

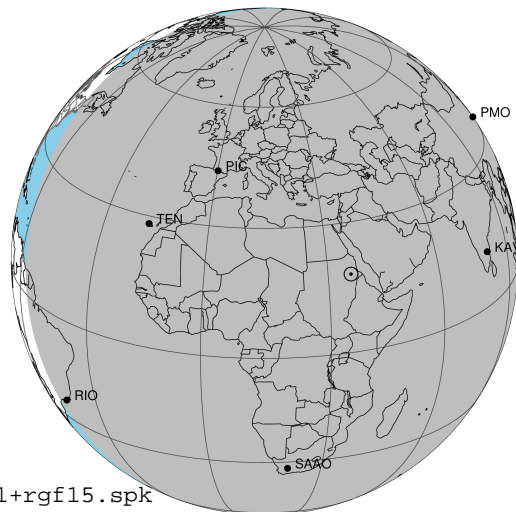
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2026-01-27T21:49:59.280
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3367284218676700928
 2Mass ID (if available) : 07155147+2235160

Jupiter 2026-01-27T21:49:59 K9.98 G11.41 Pgt

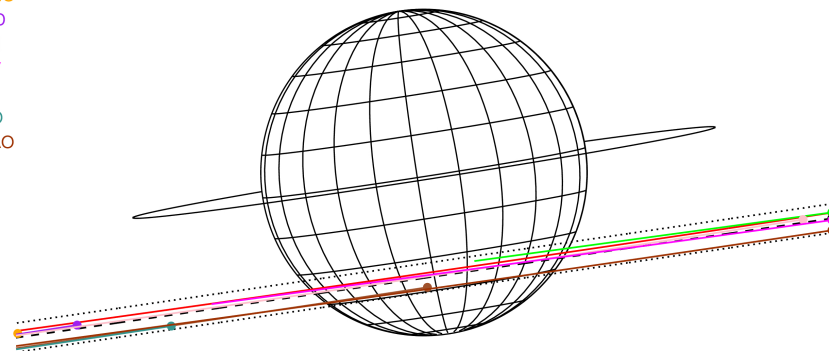
ICRS Star Coord at Epoch: 07h 15m 51.45909s +22:35:15.49975s

RUWE (>1.4 is poor) : 0.82
 K magnitude : 9.977
 G magnitude : 11.413
 RP magnitude : 10.918
 BP magnitude : 11.740
 DUPflag : 0
 Distance (au) : 4.286
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -15.44
 Sun-Target sep (deg) : 159.85
 Sun-Moon sep (deg) : 47.46
 B (ring opening deg) : 1.41
 PA of pole (deg) : 8.84
 Pole direction: RA (deg): 268.05770
 Dec (deg): 64.49669
 C/A sky separation (") : 14.720
 C/A sky separation (km) : 45758.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2026-01-27T21:49:59 K9.98 G11.41
 Pgt



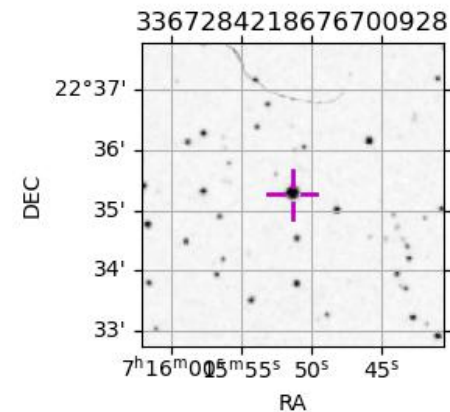
Earth
 PIC
 PMO
 KPNO
 MCD
 TEN
 KAV
 RIO
 ESO
 SAAO



2026-01-27T21:49:59.2800 α: 07 15 51.4591 δ: +22 35 15.500 C/A ***** PA 8.32 deg v_sky -15.44 km/s D 04.29 AU
 Credit: Styled after SORA/Lucky Star

