

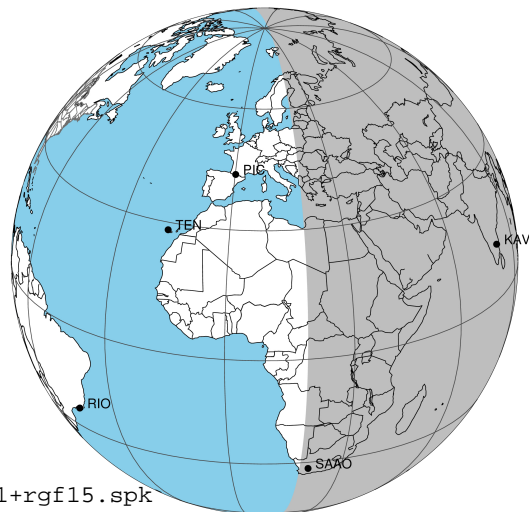
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2049-03-22T16:50:52.340
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3416101783332684288
 2Mass ID (if available) : 05265718+2303514

Jupiter 2049-03-22T16:50:52 K9.26 G10.55 Pgt

ICRS Star Coord at Epoch: 05h 26m 57.22077s +23°03'49.89266s

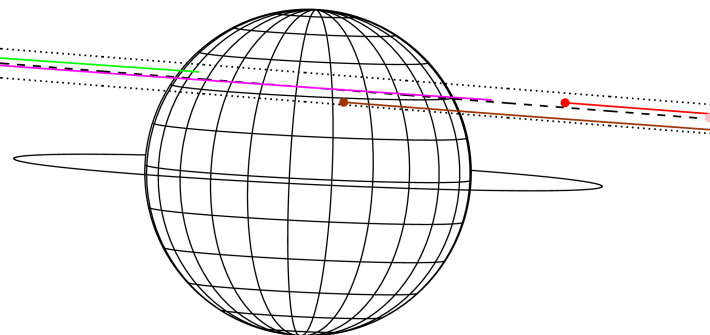
RUWE (>1.4 is poor) : 0.94
 K magnitude : 9.264
 G magnitude : 10.551
 RP magnitude : 10.084
 BP magnitude : 10.850
 DUPflag : 0
 Distance (au) : 5.207
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 17.48
 Sun-Target sep (deg) : 80.59
 Sun-Moon sep (deg) : 138.68
 B (ring opening deg) : 2.30
 PA of pole (deg) : -2.72
 Pole direction: RA (deg): 268.05741
 Dec (deg): 64.49720
 C/A sky separation (") : 9.838
 C/A sky separation (km) : 37151.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2049-03-22T16:50:52 K9.26 G10.55
 Pgt



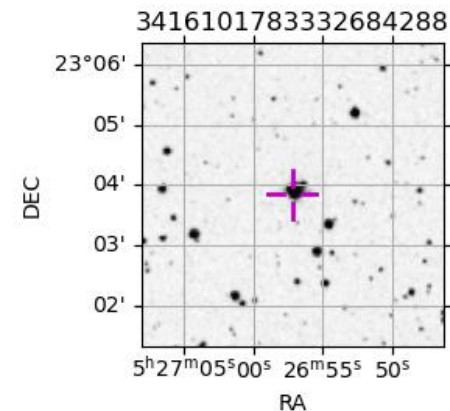
2049-03-22T16:50:52.3400 ex: 05 26 57.2208 s: +23 03 49.893 C/A 9.846° PA 175.51 deg v_sky +17.48 km/s D 05.21 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PIC
 PMO
 TEN
 KAV
 SAAO



