

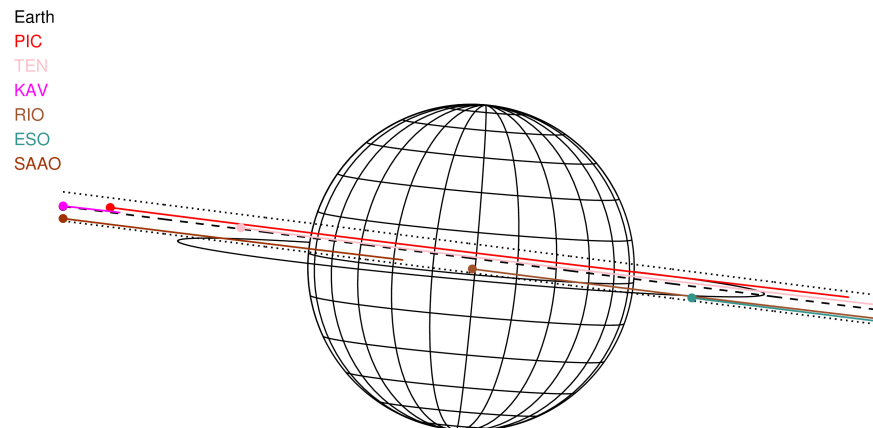
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2037-03-10T21:29:23.010
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3418262254962428160
 2Mass ID (if available) : 05035706+2232009

Jupiter 2037-03-10T21:29:23 K8.21 G8.77 Pgt

ICRS Star Coord at Epoch: 05h 03m 57.07584s +22:32:00.78816s
 RUWE (>1.4 is poor) : 5.50
 K magnitude : 8.208
 G magnitude : 8.769
 RP magnitude : 8.537
 BP magnitude : 8.873
 DUPflag : 1
 Distance (au) : 5.078
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 14.25
 Sun-Target sep (deg) : 86.94
 Sun-Moon sep (deg) : 153.05
 B (ring opening deg) : 2.47
 PA of pole (deg) : -5.17
 Pole direction: RA (deg): 268.05630
 Dec (deg): 64.49687
 C/A sky separation (") : 1.093
 C/A sky separation (km) : 4025.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

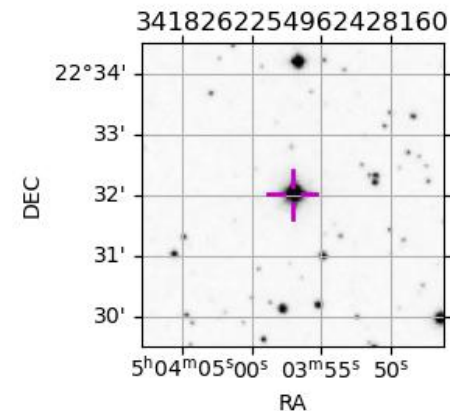


2037-03-10T21:29:23.0100 ex: 05 03 57.0758 8: +22 32 00.788 C/A 1.103" PA 172.76 deg v_sky +14.25 km/s D 05.08 AU
 Credit: Styled after SORA/Lucky Star