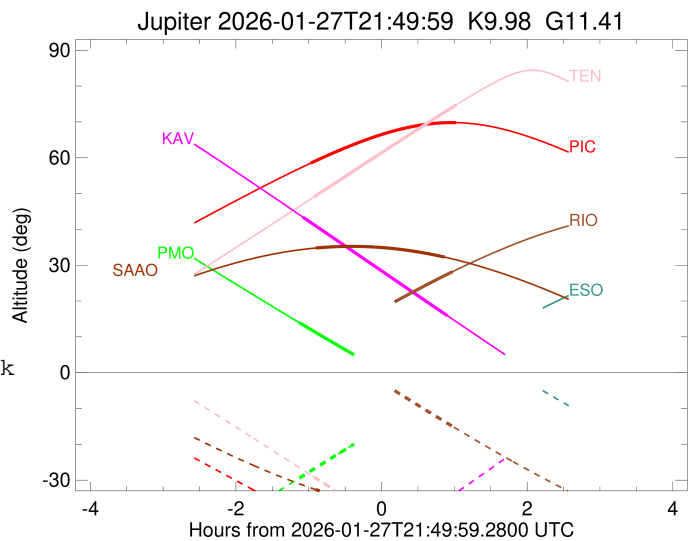
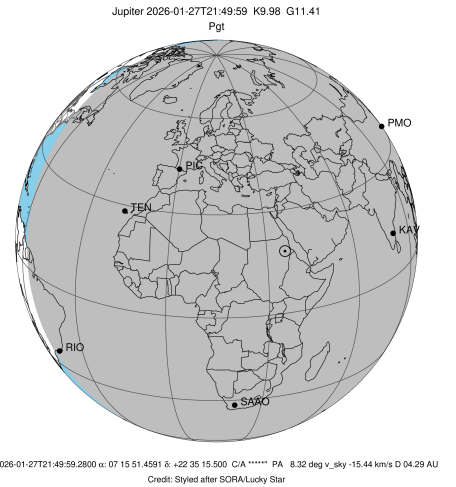
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+ +	JAN 27 20:51 - JAN 27 22:51	Pie
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+	JAN 27 20:42 - JAN 27 20:42	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	+ +	JAN 27 20:54 - JAN 27 22:51	Pie
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+ +	JAN 27 20:45 - JAN 27 22:44	Pie
RIO	Rio de Janeiro	-22.9	316.8	+	JAN 27 22:48 - JAN 27 22:48	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	+ +	JAN 27 20:55 - JAN 27 22:41	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2026-01-27T21:51:37.020
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      : 3367284218676700928
2Mass ID (if available) : 07155147+2235160
ICRS Star Coord at Epoch: 07h 15m 51.45909s +22:35:15.49975s
RUWE (>1.4 is poor) : 0.82
K magnitude          : 9.977
G magnitude          : 11.413
RP magnitude         : 10.918
BP magnitude         : 11.740
DUPflag             : 0
Distance (au)       : 4.286
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.44
Sun-Target sep (deg) : 159.85
Sun-Moon sep (deg)  : 47.96
B (ring opening deg) : 1.41
PA of pole (deg)    : 8.84
Pole direction: RA (deg): 268.05770
Dec (deg): 64.49669
C/A sky separation (" ) : 14.057
C/A sky separation (km) : 43696.5
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
    
```

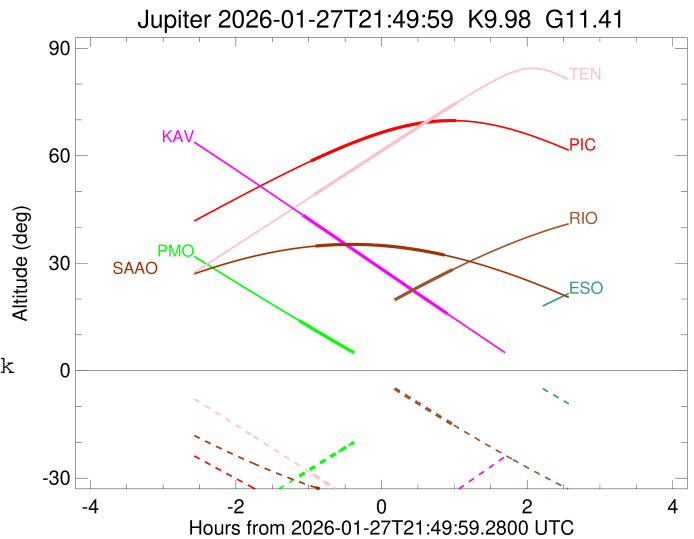
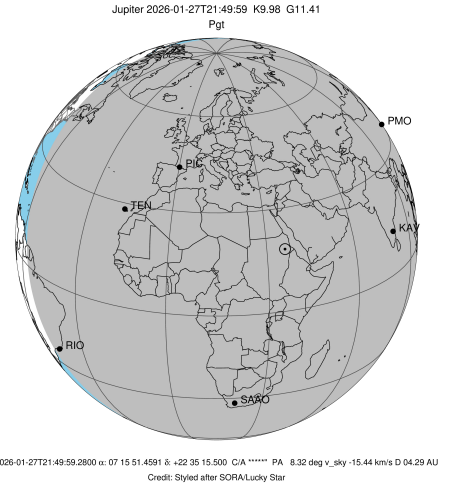


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2026-01-27T20:51:44.885	58.50	-41.30	71491.0	-38.18	-41.86
Jupiter	E	2026-01-27T22:51:27.032	69.79	-60.13	71491.0	-37.02	-40.68

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2026-01-27T21:45:18.950
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       : 3367284218676700928
2Mass ID (if available) : 07155147+2235160
ICRS Star Coord at Epoch: 07h 15m 51.45909s +22:35:15.49975s
RUWE (>1.4 is poor) : 0.82
K magnitude          : 9.977
G magnitude          : 11.413
RP magnitude         : 10.918
BP magnitude         : 11.740
DUPflag             : 0
Distance (au)        : 4.286
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.44
Sun-Target sep (deg) : 159.85
Sun-Moon sep (deg)   : 47.91
B (ring opening deg) : 1.41
PA of pole (deg)     : 8.84
Pole direction: RA (deg): 268.05770
Dec (deg): 64.49669
C/A sky separation ("): 13.333
C/A sky separation (km): 41446.4
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
    
```

