

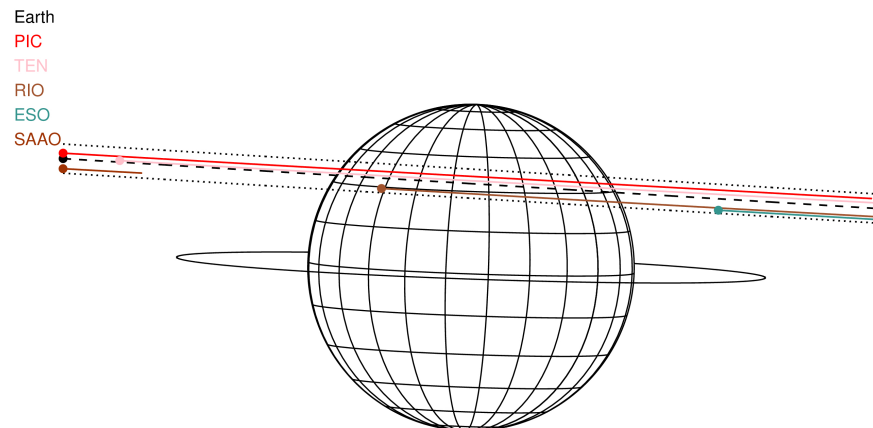
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2049-04-03T21:36:39.050
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3404514133367534464
 2Mass ID (if available) : 05333650+2310142

Jupiter 2049-04-03T21:36:39 K7.45 G9.91 Pgt

ICRS Star Coord at Epoch: 05h 33m 36.57041s +23:10:12.83373s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 7.453
 G magnitude : 9.912
 RP magnitude : 9.161
 BP magnitude : 10.527
 DUPflag : 0
 Distance (au) : 5.398
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 22.78
 Sun-Target sep (deg) : 70.06
 Sun-Moon sep (deg) : 52.57
 B (ring opening deg) : 2.26
 PA of pole (deg) : -2.00
 Pole direction: RA (deg): 268.05742
 Dec (deg): 64.49720
 C/A sky separation (") : 9.366
 C/A sky separation (km) : 36664.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

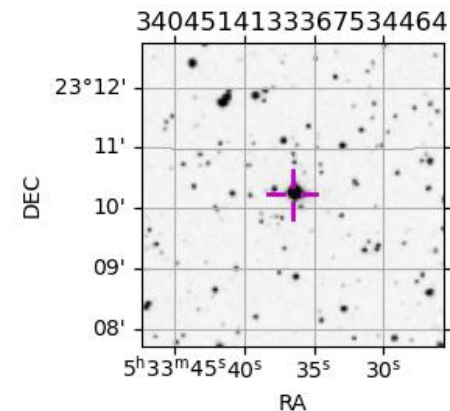


2049-04-03T21:36:39.0500 cc: 05 33 36.5704 s: +23 10 12.834 C/A 9.374" PA 176.49 deg v_sky +22.78 km/s D 05.40 AU
 Credit: Styled after SORA/Lucky Star



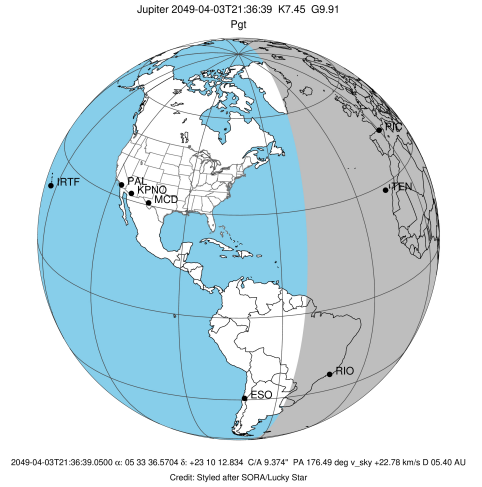
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+ +	APR 03 20:56 - APR 03 22:23	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	+ +	APR 03 20:55 - APR 03 22:24	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	+	APR 03 22:25 - APR 03 22:25	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			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn

