

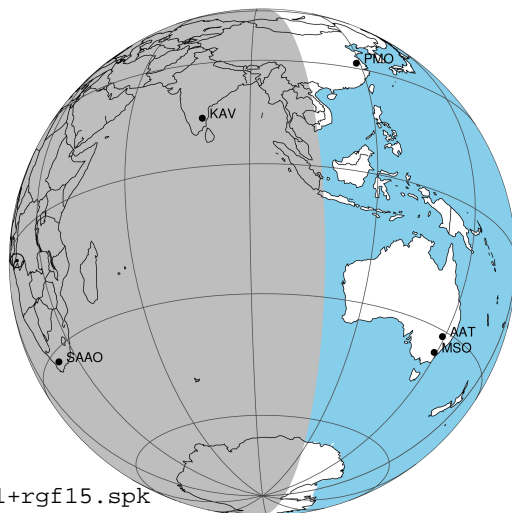
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2031-04-02T22:58:18.830
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4070202998748362240
 2Mass ID (if available) : 17523680-2253367

Jupiter 2031-04-02T22:58:18 K9.19 G14.69 Pgt

ICRS Star Coord at Epoch: 17h 52m 36.80721s -22:53:37.08775s

RUWE (>1.4 is poor) : 0.94
 K magnitude : 9.194
 G magnitude : 14.690
 RP magnitude : 13.320
 BP magnitude : 16.927
 DUPflag : 0
 Distance (au) : 4.969
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 5.81
 Sun-Target sep (deg) : 104.27
 Sun-Moon sep (deg) : 133.20
 B (ring opening deg) : -2.61
 PA of pole (deg) : -0.04
 Pole direction: RA (deg): 268.05698
 Dec (deg): 64.49651
 C/A sky separation (") : 11.465
 C/A sky separation (km) : 41321.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

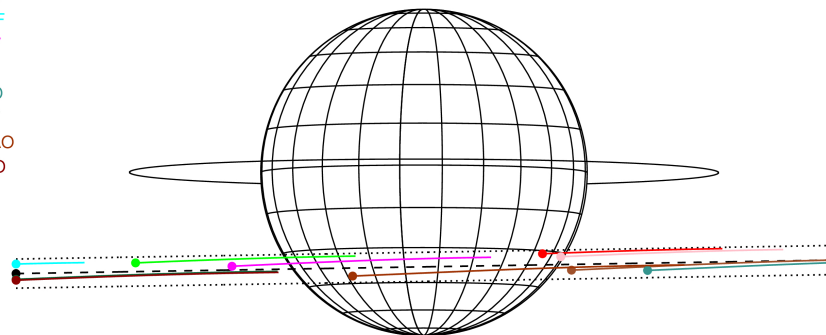
Jupiter 2031-04-02T22:58:18 K9.19 G14.69
 Pgt



2031-04-02T22:58:18.8300 α: 17 52 36.80722 δ: -22 53 37.088 C/A ***** PA 0.95 deg v_sky + 5.81 km/s D 04.97 AU