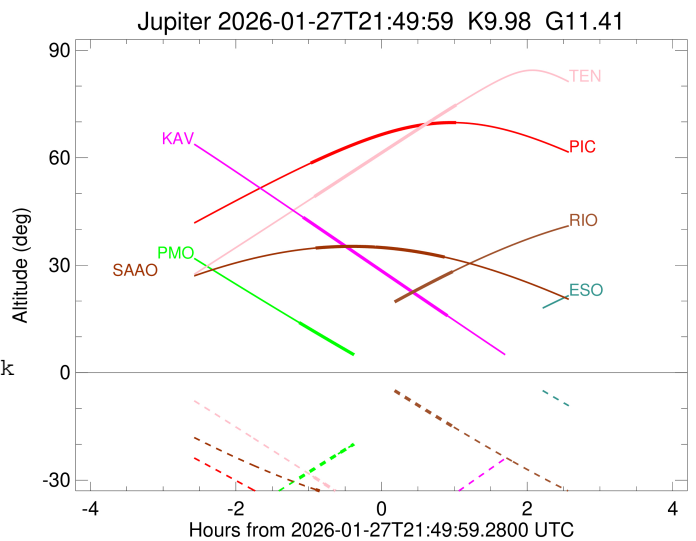
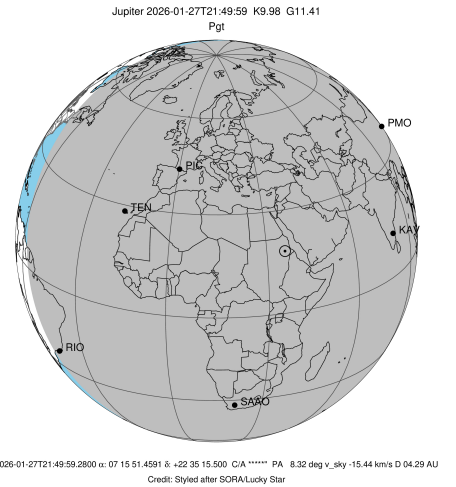


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2026-01-27T20:42:16.003	13.97	-29.43	71491.0	-36.47	-40.11
Jupiter	E	2026-01-27T22:48:48.858	-10.16x	-3.21x	71491.1	-34.46	-38.04