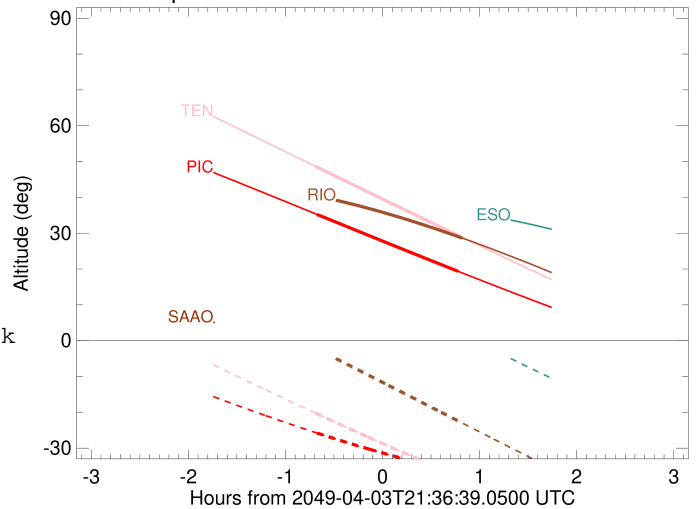


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-04-03T21:39:54.750
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : PIC
Location             : Pic du Midi
Latitude (deg)       : 42.93656
E. Longitude (deg)   : 0.14231
Altitude (km)        : 2.890
Gaia source ID       : 3404514133367534464
2Mass ID (if available) : 05333650+2310142
ICRS Star Coord at Epoch: 05h 33m 36.57041s +23:10:12.83373s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 7.453
G magnitude           : 9.912
RP magnitude         : 9.161
BP magnitude         : 10.527
DUPflag              : 0
Distance (au)        : 5.398
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 22.78
Sun-Target sep (deg) : 70.06
Sun-Moon sep (deg)   : 53.31
B (ring opening deg) : 2.26
PA of pole (deg)     : -2.00
Pole direction: RA (deg): 268.05742
Dec (deg): 64.49720
C/A sky separation (") : 10.183
C/A sky separation (km) : 39864.2
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
    
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Jupiter 2049-04-03T21:36:39 K7.45 G9.91

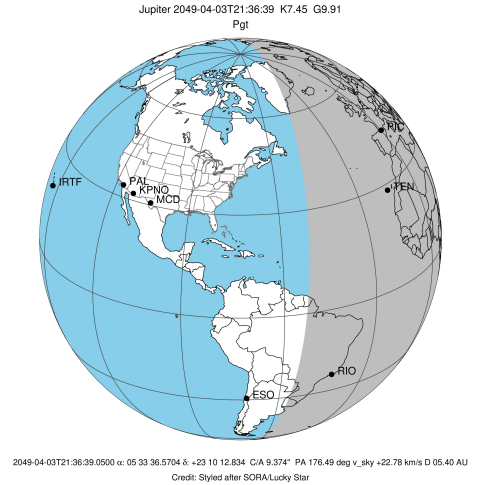


x: target alt < 5.0 deg or sun > -5.0 deg

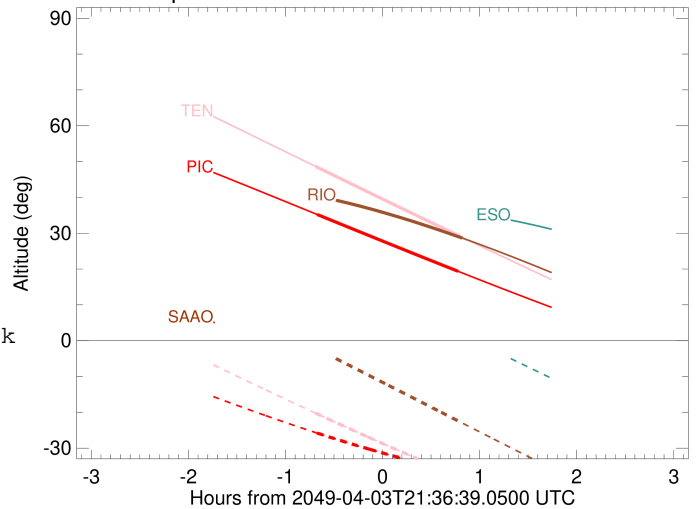
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-04-03T20:56:14.717	35.22	-25.79	71489.7	35.07	38.67
Jupiter	E	2049-04-03T22:23:26.127	19.35	-36.56	71490.0	32.68	36.19