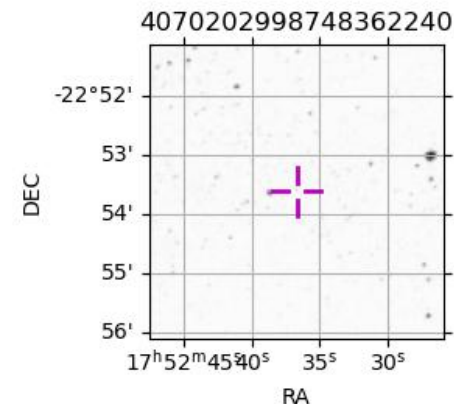
Credit: Styled after SORA/Lucky Star

Earth
 PIC
 PMO
 TEN
 IRTF
 KAV
 RIO
 ESO
 AAT
 SAAO
 MSO



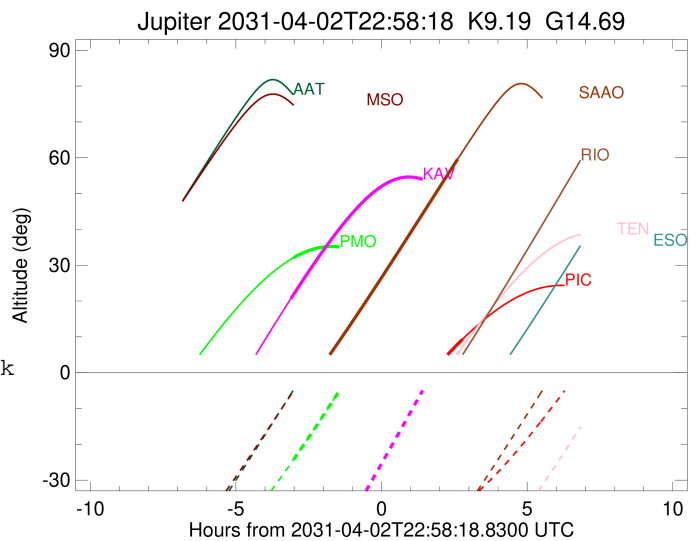
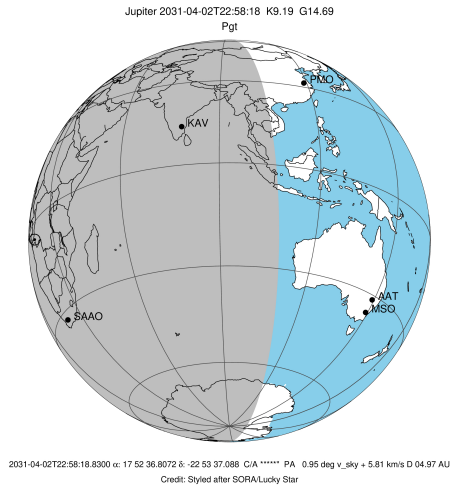
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	APR 03 01:45 - APR 03 01:45	Pne
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+	APR 02 19:57 - APR 02 19:57	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	+	APR 03 01:37 - APR 03 01:37	Pne
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	APR 02 19:51 - APR 02 19:51	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 03 01:35 - APR 03 01:35	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-04-02T22:47:14.830
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      : 4070202998748362240
2Mass ID (if available) : 17523680-2253367
ICRS Star Coord at Epoch: 17h 52m 36.80721s -22:53:37.08775s
RUWE (>1.4 is poor) : 0.94
K magnitude          : 9.194
G magnitude          : 14.690
RP magnitude         : 13.320
BP magnitude         : 16.927
DUPflag             : 0
Distance (au)       : 4.969
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 5.81
Sun-Target sep (deg) : 104.27
Sun-Moon sep (deg)  : 133.42
B (ring opening deg) : -2.61
PA of pole (deg)    : -0.04
Pole direction: RA (deg): 268.05698
Dec (deg): 64.49651
C/A sky separation (" ) : 10.429
C/A sky separation (km) : 37587.1
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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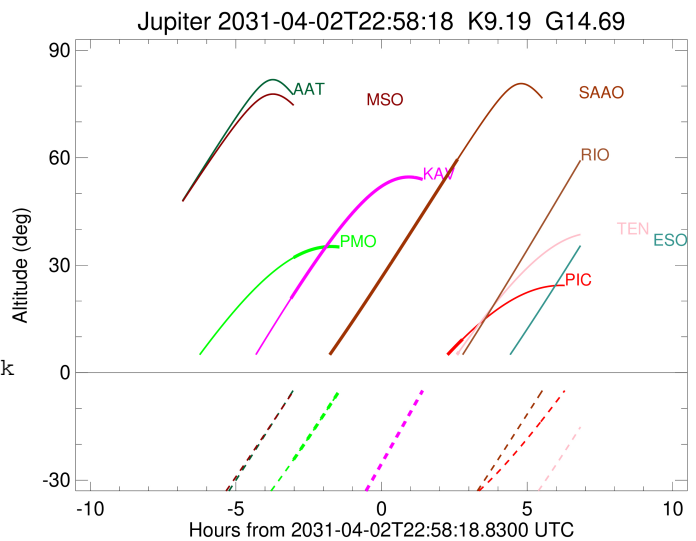
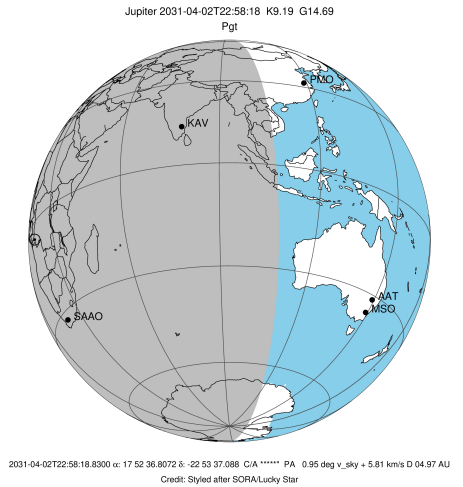


