

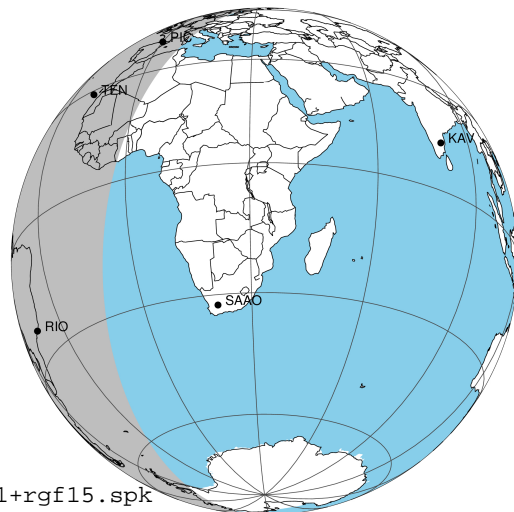
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-05T06:28:04.960
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116564426378262272
 2Mass ID (if available) : 17402252-2253501

Jupiter 2043-02-05T06:28:04 K8.83 G13.94 Pgt

ICRS Star Coord at Epoch: 17h 40m 22.52637s -22:53:50.16805s

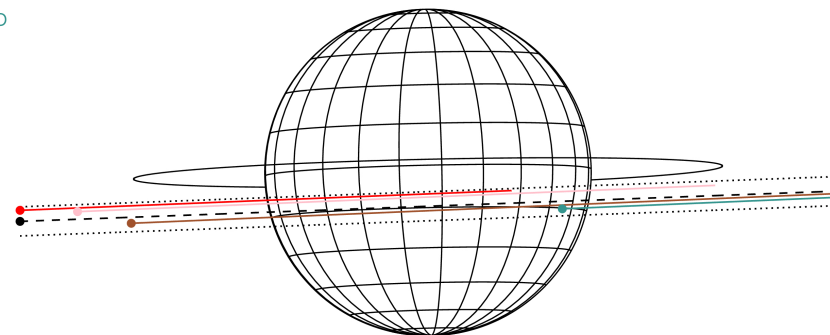
RUWE (>1.4 is poor) : 0.86
 K magnitude : 8.831
 G magnitude : 13.939
 RP magnitude : 12.680
 BP magnitude : 15.733
 DUPflag : 0
 Distance (au) : 5.887
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 32.26
 Sun-Target sep (deg) : 50.26
 Sun-Moon sep (deg) : 7.73
 B (ring opening deg) : -2.58
 PA of pole (deg) : 1.28
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 3.461
 C/A sky separation (km) : 14776.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-05T06:28:04 K8.83 G13.94
 Pgt



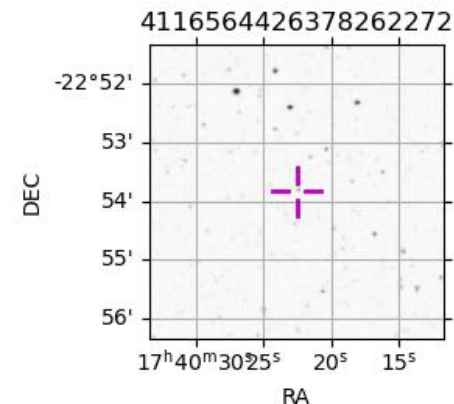
2043-02-05T06:28:04.9600 @: 17 40 22.5264 @: -22 53 50.168 C/A 3.470" PA 2.12 deg v_sky +32.26 km/s D 05.89 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PIC
 TEN
 RIO
 ESO



