

target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2037-04-28T19:45:13.580
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3404469190829659008
 2Mass ID (if available) : 05351653+2309172

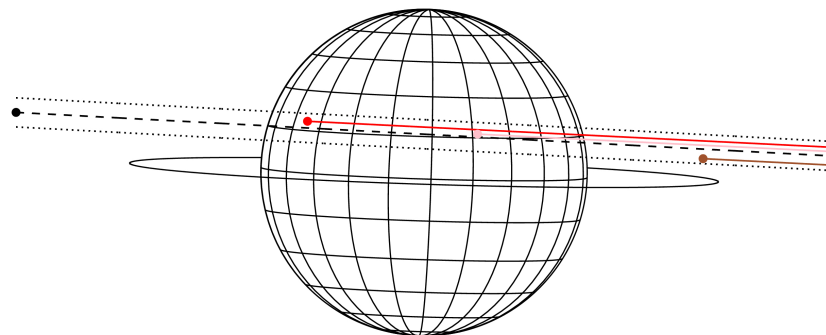
Jupiter 2037-04-28T19:45:13 K9.58 G14.35 Pgt

ICRS Star Coord at Epoch: 05h 35m 16.53121s +23°09'17.17368s
 RUWE (>1.4 is poor) : 1.14
 K magnitude : 9.576
 G magnitude : 14.351
 RP magnitude : 13.130
 BP magnitude : 15.998
 DUPflag : 0
 Distance (au) : 5.788
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 33.39
 Sun-Target sep (deg) : 45.98
 Sun-Moon sep (deg) : 120.75
 B (ring opening deg) : 2.29
 PA of pole (deg) : -1.82
 Pole direction: RA (deg): 268.05628
 Dec (deg): 64.49688
 C/A sky separation (") : 3.990
 C/A sky separation (km) : 16750.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



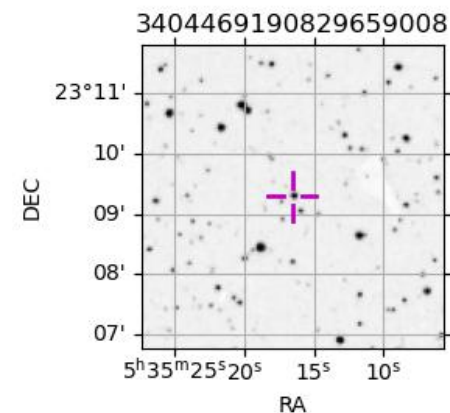
2037-04-28T19:45:13.5800 cc: 05 35 16.5312 s +23 09 17.174 C/A 3.999" PA 176.94 deg v_sky +33.39 km/s D 05.79 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PIC
 TEN
 RIO



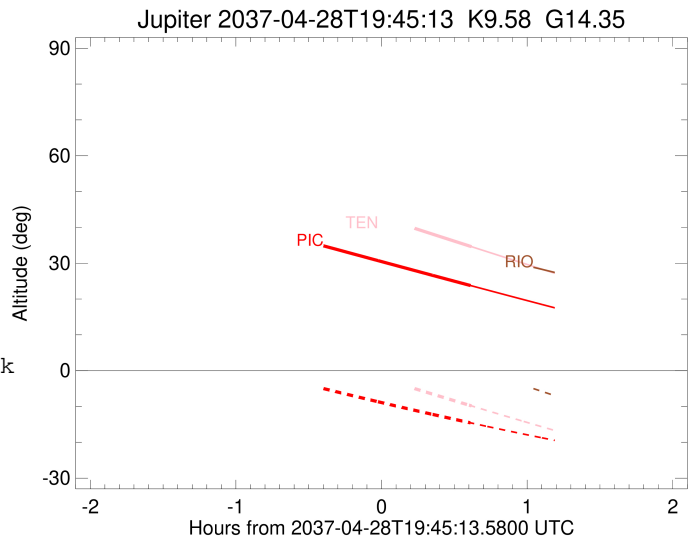
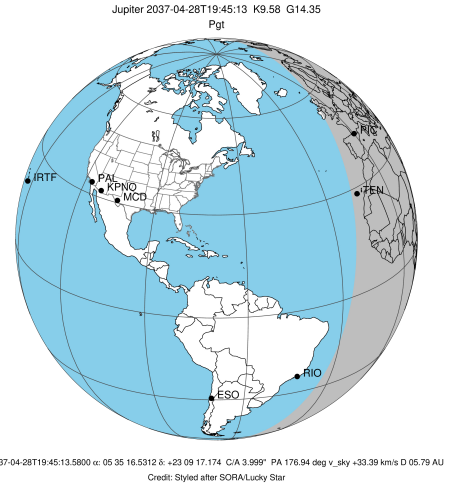
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	APR 28 20:21 - APR 28 20:21	Pne
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	+	APR 28 20:22 - APR 28 20:22	Pne
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



