

target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2048-09-01T05:30:30.330  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3427530691308513024  
 2Mass ID (if available) : 05462711+2252463

Jupiter 2048-09-01T05:30:30 K9.70 G14.04 Pgt

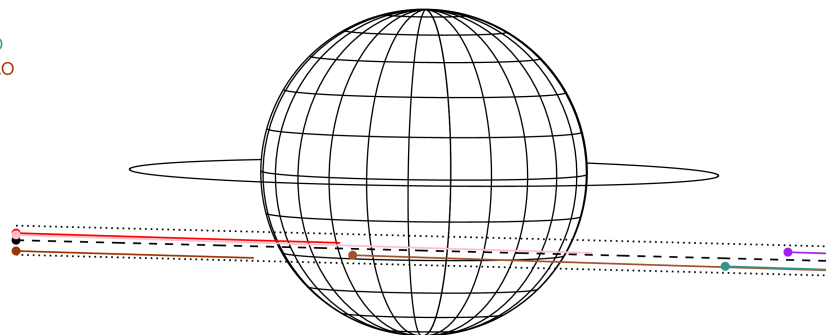
ICRS Star Coord at Epoch: 05h 46m 27.12056s +22:52:46.33720s

RUWE (>1.4 is poor) : 1.05  
 K magnitude : 9.703  
 G magnitude : 14.042  
 RP magnitude : 12.918  
 BP magnitude : 15.374  
 DUPflag : 0  
 Distance (au) : 5.292  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 21.82  
 Sun-Target sep (deg) : 71.91  
 Sun-Moon sep (deg) : 8.30  
 B (ring opening deg) : 2.62  
 PA of pole (deg) : -0.62  
 Pole direction: RA (deg): 268.05733  
 Dec (deg): 64.49722  
 C/A sky separation (") : 8.913  
 C/A sky separation (km) : 34211.2  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



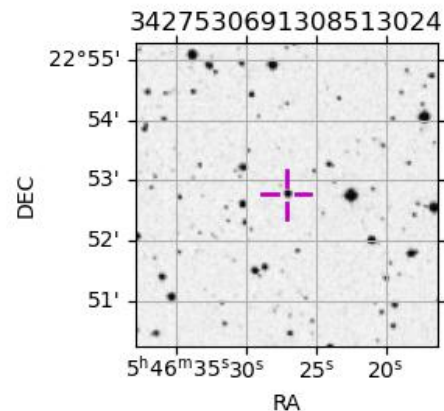
2048-09-01T05:30:30.3300 ex: 05 46 27.1206 s: +22 52 46.337 C/A 8.903" PA 358.54 deg v\_sky +21.82 km/s D 05.29 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 PIC  
 MCD  
 TEN  
 RIO  
 ESO  
 SAAO