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-04-02T19:57:55.548	-50.09x	-16.95	71489.1	-33.76	-37.31
Jupiter	E	2031-04-03T01:45:10.801	9.31	-36.76	71489.7	-29.43	-32.77

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-04-02T23:03:59.000
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      : 4070202998748362240
2Mass ID (if available) : 17523680-2253367
ICRS Star Coord at Epoch: 17h 52m 36.80721s -22:53:37.08775s
RUWE (>1.4 is poor) : 0.94
K magnitude          : 9.194
G magnitude          : 14.690
RP magnitude         : 13.320
BP magnitude         : 16.927
DUPflag             : 0
Distance (au)       : 4.969
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 5.81
Sun-Target sep (deg) : 104.27
Sun-Moon sep (deg)  : 133.25
B (ring opening deg) : -2.61
PA of pole (deg)    : -0.04
Pole direction: RA (deg): 268.05698
Dec (deg): 64.49651
C/A sky separation ("): 10.077
C/A sky separation (km): 36319.7
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
    
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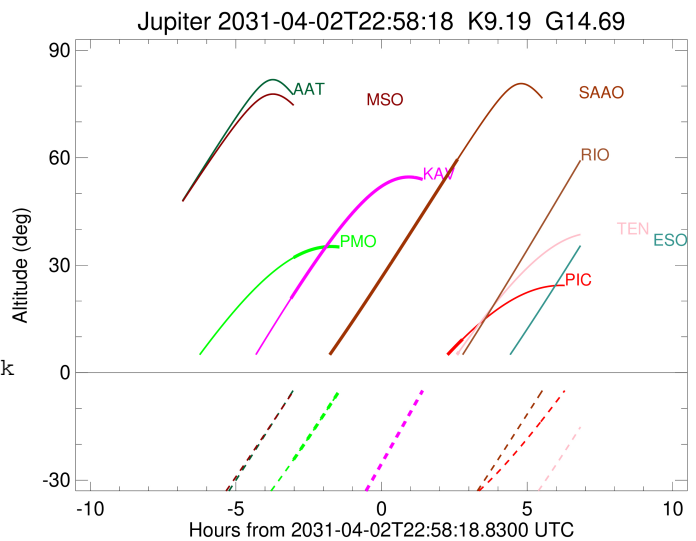
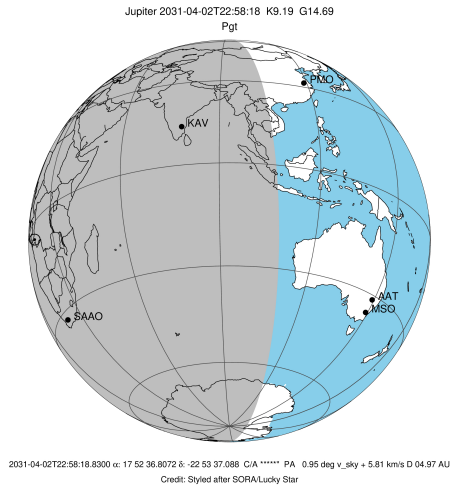


