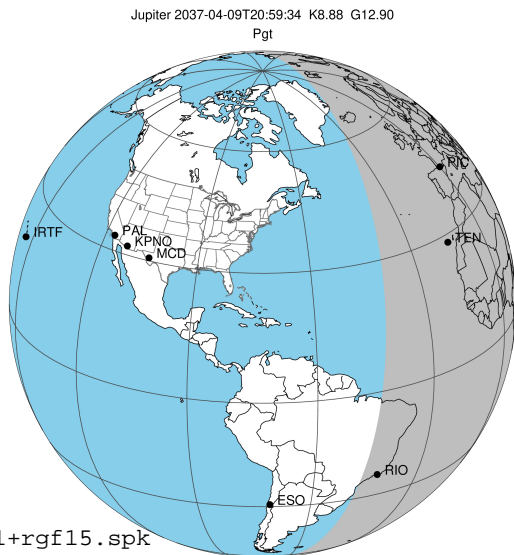


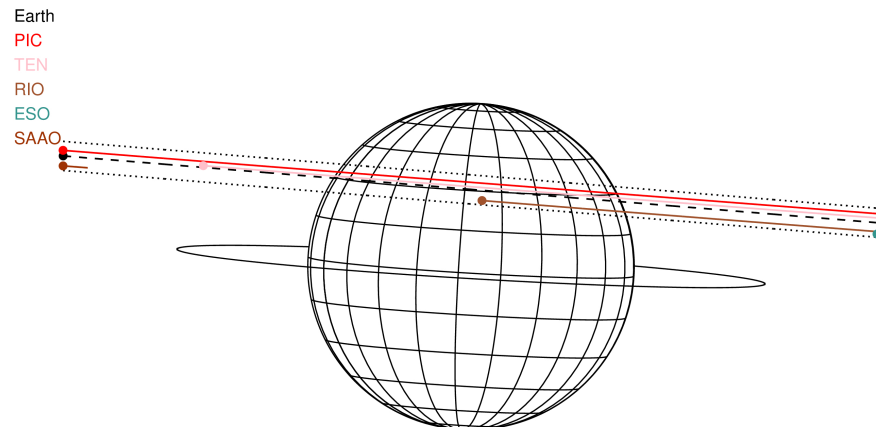
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2037-04-09T20:59:34.350
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3414826757865125632
 2Mass ID (if available) : 05204310+2255473

Jupiter 2037-04-09T20:59:34 K8.88 G12.90 Pgt

ICRS Star Coord at Epoch: 05h 20m 43.10565s +22:55:47.18448s
 RUWE (>1.4 is poor) : 1.04
 K magnitude : 8.885
 G magnitude : 12.904
 RP magnitude : 11.818
 BP magnitude : 14.130
 DUPflag : 0
 Distance (au) : 5.541
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 27.05
 Sun-Target sep (deg) : 61.13
 Sun-Moon sep (deg) : 124.70
 B (ring opening deg) : 2.36
 PA of pole (deg) : -3.39
 Pole direction: RA (deg): 268.05629
 Dec (deg): 64.49688
 C/A sky separation (") : 8.376
 C/A sky separation (km) : 33658.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

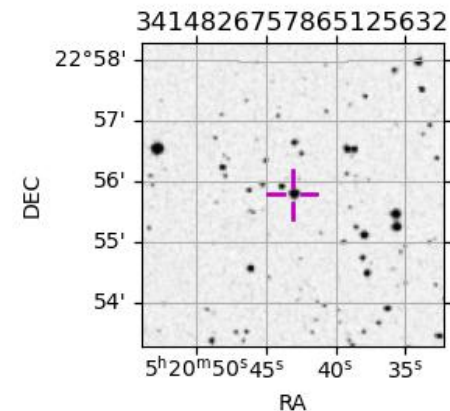


2037-04-09T20:59:34.3500 ex: 05 20 43.1056 s: +22 55 47.184 C/A 8.385" PA 175.31 deg v_sky +27.05 km/s D 05.54 AU
 Credit: Styled after SORA/Lucky Star