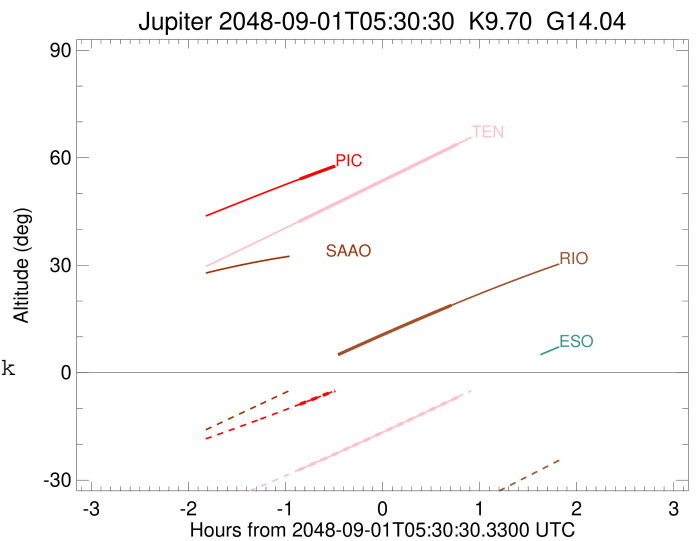
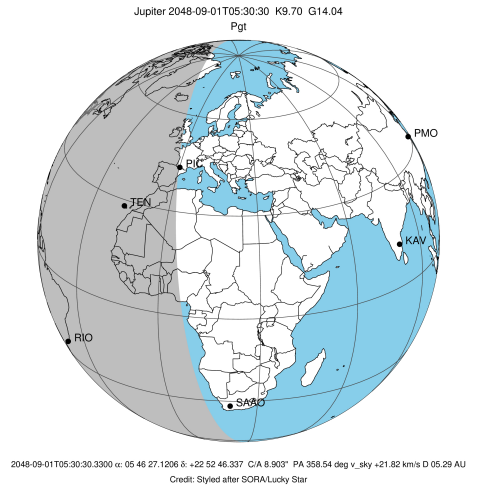
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	SEP 01 04:39 - SEP 01 04:39	Pin
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	+ +	SEP 01 04:38 - SEP 01 06:16	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	+	SEP 01 06:13 - SEP 01 06:13	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            : 2048-09-01T05:29:01.720
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       : 3427530691308513024
2Mass ID (if available) : 05462711+2252463
ICRS Star Coord at Epoch: 05h 46m 27.12056s +22:52:46.33720s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 9.703
G magnitude           : 14.042
RP magnitude          : 12.918
BP magnitude          : 15.374
DUPflag              : 0
Distance (au)        : 5.292
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 21.82
Sun-Target sep (deg) : 71.91
Sun-Moon sep (deg)   : 8.12
B (ring opening deg) : 2.62
PA of pole (deg)     : -0.62
Pole direction: RA (deg): 268.05733
Dec (deg): 64.49722
C/A sky separation (") : 8.299
C/A sky separation (km) : 31854.2
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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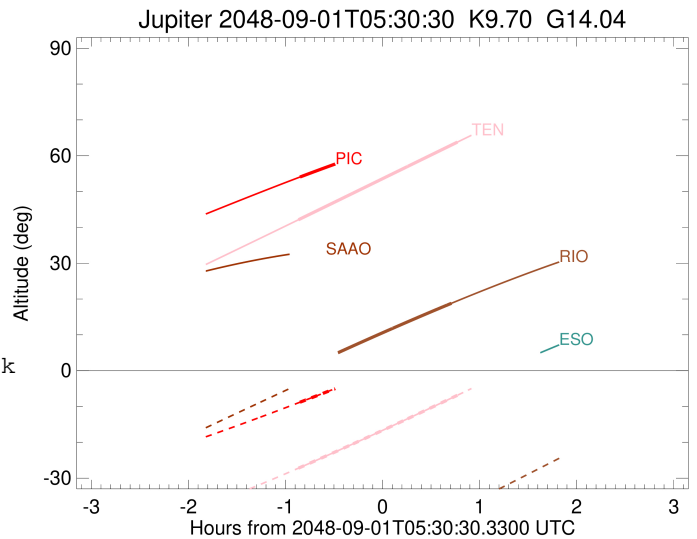
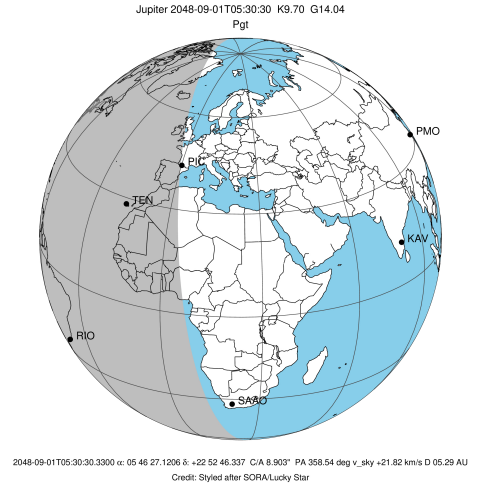


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2048-09-01T04:39:29.563	54.05	-8.81	71490.3	-25.40	-28.46
Jupiter	E	2048-09-01T06:18:40.392	68.00	8.99x	71490.0	-27.39	-30.60

