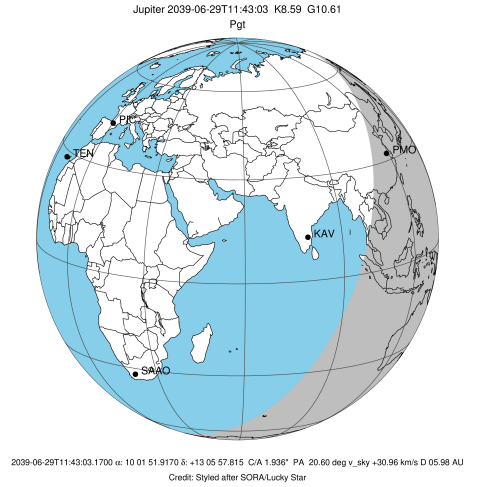
Observable events with sun below -5 deg and altitude above 5 deg

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	+	JUN 29 12:23 - JUN 29 12:23	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			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2039-06-29T11:44:56.500
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       : 3881537729816697600
2Mass ID (if available) : 10015190+1305582
ICRS Star Coord at Epoch: 10h 01m 51.91700s +13:05:57.81508s
RUWE (>1.4 is poor) : 1.04
K magnitude          : 8.586
G magnitude          : 10.609
RP magnitude         : 9.968
BP magnitude         : 11.085
DUPflag             : 0
Distance (au)        : 5.978
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 30.96
Sun-Target sep (deg) : 50.87
Sun-Moon sep (deg)   : 39.36
B (ring opening deg) : -0.59
PA of pole (deg)     : 22.43
Pole direction: RA (deg): 268.05613
Dec (deg): 64.49700
C/A sky separation ("): 0.963
C/A sky separation (km): 4174.8
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	2039-06-29T11:06:18.105	39.02	0.71x	71492.0	-1.79	-2.05
Jupiter	E	2039-06-29T12:23:29.823	22.66	-13.07	71492.0	-4.93	-5.63