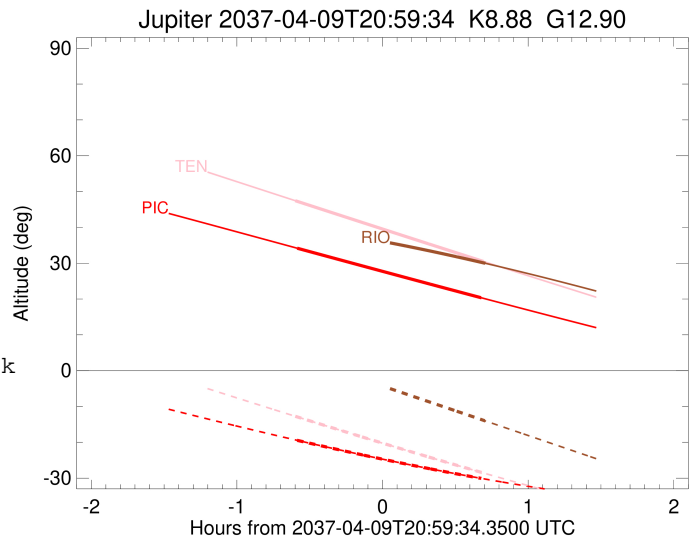
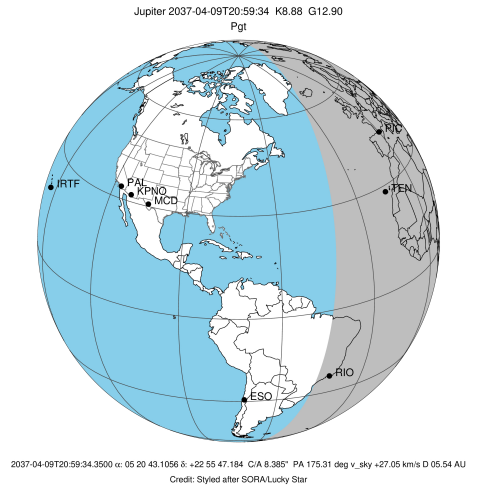
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+ +	APR 09 20:24 - APR 09 21:40	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 09 20:23 - APR 09 21:41	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 09 21:41 - APR 09 21:41	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



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-04-09T21:02:23.600
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     : 3414826757865125632
2Mass ID (if available) : 05204310+2255473
ICRS Star Coord at Epoch: 05h 20m 43.10565s +22:55:47.18448s
RUWE (>1.4 is poor) : 1.04
K magnitude        : 8.885
G magnitude        : 12.904
RP magnitude       : 11.818
BP magnitude       : 14.130
DUPflag           : 0
Distance (au)     : 5.541
f0 (km)           : 0.00
g0 (km)           : 0.00
skyplane vel. (km/s) : 27.05
Sun-Target sep (deg) : 61.13
Sun-Moon sep (deg) : 124.67
B (ring opening deg) : 2.36
PA of pole (deg)  : -3.39
Pole direction: RA (deg): 268.05629
Dec (deg): 64.49688
C/A sky separation (") : 9.148
C/A sky separation (km) : 36761.2
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
    
```

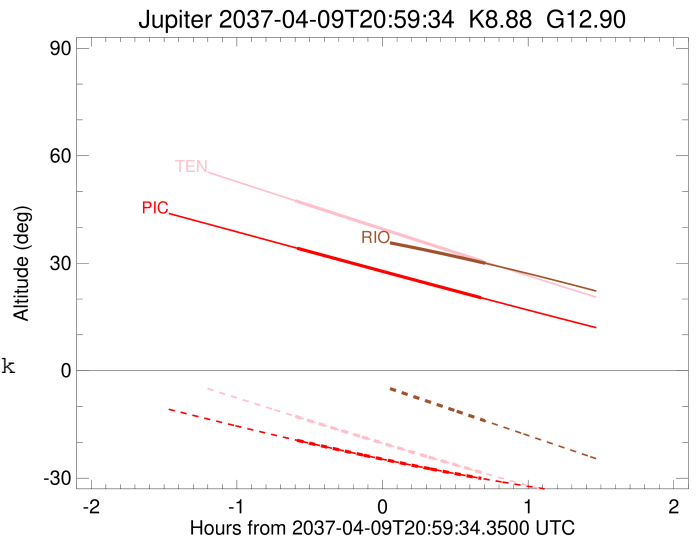
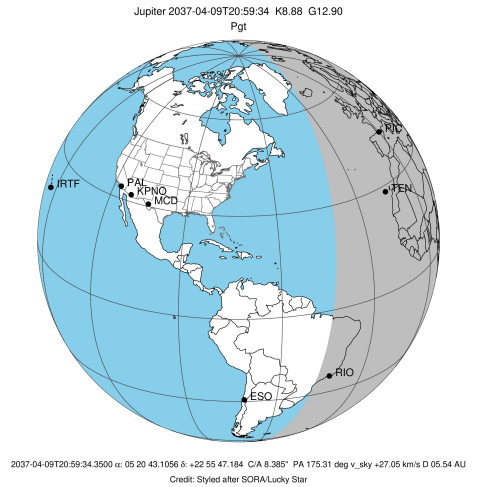


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-04-09T20:24:25.521	34.18	-19.45	71489.9	31.98	35.45
Jupiter	E	2037-04-09T21:40:16.237	20.35	-30.06	71490.1	29.88	33.24

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2037-04-09T21:02:26.760
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        : 3414826757865125632
2Mass ID (if available) : 05204310+2255473
ICRS Star Coord at Epoch: 05h 20m 43.10565s +22:55:47.18448s
RUWE (>1.4 is poor)  : 1.04
K magnitude           : 8.885
G magnitude           : 12.904
RP magnitude          : 11.818
BP magnitude          : 14.130
DUPflag              : 0
Distance (au)         : 5.541
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s)  : 27.05
Sun-Target sep (deg)  : 61.13
Sun-Moon sep (deg)    : 124.79
B (ring opening deg)  : 2.36
PA of pole (deg)      : -3.39
Pole direction: RA (deg): 268.05629
Dec (deg): 64.49688
C/A sky separation (") : 8.674
C/A sky separation (km) : 34855.6
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
    
```

