

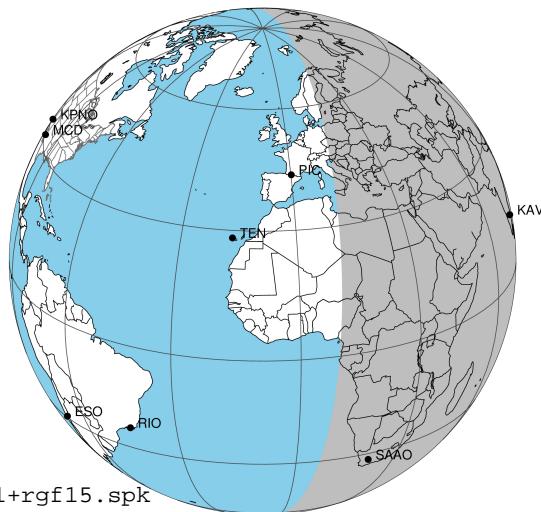
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2049-04-01T17:28:07.010  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3404152600200073216  
 2Mass ID (if available) : 05321883+2309030

Jupiter 2049-04-01T17:28:07 K9.50 G12.60 Pgt

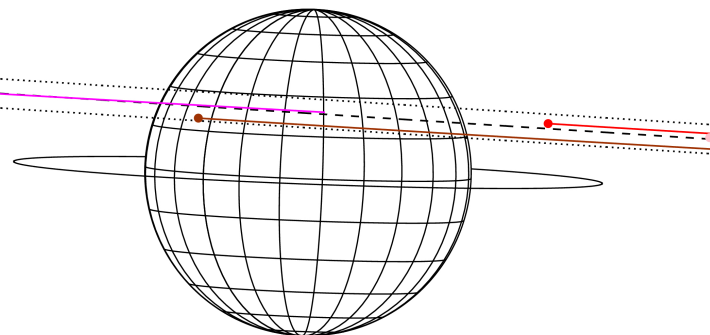
ICRS Star Coord at Epoch: 05h 32m 18.85749s +23°09'02.76154s

RUWE (>1.4 is poor) : 1.16  
 K magnitude : 9.501  
 G magnitude : 12.603  
 RP magnitude : 11.716  
 BP magnitude : 13.428  
 DUPflag : 0  
 Distance (au) : 5.364  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 21.87  
 Sun-Target sep (deg) : 71.91  
 Sun-Moon sep (deg) : 81.61  
 B (ring opening deg) : 2.27  
 PA of pole (deg) : -2.14  
 Pole direction: RA (deg): 268.05742  
 Dec (deg): 64.49720  
 C/A sky separation (") : 6.656  
 C/A sky separation (km) : 25898.0  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2049-04-01T17:28:07 K9.50 G12.60  
 Pgt



Earth  
 PIC  
 PMO  
 TEN  
 KAV  
 SAAO

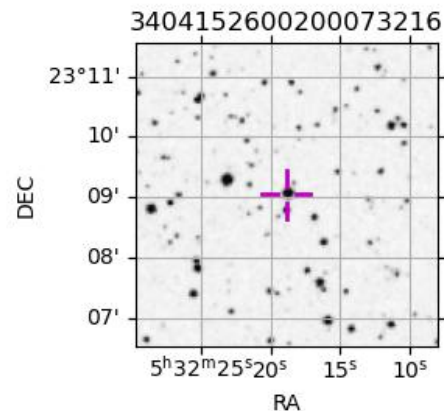


2049-04-01T17:28:07.0100 ex: 05 32 18.8575 s: +23 09 02.762 C/A 6.665" PA 176.32 deg v\_sky +21.87 km/s D 05.36 AU

Credit: Styled after SORA/Lucky Star

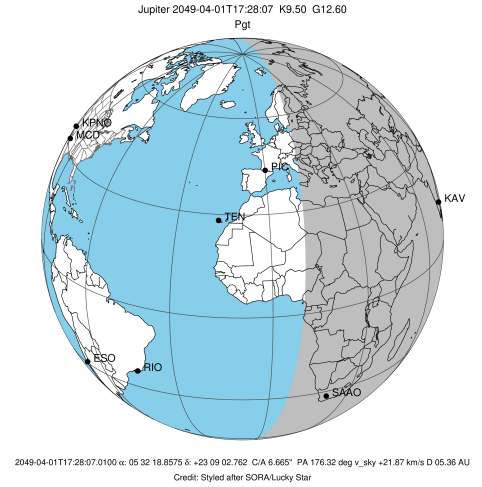
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
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			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			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	APR 01 16:42 - APR 01 16:42	Pin
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	+	APR 01 18:22 - APR 01 18:22	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn

