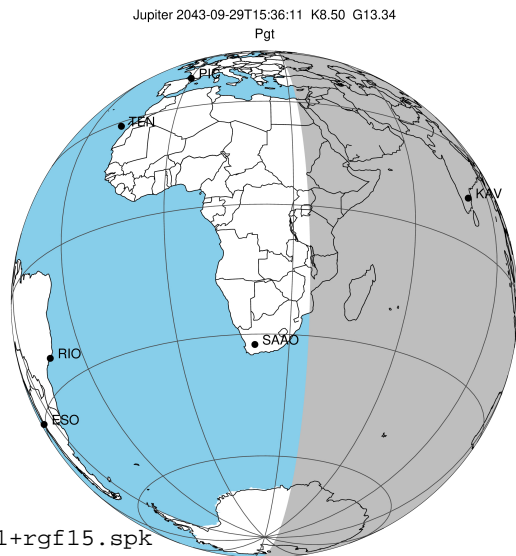


target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-09-29T15:36:11.070  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4116536904222789248  
 2Mass ID (if available) : 17402881-2316010

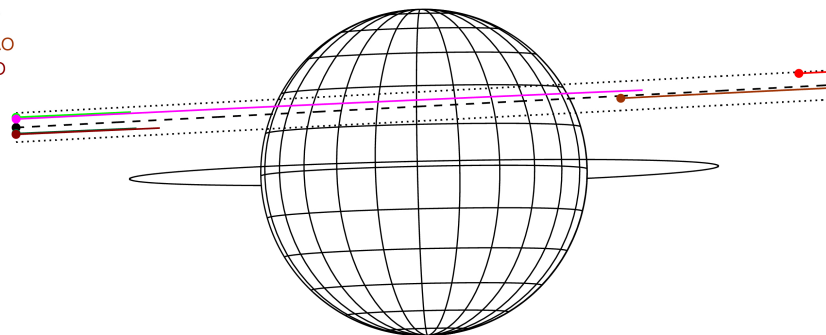
Jupiter 2043-09-29T15:36:11 K8.50 G13.34 Pgt

ICRS Star Coord at Epoch: 17h 40m 28.83385s -23:16:00.93341s  
 RUWE (>1.4 is poor) : 0.85  
 K magnitude : 8.499  
 G magnitude : 13.342  
 RP magnitude : 12.107  
 BP magnitude : 15.036  
 DUPflag : 0  
 Distance (au) : 5.316  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 18.41  
 Sun-Target sep (deg) : 79.73  
 Sun-Moon sep (deg) : 120.75  
 B (ring opening deg) : -2.21  
 PA of pole (deg) : 1.26  
 Pole direction: RA (deg): 268.05674  
 Dec (deg): 64.49731  
 C/A sky separation (") : 7.520  
 C/A sky separation (km) : 28992.3  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



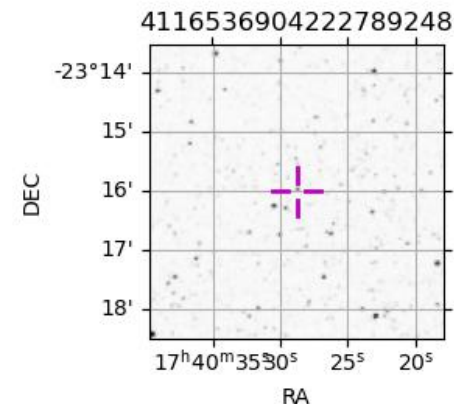
2043-09-29T15:36:11.0700 cc: 17 40 28.8338 s: -23 16 00.933 C/A 7.511" PA 182.99 deg v\_sky +18.41 km/s D 05.32 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 PIC  
 PMO  
 KAV  
 AAT  
 SAAO  
 MSO



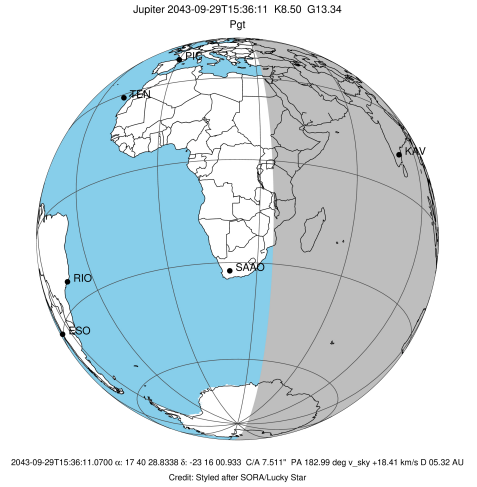
Observable events with sun below -5 deg and altitude above 5 deg

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			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	+ +	SEP 29 14:42 - SEP 29 16:39	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			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn

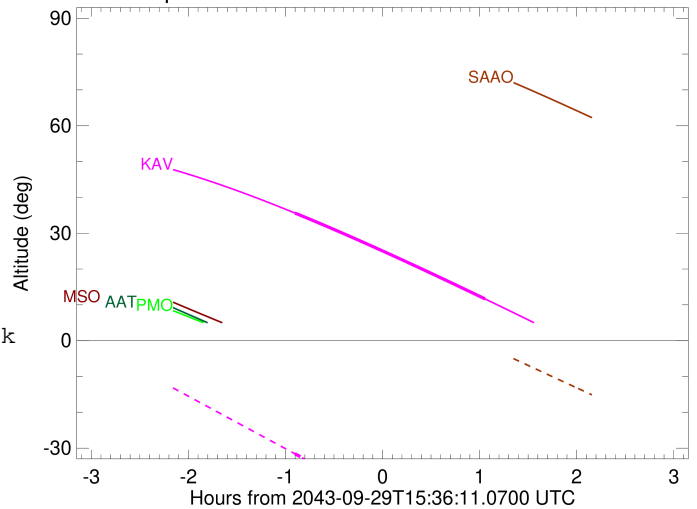


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-29T15:40:59.600
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       : 4116536904222789248
2Mass ID (if available) : 17402881-2316010
ICRS Star Coord at Epoch: 17h 40m 28.83385s -23:16:00.93341s
RUWE (>1.4 is poor) : 0.85
K magnitude          : 8.499
G magnitude          : 13.342
RP magnitude         : 12.107
BP magnitude         : 15.036
DUPflag             : 0
Distance (au)        : 5.316
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 18.41
Sun-Target sep (deg) : 79.73
Sun-Moon sep (deg)   : 120.72
B (ring opening deg) : -2.21
PA of pole (deg)     : 1.26
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 8.264
C/A sky separation (km) : 31859.4
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
    
```



Jupiter 2043-09-29T15:36:11 K8.50 G13.34



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	2043-09-29T14:42:01.375	35.63	-31.55	71490.8	25.10	28.14
Jupiter	E	2043-09-29T16:39:34.888	11.65	-59.79	71490.6	27.69	30.92