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2026-01-27T21:53:05.330
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        : 3367284218676700928
2Mass ID (if available) : 07155147+2235160
ICRS Star Coord at Epoch: 07h 15m 51.45909s +22:35:15.49975s
RUWE (>1.4 is poor) : 0.82
K magnitude           : 9.977
G magnitude           : 11.413
RP magnitude          : 10.918
BP magnitude          : 11.740
DUPflag              : 0
Distance (au)         : 4.286
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.44
Sun-Target sep (deg) : 159.85
Sun-Moon sep (deg)   : 47.78
B (ring opening deg) : 1.41
PA of pole (deg)     : 8.84
Pole direction: RA (deg): 268.05770
Dec (deg): 64.49669
C/A sky separation (" ) : 14.563
C/A sky separation (km) : 45270.1
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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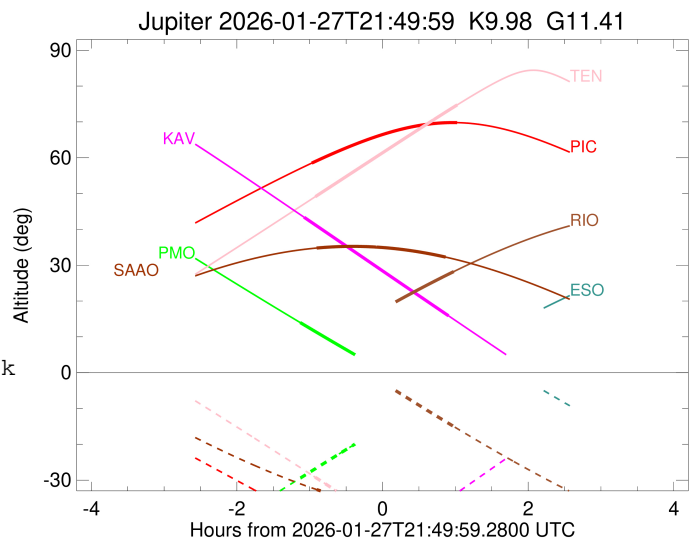
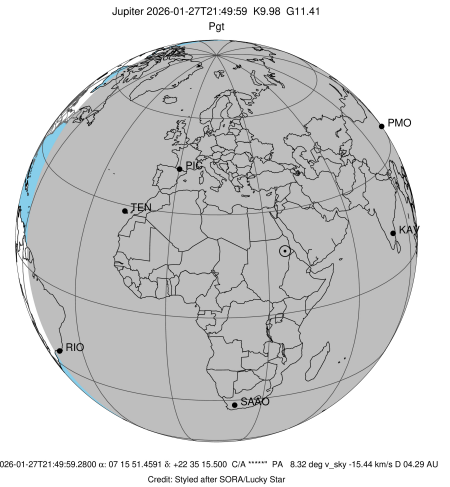


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2026-01-27T20:54:35.056	49.12	-29.20	71490.9	-39.62	-43.32
Jupiter	E	2026-01-27T22:51:26.892	74.72	-54.88	71490.9	-38.78	-42.47

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2026-01-27T21:44:40.330
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      : 3367284218676700928
2Mass ID (if available) : 07155147+2235160
ICRS Star Coord at Epoch: 07h 15m 51.45909s +22:35:15.49975s
RUWE (>1.4 is poor) : 0.82
K magnitude          : 9.977
G magnitude          : 11.413
RP magnitude         : 10.918
BP magnitude         : 11.740
DUPflag             : 0
Distance (au)       : 4.286
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.44
Sun-Target sep (deg) : 159.85
Sun-Moon sep (deg)  : 48.37
B (ring opening deg) : 1.41
PA of pole (deg)    : 8.84
Pole direction: RA (deg): 268.05770
Dec (deg): 64.49669
C/A sky separation (") : 14.400
C/A sky separation (km) : 44762.8
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
    
```

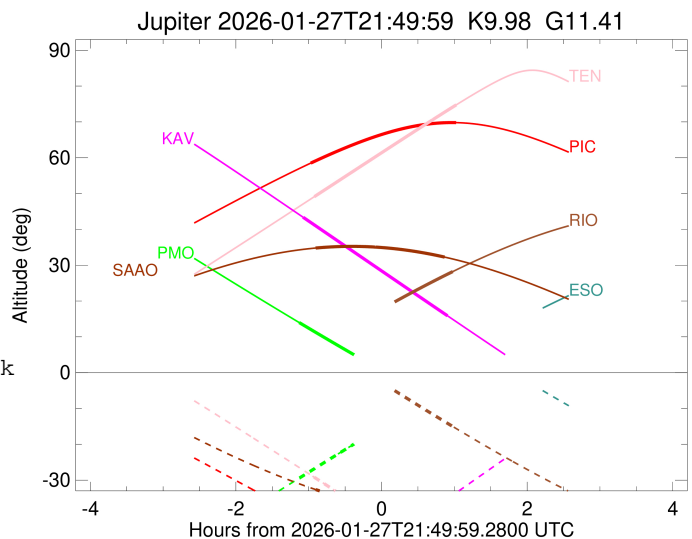
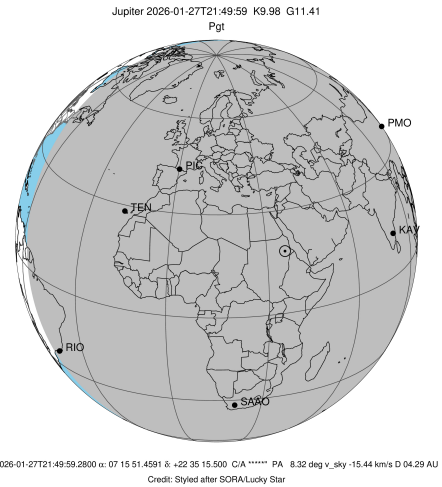


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2026-01-27T20:45:24.611	43.37	-63.38	71490.9	-39.92	-43.63
Jupiter	E	2026-01-27T22:44:21.342	15.88	-35.22	71491.0	-37.56	-41.22

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2026-01-27T21:54:19.960
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      : 3367284218676700928
2Mass ID (if available) : 07155147+2235160
ICRS Star Coord at Epoch: 07h 15m 51.45909s +22:35:15.49975s
RUWE (>1.4 is poor) : 0.82
K magnitude         : 9.977
G magnitude         : 11.413
RP magnitude        : 10.918
BP magnitude        : 11.740
DUPflag            : 0
Distance (au)       : 4.286
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : -15.44
Sun-Target sep (deg) : 159.85
Sun-Moon sep (deg)  : 47.26
B (ring opening deg) : 1.41
PA of pole (deg)    : 8.84
Pole direction: RA (deg): 268.05770
Dec (deg): 64.49669
C/A sky separation (") : 16.071
C/A sky separation (km) : 49957.0
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
    
```