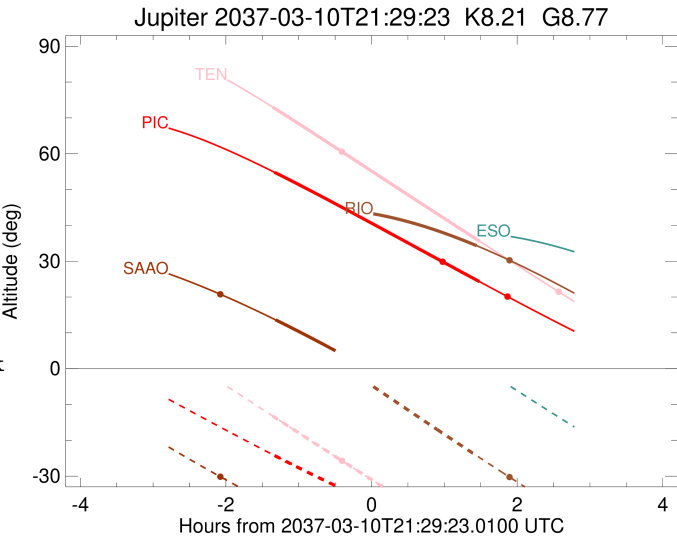
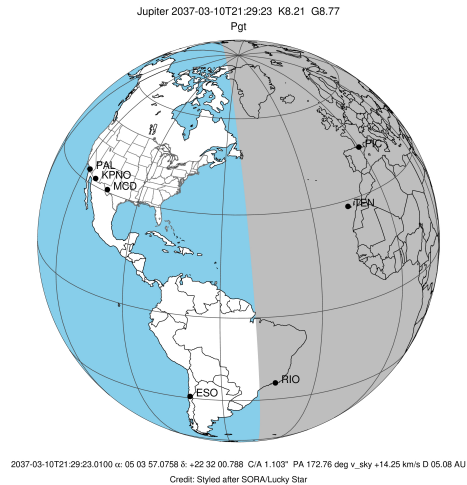
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+ +	MAR 10 20:09 - MAR 10 22:58	Pie
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	+ +	MAR 10 20:07 - MAR 10 22:58	Pie
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	+	MAR 10 22:56 - MAR 10 22:56	Pne
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	+	MAR 10 20:10 - MAR 10 20:10	Pin
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-03-10T21:34:16.230
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       : 3418262254962428160
2Mass ID (if available) : 05035706+2232009
ICRS Star Coord at Epoch: 05h 03m 57.07584s +22:32:00.78816s
RUWE (>1.4 is poor) : 5.50
K magnitude          : 8.208
G magnitude          : 8.769
RP magnitude         : 8.537
BP magnitude         : 8.873
DUPflag             : 1
Distance (au)        : 5.078
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.25
Sun-Target sep (deg) : 86.94
Sun-Moon sep (deg)   : 152.82
B (ring opening deg) : 2.47
PA of pole (deg)     : -5.17
Pole direction: RA (deg): 268.05630
Dec (deg): 64.49687
C/A sky separation ("): 1.770
C/A sky separation (km): 6519.0
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
    
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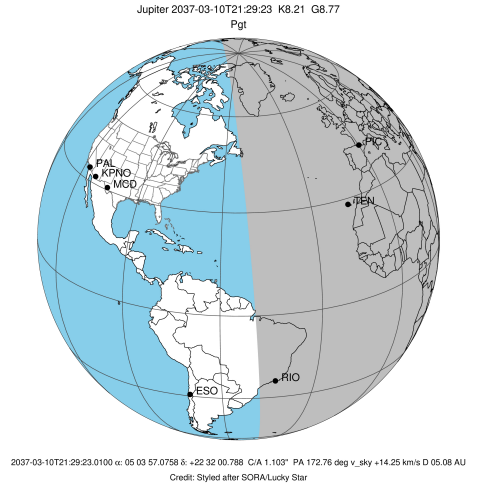


x: target alt < 5.0 deg or sun > -5.0 deg

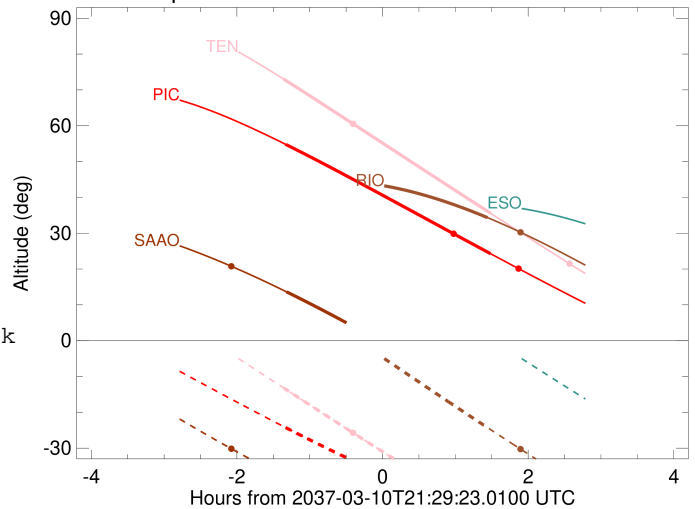
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-03-10T20:09:28.526	54.81	-24.25	71491.9	7.03	8.03
Jupiter	E	2037-03-10T22:58:17.429	24.31	-47.86	71492.0	3.58	4.09