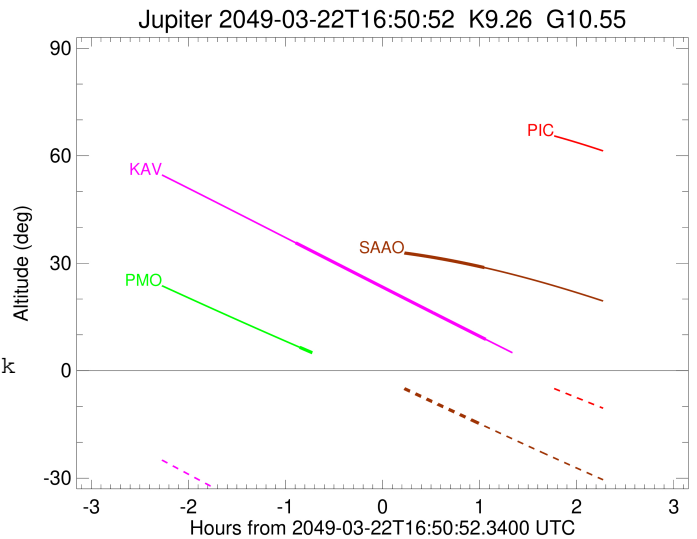
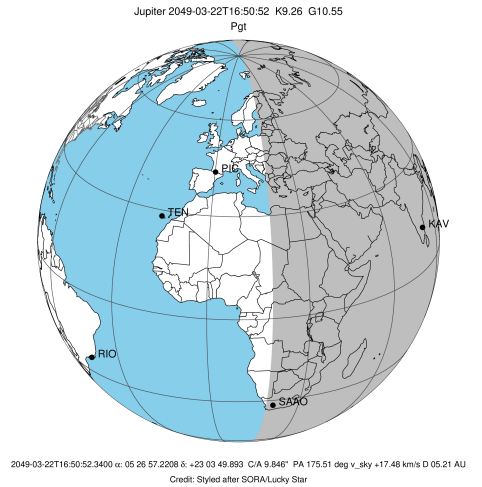
Observable events with sun below -5 deg and altitude above 5 deg

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	+	MAR 22 15:59 - MAR 22 15:59	Pin
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	+ +	MAR 22 15:57 - MAR 22 17:54	Pie
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	+	MAR 22 17:53 - MAR 22 17:53	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-03-22T16:55:36.450
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       : 3416101783332684288
2Mass ID (if available) : 05265718+2303514
ICRS Star Coord at Epoch: 05h 26m 57.22077s +23:03:49.89266s
RUWE (>1.4 is poor) : 0.94
K magnitude           : 9.264
G magnitude           : 10.551
RP magnitude         : 10.084
BP magnitude         : 10.850
DUPflag              : 0
Distance (au)        : 5.207
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 17.48
Sun-Target sep (deg) : 80.59
Sun-Moon sep (deg)   : 139.21
B (ring opening deg) : 2.30
PA of pole (deg)     : -2.72
Pole direction: RA (deg): 268.05741
Dec (deg): 64.49720
C/A sky separation ("): 10.758
C/A sky separation (km): 40627.1
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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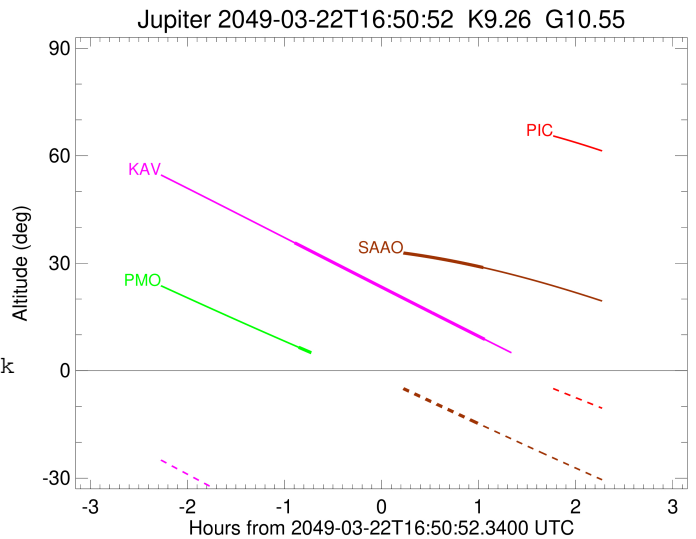
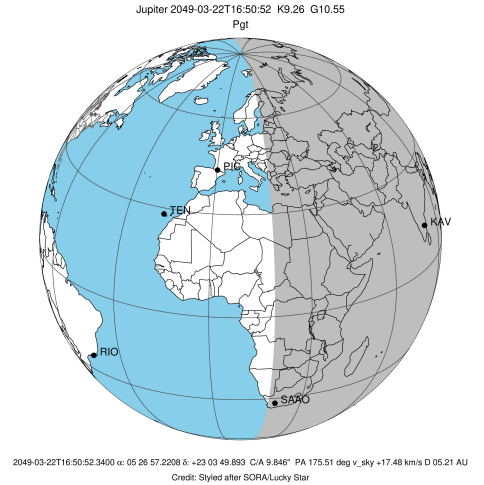


