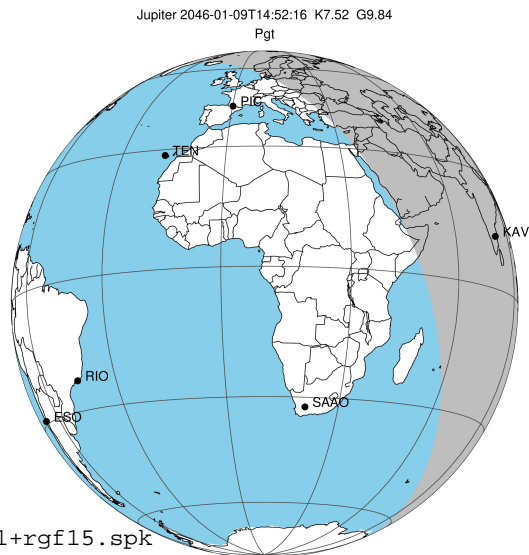


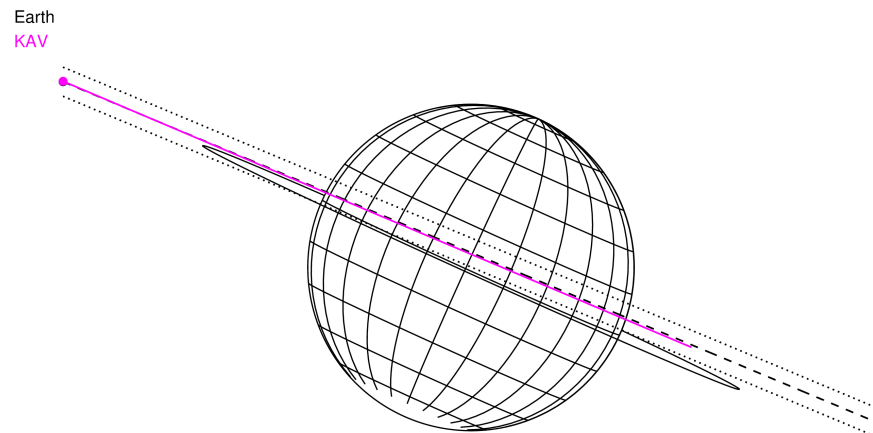
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2046-01-09T14:52:16.430  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 2608675866150497280  
 2Mass ID (if available) : 22470242-0853580

Jupiter 2046-01-09T14:52:16 K7.52 G9.84 Pgt

ICRS Star Coord at Epoch: 22h 47m 02.35565s -08:53:59.36951s  
 RUWE (>1.4 is poor) : 1.18  
 K magnitude : 7.521  
 G magnitude : 9.844  
 RP magnitude : 9.130  
 BP magnitude : 10.415  
 DUPflag : 0  
 Distance (au) : 5.539  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 32.49  
 Sun-Target sep (deg) : 50.95  
 Sun-Moon sep (deg) : 23.93  
 B (ring opening deg) : 1.16  
 PA of pole (deg) : -24.41  
 Pole direction: RA (deg): 268.05707  
 Dec (deg): 64.49723  
 C/A sky separation (") : 1.509  
 C/A sky separation (km) : 6060.4  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

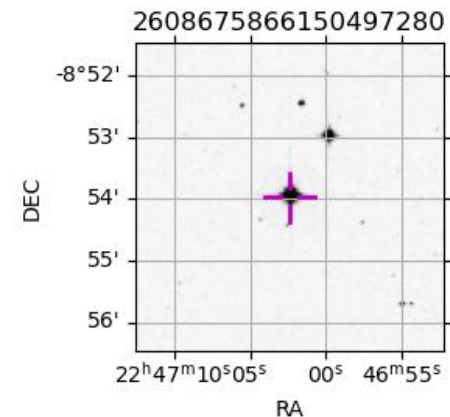


2046-01-09T14:52:16.4300 ex: 22 47 02.3557 s: -08 53 59.370 C/A 1.512" PA 157.29 deg v\_sky +32.49 km/s D 05.54 AU  
 Credit: Styled after SORA/Lucky Star



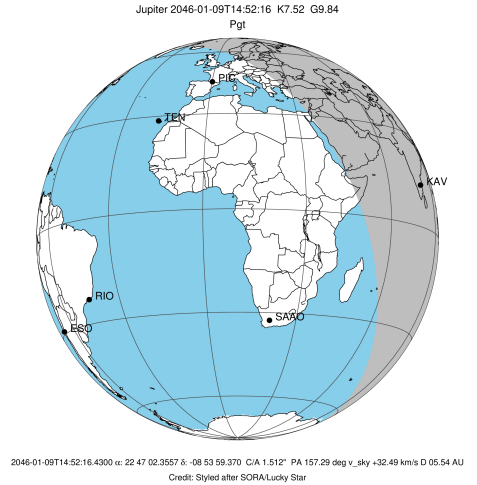
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	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	+ +	JAN 09 14:18 - JAN 09 15:32	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

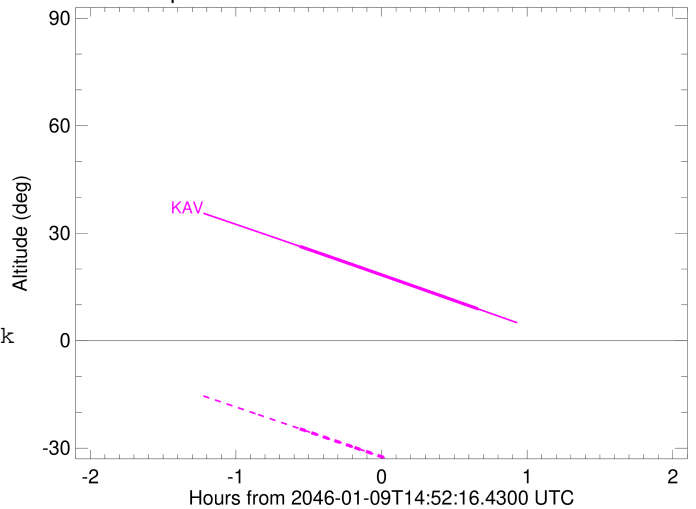


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2046-01-09T14:55:22.870
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        : 2608675866150497280
2Mass ID (if available) : 22470242-0853580
ICRS Star Coord at Epoch: 22h 47m 02.35565s -08:53:59.36951s
RUWE (>1.4 is poor)  : 1.18
K magnitude           : 7.521
G magnitude           : 9.844
RP magnitude          : 9.130
BP magnitude          : 10.415
DUPflag              : 0
Distance (au)         : 5.539
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.49
Sun-Target sep (deg)  : 50.95
Sun-Moon sep (deg)    : 24.82
B (ring opening deg) : 1.16
PA of pole (deg)      : -24.41
Pole direction: RA (deg): 268.05707
Dec (deg): 64.49723
C/A sky separation (") : 1.333
C/A sky separation (km) : 5356.3
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
    
```



Jupiter 2046-01-09T14:52:16 K7.52 G9.84



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	2046-01-09T14:18:37.821	26.33	-24.59	71492.0	2.83	3.23
Jupiter	E	2046-01-09T15:32:02.811	8.87	-41.59	71492.0	5.80	6.63