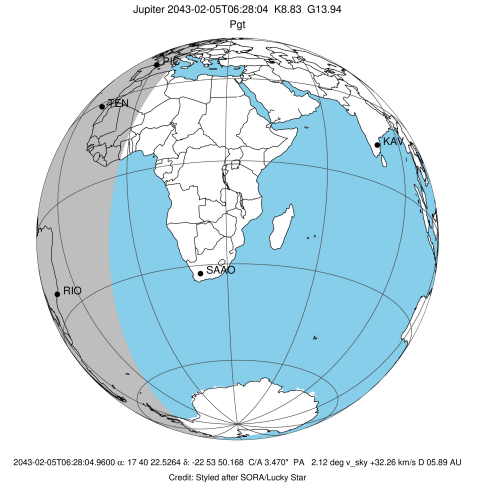
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	FEB 05 05:49 - FEB 05 05:49	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	+ +	FEB 05 05:49 - FEB 05 07:02	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	+ +	FEB 05 05:49 - FEB 05 07:01	Pie
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	FEB 05 07:01 - FEB 05 07:01	Pne
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

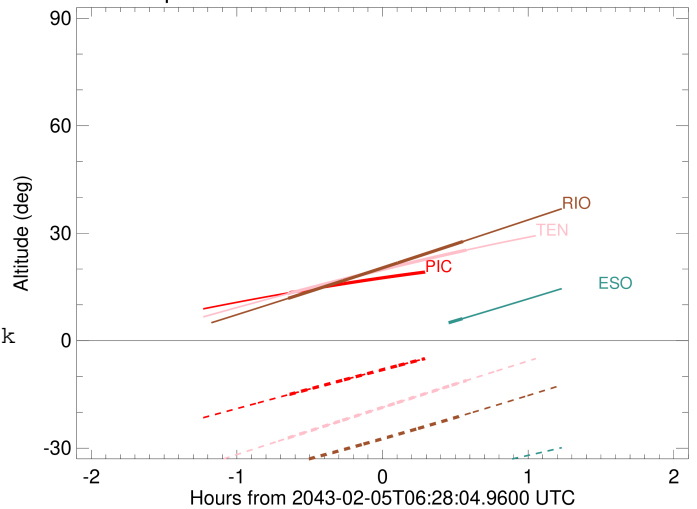


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-05T06:26:39.930
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PIC
Location              : Pic du Midi
Latitude (deg)        : 42.93656
E. Longitude (deg)    : 0.14231
Altitude (km)         : 2.890
Gaia source ID        : 4116564426378262272
2Mass ID (if available) : 17402252-2253501
ICRS Star Coord at Epoch: 17h 40m 22.52637s -22:53:50.16805s
RUWE (>1.4 is poor) : 0.86
K magnitude           : 8.831
G magnitude           : 13.939
RP magnitude          : 12.680
BP magnitude          : 15.733
DUPflag              : 0
Distance (au)         : 5.887
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.26
Sun-Target sep (deg) : 50.26
Sun-Moon sep (deg)   : 8.06
B (ring opening deg) : -2.58
PA of pole (deg)     : 1.28
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 2.193
C/A sky separation (km) : 9363.7
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 2043-02-05T06:28:04 K8.83 G13.94