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-03-22T15:59:45.367	6.51	-57.01	71489.5	35.86	39.49
Jupiter	E	2049-03-22T17:51:07.168	-13.80x	-49.48	71489.8	33.32	36.85

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-03-22T16:56:11.030
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)   : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 3416101783332684288
2Mass ID (if available) : 05265718+2303514
ICRS Star Coord at Epoch: 05h 26m 57.22077s +23:03:49.89266s
RUWE (>1.4 is poor) : 0.94
K magnitude           : 9.264
G magnitude           : 10.551
RP magnitude         : 10.084
BP magnitude         : 10.850
DUPflag              : 0
Distance (au)        : 5.207
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.48
Sun-Target sep (deg) : 80.59
Sun-Moon sep (deg)   : 139.60
B (ring opening deg) : 2.30
PA of pole (deg)     : -2.72
Pole direction: RA (deg): 268.05741
Dec (deg): 64.49720
C/A sky separation ("): 9.850
C/A sky separation (km): 37196.8
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
    
```

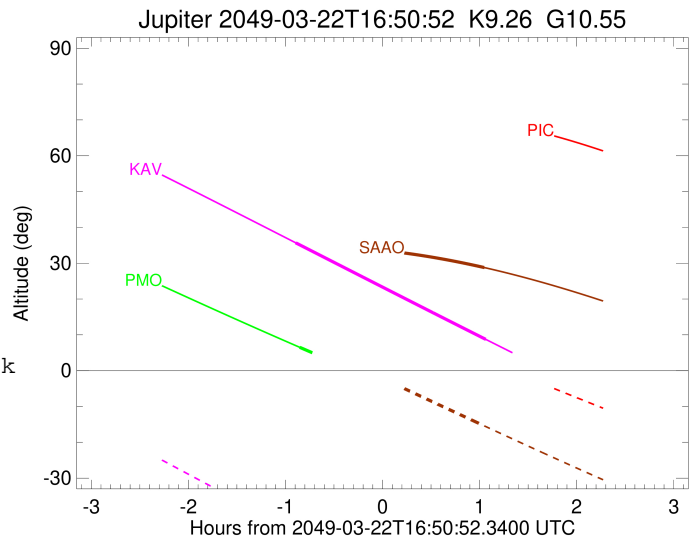
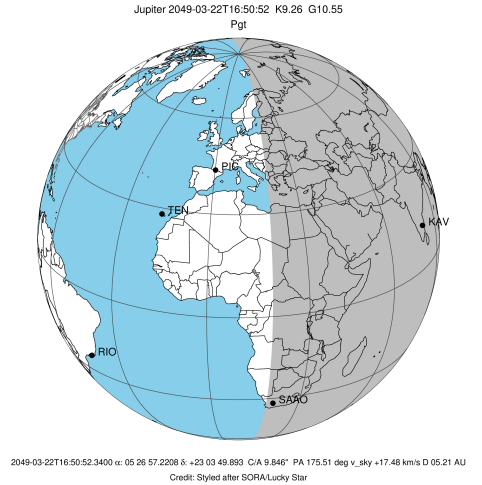


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-03-22T15:57:15.366	35.68	-44.79	71489.9	32.62	36.12
Jupiter	E	2049-03-22T17:54:40.934	8.74	-70.53	71490.2	30.11	33.48

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-03-22T16:51:33.550
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     : 3416101783332684288
2Mass ID (if available) : 05265718+2303514
ICRS Star Coord at Epoch: 05h 26m 57.22077s +23:03:49.89266s
RUWE (>1.4 is poor) : 0.94
K magnitude         : 9.264
G magnitude         : 10.551
RP magnitude        : 10.084
BP magnitude        : 10.850
DUPflag            : 0
Distance (au)      : 5.207
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : 17.48
Sun-Target sep (deg) : 80.59
Sun-Moon sep (deg)  : 139.16
B (ring opening deg) : 2.30
PA of pole (deg)   : -2.72
Pole direction: RA (deg): 268.05741
Dec (deg): 64.49720
C/A sky separation (" ) : 8.444
C/A sky separation (km) : 31888.5
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
    
```



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	2049-03-22T15:49:09.228	34.58	10.89x	71490.4	28.30	31.57
Jupiter	E	2049-03-22T17:53:49.037	28.78	-15.41	71490.7	24.78	27.79