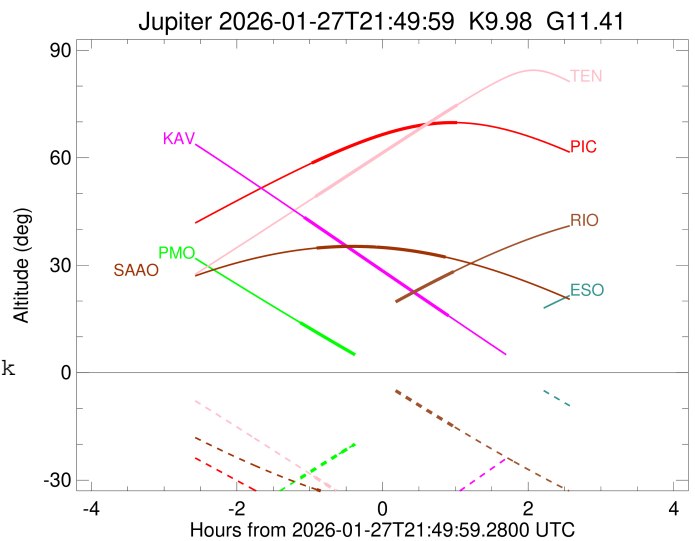
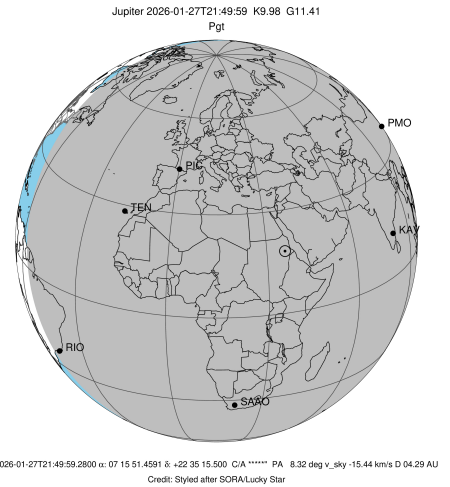


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2026-01-27T20:59:50.057	7.84	8.26x	71490.7	-44.40	-48.11
Jupiter	E	2026-01-27T22:48:34.887	28.19	-15.00	71490.7	-44.10	-47.81


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2026-01-27T21:48:49.690
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       : 3367284218676700928
2Mass ID (if available) : 07155147+2235160
ICRS Star Coord at Epoch: 07h 15m 51.45909s +22:35:15.49975s
RUWE (>1.4 is poor) : 0.82
K magnitude           : 9.977
G magnitude           : 11.413
RP magnitude         : 10.918
BP magnitude         : 11.740
DUPflag              : 0
Distance (au)        : 4.286
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.44
Sun-Target sep (deg) : 159.85
Sun-Moon sep (deg)   : 48.08
B (ring opening deg) : 1.41
PA of pole (deg)     : 8.84
Pole direction: RA (deg): 268.05770
Dec (deg): 64.49669
C/A sky separation ("): 16.347
C/A sky separation (km): 50815.2
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
    
```



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	2026-01-27T20:55:50.411	34.79	-32.64	71490.6	-46.00	-49.69
Jupiter	E	2026-01-27T22:41:52.909	32.27	-39.50	71490.7	-44.44	-48.15