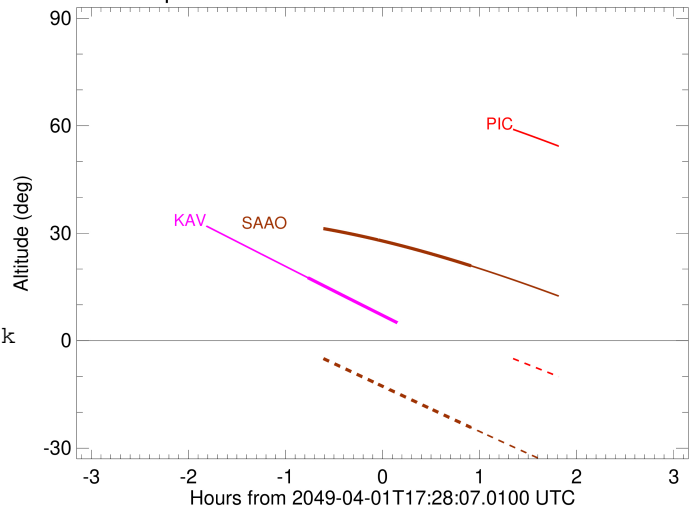


```

target                : Jupiter
target radius (km)    : 71492.00
C/A epoch              : 2049-04-01T17:32:44.430
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        : 3404152600200073216
2Mass ID (if available) : 05321883+2309030
ICRS Star Coord at Epoch: 05h 32m 18.85749s +23:09:02.76154s
RUWE (>1.4 is poor)  : 1.16
K magnitude            : 9.501
G magnitude            : 12.603
RP magnitude           : 11.716
BP magnitude           : 13.428
DUPflag                : 0
Distance (au)         : 5.364
f0 (km)                : 0.00
g0 (km)                : 0.00
skyplane vel. (km/s)  : 21.87
Sun-Target sep (deg)  : 71.91
Sun-Moon sep (deg)    : 81.86
B (ring opening deg)  : 2.27
PA of pole (deg)      : -2.14
Pole direction: RA (deg): 268.05742
Dec (deg): 64.49720
C/A sky separation (") : 6.874
C/A sky separation (km) : 26743.7
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
    
```



Jupiter 2049-04-01T17:28:07 K9.50 G12.60

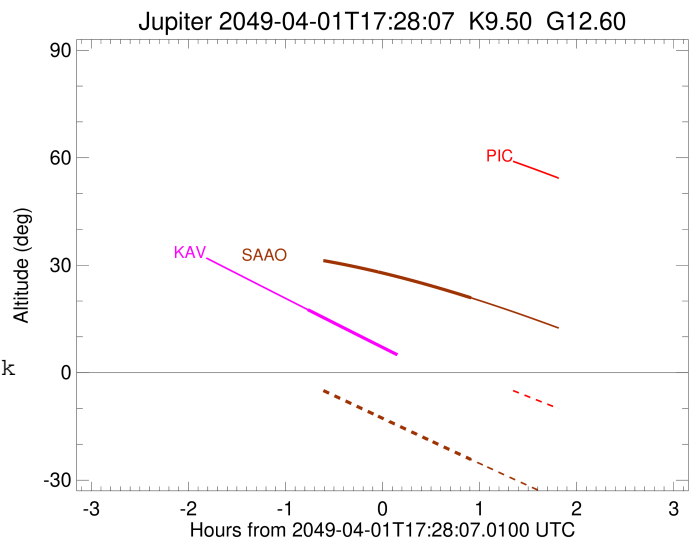
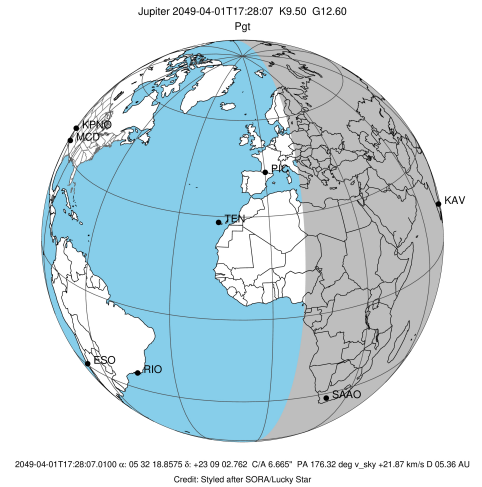


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-04-01T16:42:03.064	17.56	-54.16	71490.9	23.03	25.89
Jupiter	E	2049-04-01T18:23:09.756	-5.27x	-71.51	71491.1	20.88	23.55

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2049-04-01T17:29:54.170
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        : 3404152600200073216
2Mass ID (if available) : 05321883+2309030
ICRS Star Coord at Epoch: 05h 32m 18.85749s +23:09:02.76154s
RUWE (>1.4 is poor) : 1.16
K magnitude           : 9.501
G magnitude           : 12.603
RP magnitude          : 11.716
BP magnitude          : 13.428
DUPflag              : 0
Distance (au)         : 5.364
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 21.87
Sun-Target sep (deg)  : 71.91
Sun-Moon sep (deg)    : 82.12
B (ring opening deg) : 2.27
PA of pole (deg)      : -2.14
Pole direction: RA (deg): 268.05742
Dec (deg): 64.49720
C/A sky separation (") : 5.343
C/A sky separation (km) : 20786.3
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	2049-04-01T16:36:53.855	32.35	-1.89x	71491.3	18.32	20.72
Jupiter	E	2049-04-01T18:22:45.518	20.90	-24.23	71491.5	15.55	17.64