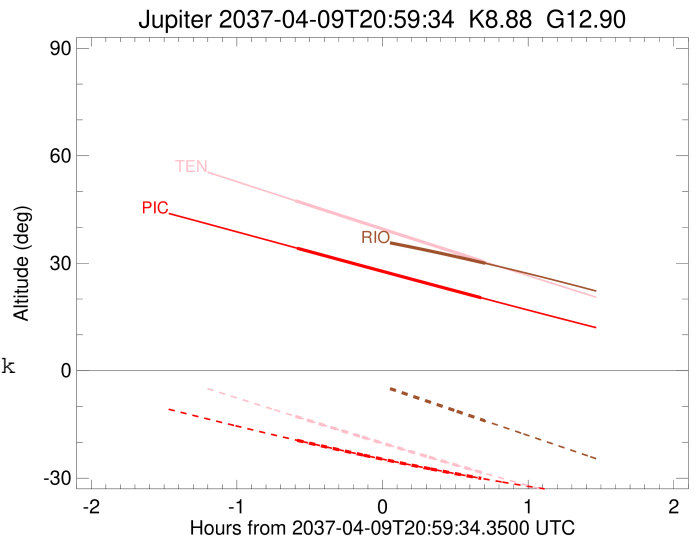
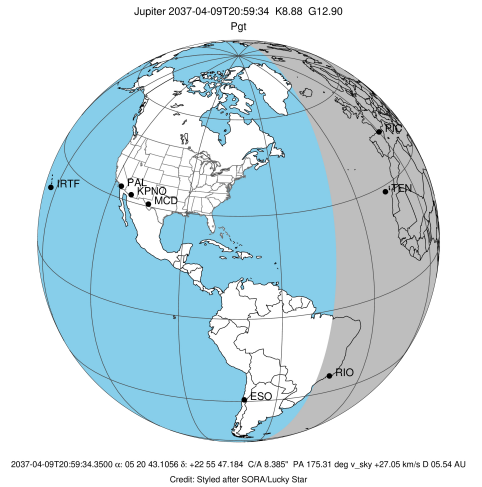


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-04-09T20:23:36.767	47.44	-12.73	71490.1	30.23	33.61
Jupiter	E	2037-04-09T21:41:10.850	30.48	-28.56	71490.3	28.12	31.37

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2037-04-09T21:01:07.490
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       : 3414826757865125632
2Mass ID (if available) : 05204310+2255473
ICRS Star Coord at Epoch: 05h 20m 43.10565s +22:55:47.18448s
RUWE (>1.4 is poor) : 1.04
K magnitude           : 8.885
G magnitude           : 12.904
RP magnitude         : 11.818
BP magnitude         : 14.130
DUPflag              : 0
Distance (au)        : 5.541
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 27.05
Sun-Target sep (deg) : 61.13
Sun-Moon sep (deg)   : 124.94
B (ring opening deg) : 2.36
PA of pole (deg)     : -3.39
Pole direction: RA (deg): 268.05629
Dec (deg): 64.49688
C/A sky separation ("): 7.262
C/A sky separation (km): 29183.2
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
    
```



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	2037-04-09T20:20:19.217	40.48	4.66x	71490.6	25.29	28.34
Jupiter	E	2037-04-09T21:41:51.383	29.98	-14.01	71490.8	22.91	25.76