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2049-04-03T21:40:00.520
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       : 3404514133367534464
2Mass ID (if available) : 05333650+2310142
ICRS Star Coord at Epoch: 05h 33m 36.57041s +23:10:12.83373s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 7.453
G magnitude           : 9.912
RP magnitude          : 9.161
BP magnitude          : 10.527
DUPflag              : 0
Distance (au)        : 5.398
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.78
Sun-Target sep (deg) : 70.06
Sun-Moon sep (deg)   : 53.46
B (ring opening deg) : 2.26
PA of pole (deg)     : -2.00
Pole direction: RA (deg): 268.05742
Dec (deg): 64.49720
C/A sky separation (") : 9.696
C/A sky separation (km) : 37956.5
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 2049-04-03T21:36:39 K7.45 G9.91

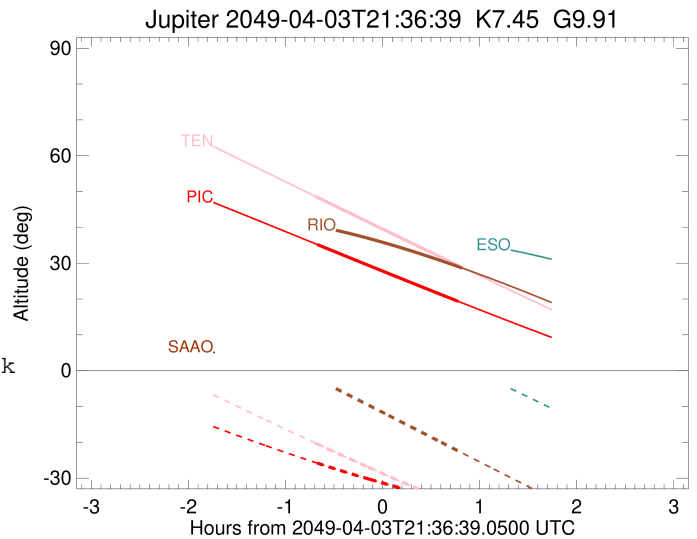
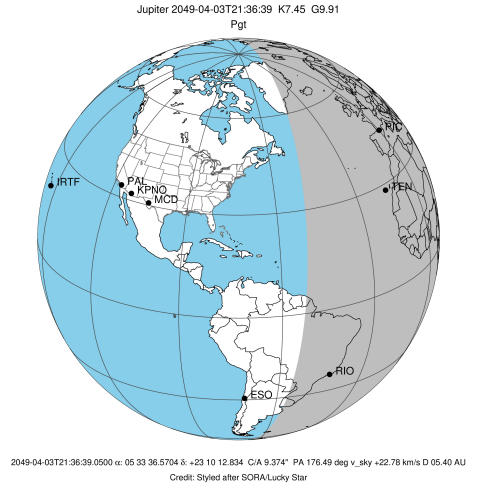


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-04-03T20:55:10.885	48.65	-20.21	71489.9	33.26	36.79
Jupiter	E	2049-04-03T22:24:40.656	29.10	-37.91	71490.2	30.88	34.29

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2049-04-03T21:38:33.150
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       : 3404514133367534464
2Mass ID (if available) : 05333650+2310142
ICRS Star Coord at Epoch: 05h 33m 36.57041s +23:10:12.83373s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 7.453
G magnitude          : 9.912
RP magnitude         : 9.161
BP magnitude         : 10.527
DUPflag             : 0
Distance (au)        : 5.398
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.78
Sun-Target sep (deg) : 70.06
Sun-Moon sep (deg)   : 53.28
B (ring opening deg) : 2.26
PA of pole (deg)     : -2.00
Pole direction: RA (deg): 268.05742
Dec (deg): 64.49720
C/A sky separation ("): 8.234
C/A sky separation (km): 32233.7
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	2049-04-03T20:51:03.436	40.81	-1.13x	71490.4	28.16	31.42
Jupiter	E	2049-04-03T22:25:55.543	28.64	-22.98	71490.7	25.48	28.54