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-03-10T21:33:38.940
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       : 3418262254962428160
2Mass ID (if available) : 05035706+2232009
ICRS Star Coord at Epoch: 05h 03m 57.07584s +22:32:00.78816s
RUWE (>1.4 is poor) : 5.50
K magnitude           : 8.208
G magnitude           : 8.769
RP magnitude         : 8.537
BP magnitude         : 8.873
DUPflag              : 1
Distance (au)        : 5.078
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.25
Sun-Target sep (deg) : 86.94
Sun-Moon sep (deg)  : 152.94
B (ring opening deg) : 2.47
PA of pole (deg)    : -5.17
Pole direction: RA (deg): 268.05630
Dec (deg): 64.49687
C/A sky separation (" ) : 1.273
C/A sky separation (km) : 4686.8
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
    
```



Jupiter 2037-03-10T21:29:23 K8.21 G8.77

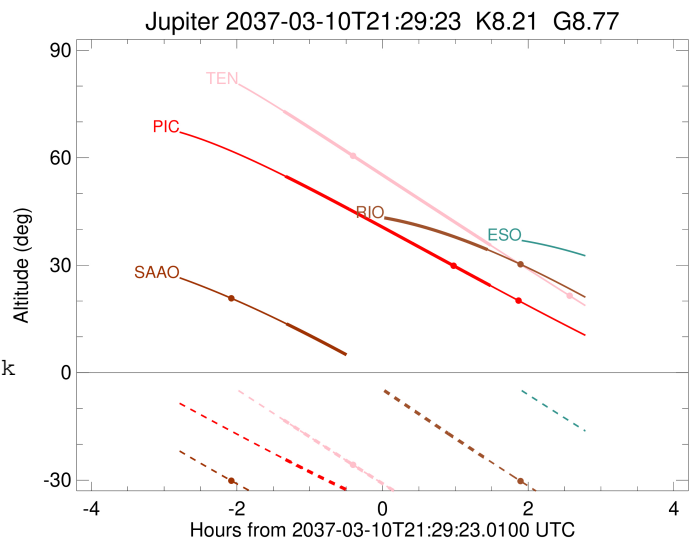
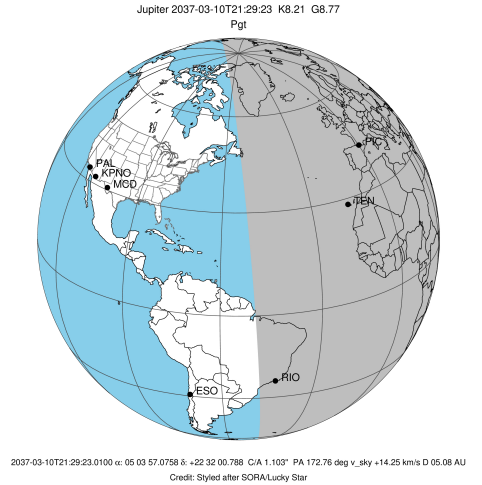


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-03-10T20:07:57.772	73.00	-13.21	71491.9	5.69	6.51
Jupiter	E	2037-03-10T22:58:36.104	35.53	-49.19	71492.0	2.05	2.35

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-03-10T21:30:07.300
Event type          : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code       : RIO
Location            : Rio de Janeiro
Latitude (deg)      : -22.89506
E. Longitude (deg)  : 316.77708
Altitude (km)       : 0.033
Gaia source ID      : 3418262254962428160
2Mass ID (if available) : 05035706+2232009
ICRS Star Coord at Epoch: 05h 03m 57.07584s +22:32:00.78816s
RUWE (>1.4 is poor) : 5.50
K magnitude          : 8.208
G magnitude          : 8.769
RP magnitude         : 8.537
BP magnitude         : 8.873
DUPflag             : 1
Distance (au)        : 5.078
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.25
Sun-Target sep (deg) : 86.94
Sun-Moon sep (deg)  : 153.19
B (ring opening deg) : 2.47
PA of pole (deg)    : -5.17
Pole direction: RA (deg): 268.05630
Dec (deg): 64.49687
C/A sky separation (") : 0.156
C/A sky separation (km) : 574.4
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
    
```