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-04-02T19:57:15.307	32.12	-24.24	71489.5	-31.43	-34.88
Jupiter	E	2031-04-03T02:08:30.108	0.92x	51.32x	71489.6	-30.66	-34.07

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-04-02T22:46:06.270
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        : 4070202998748362240
2Mass ID (if available) : 17523680-2253367
ICRS Star Coord at Epoch: 17h 52m 36.80721s -22:53:37.08775s
RUWE (>1.4 is poor) : 0.94
K magnitude           : 9.194
G magnitude           : 14.690
RP magnitude          : 13.320
BP magnitude          : 16.927
DUPflag              : 0
Distance (au)         : 4.969
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 5.81
Sun-Target sep (deg)  : 104.27
Sun-Moon sep (deg)    : 133.40
B (ring opening deg) : -2.61
PA of pole (deg)      : -0.04
Pole direction: RA (deg): 268.05698
Dec (deg): 64.49651
C/A sky separation (") : 10.951
C/A sky separation (km) : 39470.9
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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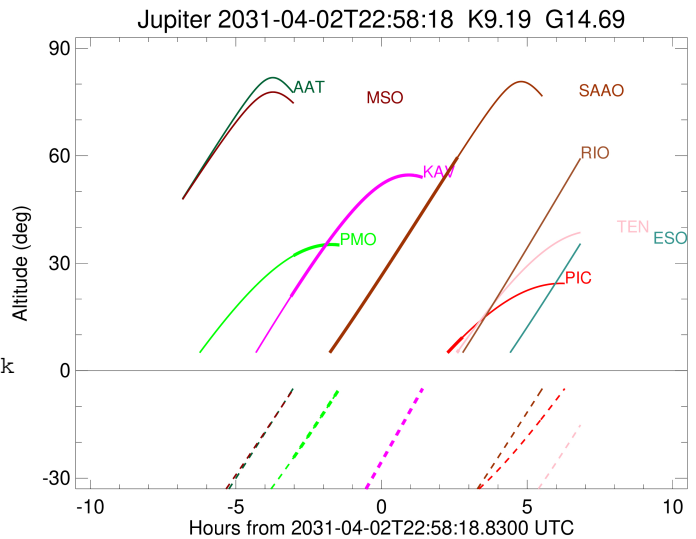
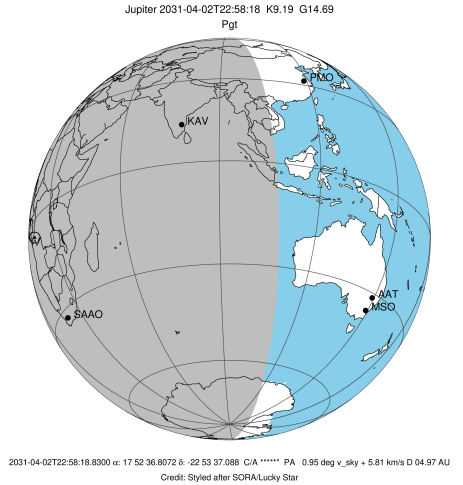


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-04-02T20:03:08.352	-65.45x	-9.31	71488.9	-35.50	-39.11
Jupiter	E	2031-04-03T01:37:41.090	5.80	-56.00	71489.5	-30.95	-34.37