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2048-09-01T05:27:35.080
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        : 3427530691308513024
2Mass ID (if available) : 05462711+2252463
ICRS Star Coord at Epoch: 05h 46m 27.12056s +22:52:46.33720s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 9.703
G magnitude           : 14.042
RP magnitude          : 12.918
BP magnitude          : 15.374
DUPflag              : 0
Distance (au)         : 5.292
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 21.82
Sun-Target sep (deg)  : 71.91
Sun-Moon sep (deg)    : 7.88
B (ring opening deg) : 2.62
PA of pole (deg)      : -0.62
Pole direction: RA (deg): 268.05733
Dec (deg): 64.49722
C/A sky separation (") : 8.603
C/A sky separation (km) : 33021.9
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
    
```

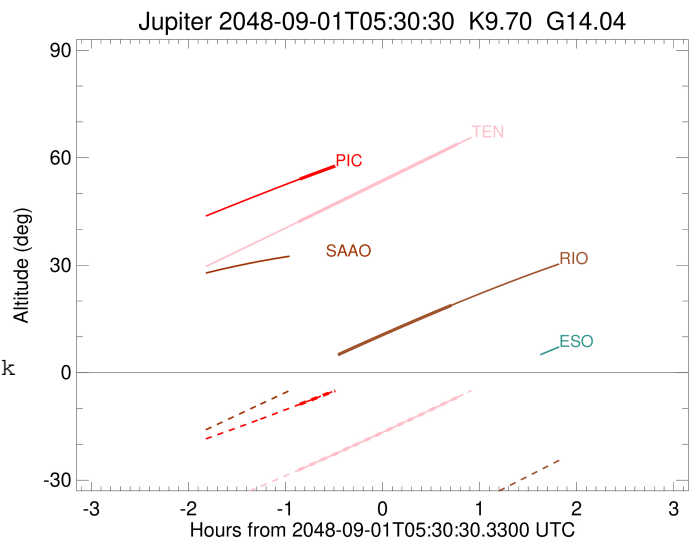
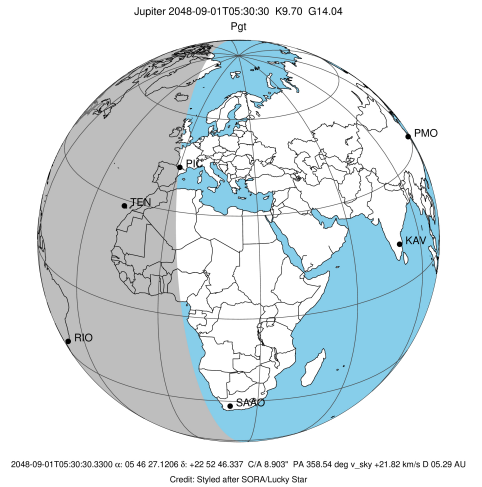


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2048-09-01T04:38:32.935	42.12	-27.22	71490.2	-26.31	-29.44
Jupiter	E	2048-09-01T06:16:47.502	63.79	-6.86	71489.9	-28.58	-31.86

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2048-09-01T05:26:05.360
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       : 3427530691308513024
2Mass ID (if available) : 05462711+2252463
ICRS Star Coord at Epoch: 05h 46m 27.12056s +22:52:46.33720s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 9.703
G magnitude          : 14.042
RP magnitude         : 12.918
BP magnitude         : 15.374
DUPflag             : 0
Distance (au)        : 5.292
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 21.82
Sun-Target sep (deg) : 71.91
Sun-Moon sep (deg)  : 7.63
B (ring opening deg) : 2.62
PA of pole (deg)    : -0.62
Pole direction: RA (deg): 268.05733
Dec (deg): 64.49722
C/A sky separation (") : 9.699
C/A sky separation (km) : 37230.4
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	2048-09-01T04:39:14.944	0.08x	-60.48	71489.6	-30.08	-33.45
Jupiter	E	2048-09-01T06:13:08.565	18.81	-39.74	71489.3	-32.59	-36.09