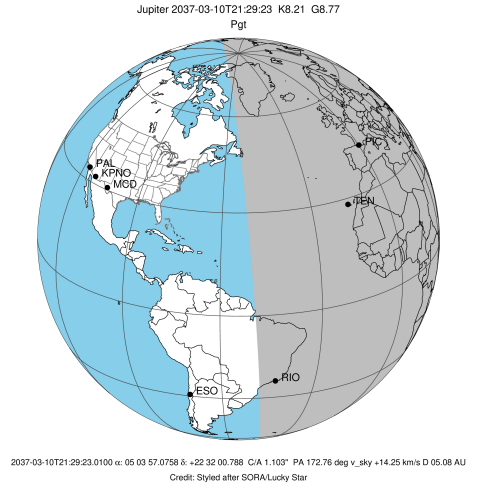


x: target alt < 5.0 deg or sun > -5.0 deg

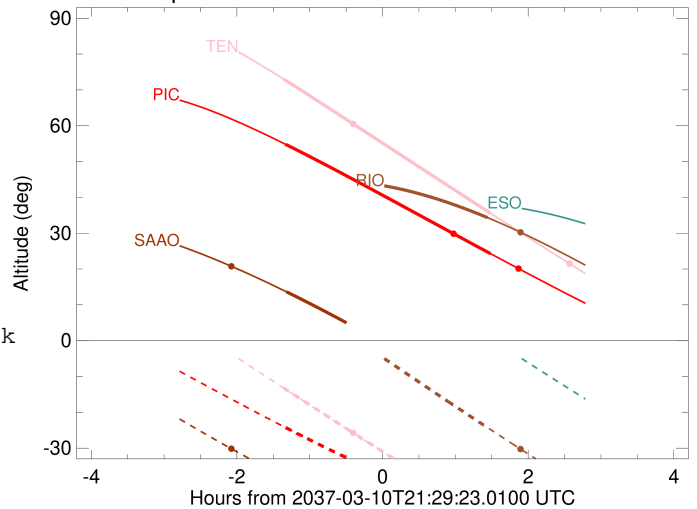
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-03-10T20:03:52.006	43.64	15.04x	71492.0	1.81	2.07
Jupiter	E	2037-03-10T22:56:02.020	34.33	-24.29	71492.0	-2.46	-2.81

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-03-10T21:34:58.040
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : SAAO
Location             : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)       : -32.37953
E. Longitude (deg)   : 20.81070
Altitude (km)        : 1.768
Gaia source ID       : 3418262254962428160
2Mass ID (if available) : 05035706+2232009
ICRS Star Coord at Epoch: 05h 03m 57.07584s +22:32:00.78816s
RUWE (>1.4 is poor) : 5.50
K magnitude           : 8.208
G magnitude           : 8.769
RP magnitude          : 8.537
BP magnitude          : 8.873
DUPflag              : 1
Distance (au)         : 5.078
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 14.25
Sun-Target sep (deg)  : 86.94
Sun-Moon sep (deg)   : 152.39
B (ring opening deg) : 2.47
PA of pole (deg)     : -5.17
Pole direction: RA (deg): 268.05630
Dec (deg): 64.49687
C/A sky separation (") : 0.053
C/A sky separation (km) : 195.0
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
    
```



Jupiter 2037-03-10T21:29:23 K8.21 G8.77



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	2037-03-10T20:10:15.695	13.63	-38.35	71492.0	1.43	1.64
Jupiter	E	2037-03-10T22:58:40.710	-18.18x	-54.00	71492.0	-1.63	-1.86