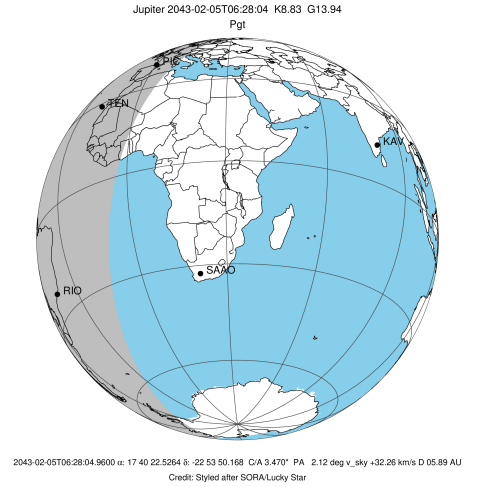


x: target alt < 5.0 deg or sun > -5.0 deg

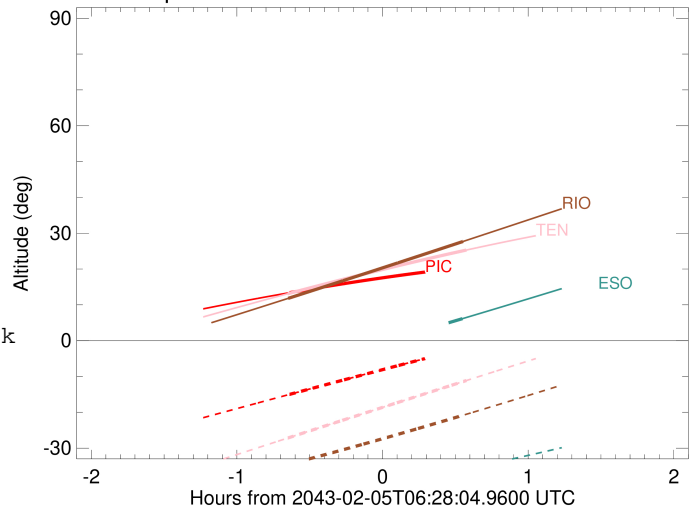
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-05T05:49:45.281	13.39	-15.00	71491.8	-8.53	-9.73
Jupiter	E	2043-02-05T07:03:37.447	20.61	-1.86x	71491.9	-6.54	-7.47

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-05T06:25:47.790
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      : 4116564426378262272
2Mass ID (if available) : 17402252-2253501
ICRS Star Coord at Epoch: 17h 40m 22.52637s -22:53:50.16805s
RUWE (>1.4 is poor) : 0.86
K magnitude          : 8.831
G magnitude          : 13.939
RP magnitude         : 12.680
BP magnitude         : 15.733
DUPflag             : 0
Distance (au)       : 5.887
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 32.26
Sun-Target sep (deg) : 50.26
Sun-Moon sep (deg)  : 7.75
B (ring opening deg) : -2.58
PA of pole (deg)    : 1.28
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 2.519
C/A sky separation (km) : 10757.7
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 2043-02-05T06:28:04 K8.83 G13.94

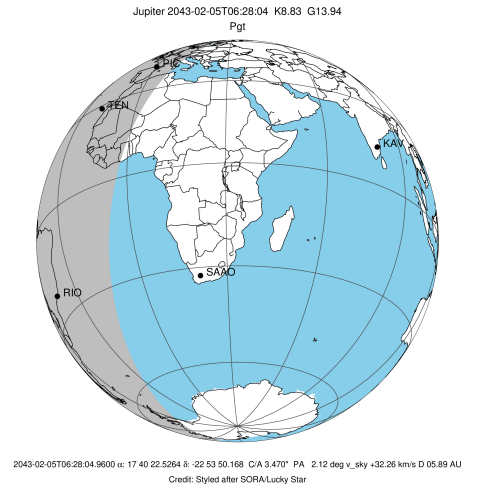


x: target alt < 5.0 deg or sun > -5.0 deg

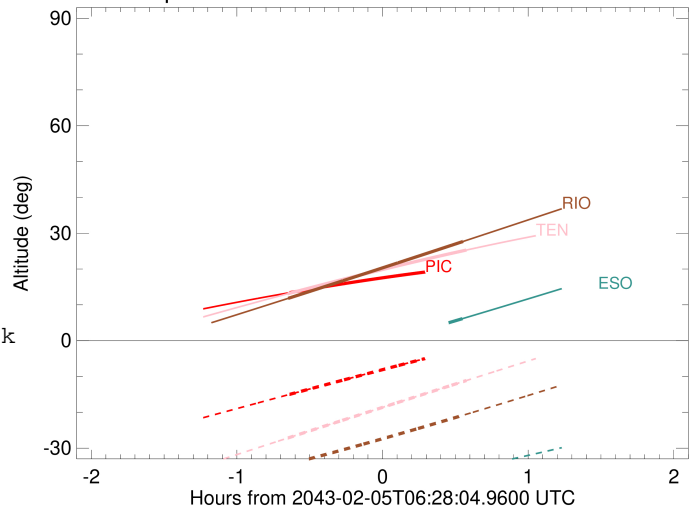
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-05T05:49:01.758	13.09	-27.18	71491.7	-9.74	-11.10
Jupiter	E	2043-02-05T07:02:38.073	25.29	-11.13	71491.8	-7.58	-8.65