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-04-02T22:54:34.750
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       : 4070202998748362240
2Mass ID (if available) : 17523680-2253367
ICRS Star Coord at Epoch: 17h 52m 36.80721s -22:53:37.08775s
RUWE (>1.4 is poor) : 0.94
K magnitude          : 9.194
G magnitude          : 14.690
RP magnitude         : 13.320
BP magnitude         : 16.927
DUPflag             : 0
Distance (au)        : 4.969
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 5.81
Sun-Target sep (deg) : 104.27
Sun-Moon sep (deg)   : 133.83
B (ring opening deg) : -2.61
PA of pole (deg)     : -0.04
Pole direction: RA (deg): 268.05698
Dec (deg): 64.49651
C/A sky separation (") : 10.470
C/A sky separation (km) : 37734.8
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
    
```

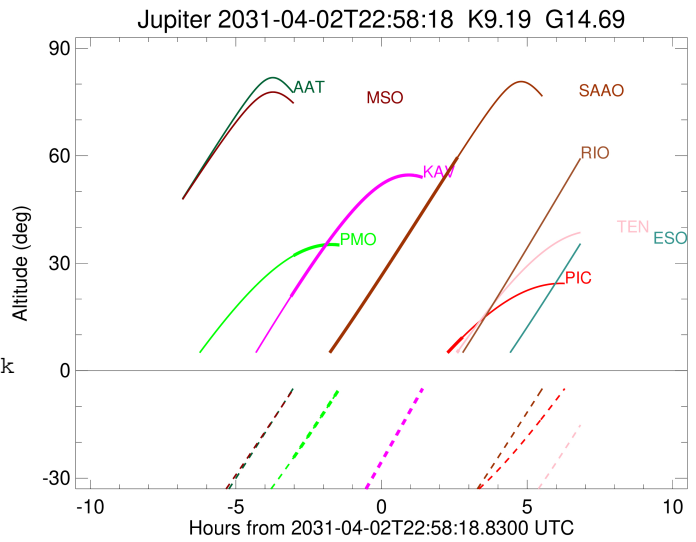
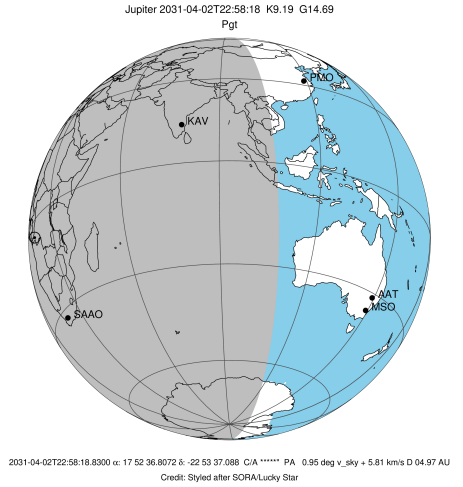


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-04-02T19:51:45.775	20.70	-66.37	71489.1	-33.96	-37.52
Jupiter	E	2031-04-03T02:02:19.525	42.73	19.20x	71489.5	-31.04	-34.46

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-04-02T22:46:46.080
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       : 4070202998748362240
2Mass ID (if available) : 17523680-2253367
ICRS Star Coord at Epoch: 17h 52m 36.80721s -22:53:37.08775s
RUWE (>1.4 is poor) : 0.94
K magnitude           : 9.194
G magnitude           : 14.690
RP magnitude          : 13.320
BP magnitude          : 16.927
DUPflag              : 0
Distance (au)        : 4.969
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 5.81
Sun-Target sep (deg) : 104.27
Sun-Moon sep (deg)   : 134.03
B (ring opening deg) : -2.61
PA of pole (deg)     : -0.04
Pole direction: RA (deg): 268.05698
Dec (deg): 64.49651
C/A sky separation (") : 12.206
C/A sky separation (km) : 43993.3
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	2031-04-02T20:07:00.787	-7.07x	-45.12	71488.1	-40.37	-44.08
Jupiter	E	2031-04-03T01:35:00.757	59.55	-41.10	71488.8	-35.67	-39.29