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-04-28T19:47:27.700
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : PIC
Location             : Pic du Midi
Latitude (deg)       : 42.93656
E. Longitude (deg)  : 0.14231
Altitude (km)       : 2.890
Gaia source ID      : 3404469190829659008
2Mass ID (if available) : 05351653+2309172
ICRS Star Coord at Epoch: 05h 35m 16.53121s +23:09:17.17368s
RUWE (>1.4 is poor) : 1.14
K magnitude          : 9.576
G magnitude          : 14.351
RP magnitude         : 13.130
BP magnitude         : 15.998
DUPflag             : 0
Distance (au)       : 5.788
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 33.39
Sun-Target sep (deg) : 45.98
Sun-Moon sep (deg)  : 121.58
B (ring opening deg) : 2.29
PA of pole (deg)    : -1.82
Pole direction: RA (deg): 268.05628
Dec (deg): 64.49688
C/A sky separation (") : 4.733
C/A sky separation (km) : 19868.0
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
    
```

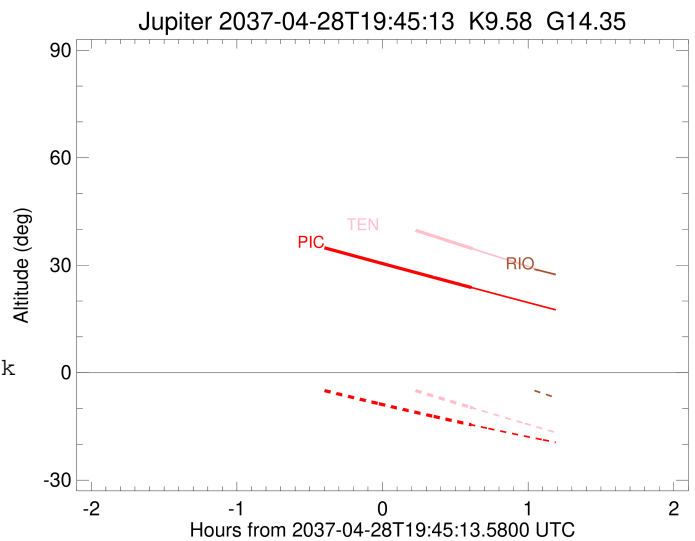
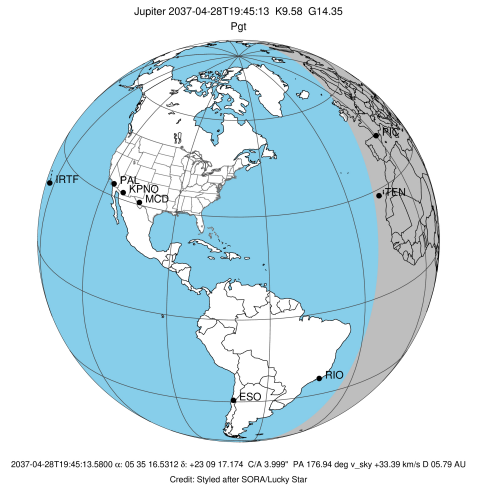


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-04-28T19:13:01.534	36.37	-3.61x	71491.4	17.16	19.43
Jupiter	E	2037-04-28T20:21:50.406	23.77	-14.55	71491.5	15.10	17.14

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2037-04-28T19:47:28.360
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : TEN
Location              : Teide Obs./Tenerife
Latitude (deg)        : 28.30050
E. Longitude (deg)    : 343.48909
Altitude (km)         : 2.395
Gaia source ID        : 3404469190829659008
2Mass ID (if available) : 05351653+2309172
ICRS Star Coord at Epoch: 05h 35m 16.53121s +23:09:17.17368s
RUWE (>1.4 is poor) : 1.14
K magnitude           : 9.576
G magnitude           : 14.351
RP magnitude          : 13.130
BP magnitude          : 15.998
DUPflag               : 0
Distance (au)         : 5.788
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 33.39
Sun-Target sep (deg) : 45.98
Sun-Moon sep (deg)   : 121.71
B (ring opening deg) : 2.29
PA of pole (deg)     : -1.82
Pole direction: RA (deg): 268.05628
Dec (deg): 64.49688
C/A sky separation (") : 4.279
C/A sky separation (km) : 17962.3
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	2037-04-28T19:12:38.445	49.89	4.76x	71491.5	15.59	17.68
Jupiter	E	2037-04-28T20:22:14.659	34.62	-9.82	71491.6	13.52	15.37