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-05T06:25:11.720
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        : 4116564426378262272
2Mass ID (if available) : 17402252-2253501
ICRS Star Coord at Epoch: 17h 40m 22.52637s -22:53:50.16805s
RUWE (>1.4 is poor) : 0.86
K magnitude           : 8.831
G magnitude           : 13.939
RP magnitude          : 12.680
BP magnitude          : 15.733
DUPflag              : 0
Distance (au)         : 5.887
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.26
Sun-Target sep (deg) : 50.26
Sun-Moon sep (deg)   : 7.00
B (ring opening deg) : -2.58
PA of pole (deg)     : 1.28
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation ("): 3.919
C/A sky separation (km): 16732.5
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
    
```



Jupiter 2043-02-05T06:28:04 K8.83 G13.94

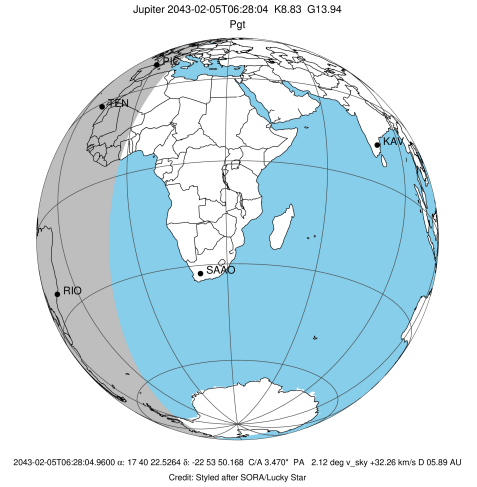


x: target alt < 5.0 deg or sun > -5.0 deg

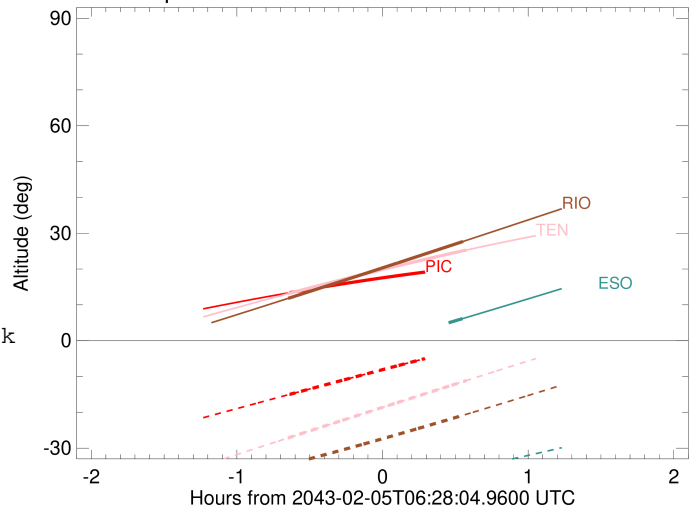
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-05T05:49:14.002	11.81	-34.52	71491.4	-14.67	-16.65
Jupiter	E	2043-02-05T07:01:14.524	27.68	-20.83	71491.6	-12.39	-14.09

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-05T06:25:24.160
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : ESO
Location              : European Southern Obs. (3.6m)
Latitude (deg)        : -29.26097
E. Longitude (deg)    : 289.26831
Altitude (km)         : 2.400
Gaia source ID        : 4116564426378262272
2Mass ID (if available) : 17402252-2253501
ICRS Star Coord at Epoch: 17h 40m 22.52637s -22:53:50.16805s
RUWE (>1.4 is poor) : 0.86
K magnitude           : 8.831
G magnitude           : 13.939
RP magnitude          : 12.680
BP magnitude          : 15.733
DUPflag              : 0
Distance (au)         : 5.887
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.26
Sun-Target sep (deg) : 50.26
Sun-Moon sep (deg)   : 6.83
B (ring opening deg) : -2.58
PA of pole (deg)     : 1.28
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 4.300
C/A sky separation (km) : 18360.2
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
    
```



Jupiter 2043-02-05T06:28:04 K8.83 G13.94



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	2043-02-05T05:49:51.965	-7.71x	-43.17	71491.3	-15.97	-18.11
Jupiter	E	2043-02-05T07:01:01.012	6.14	-35.90	71491.5	-13.75	-15.62