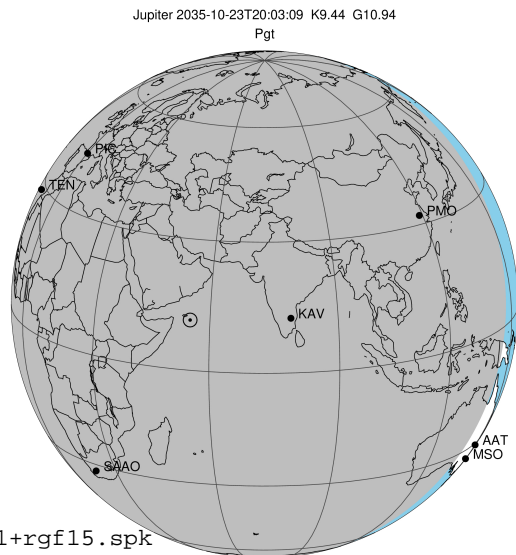


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2035-10-23T20:03:09.730
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 34010299829019648
 2Mass ID (if available) : 03002494+1540238

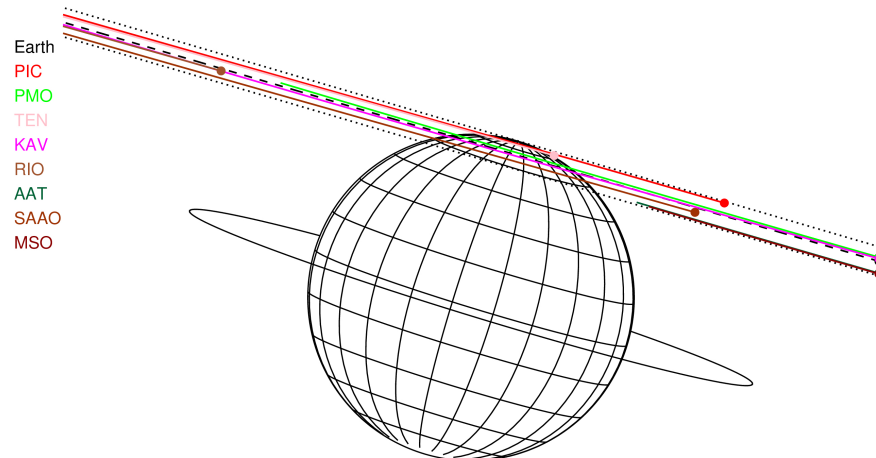
ICRS Star Coord at Epoch: 03h 00m 24.94251s +15:40:24.02327s

RUWE (>1.4 is poor) : 1.00
 K magnitude : 9.438
 G magnitude : 10.936
 RP magnitude : 10.418
 BP magnitude : 11.282
 DUPflag : 0
 Distance (au) : 4.024
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -15.11
 Sun-Target sep (deg) : 162.52
 Sun-Moon sep (deg) : 72.04
 B (ring opening deg) : 3.42
 PA of pole (deg) : -17.09
 Pole direction: RA (deg): 268.05639
 Dec (deg): 64.49682
 C/A sky separation (") : 22.438
 C/A sky separation (km) : 65487.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



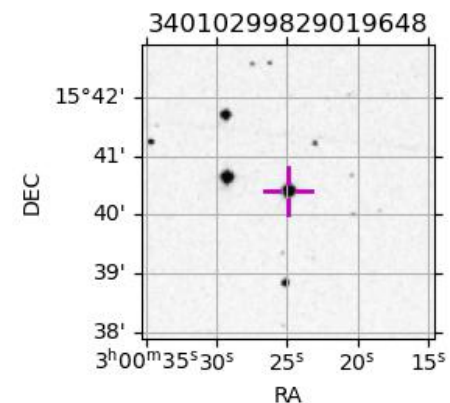
2035-10-23T20:03:09.7300 a: 03 00 24.9425 s: +15 40 24.023 C/A ***** PA 163.67 deg v_sky -15.11 km/s D 04.02 AU
 Credit: Styled after SORA/Lucky Star

Jupiter 2035-10-23T20:03:09 K9.44 G10.94 Pgt



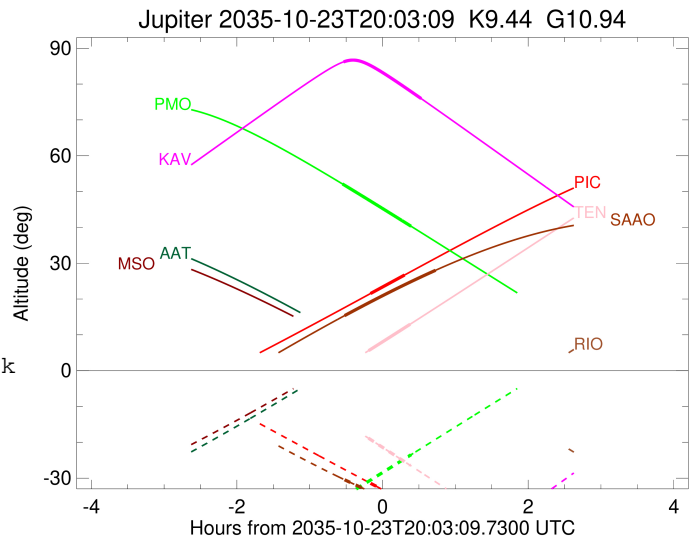
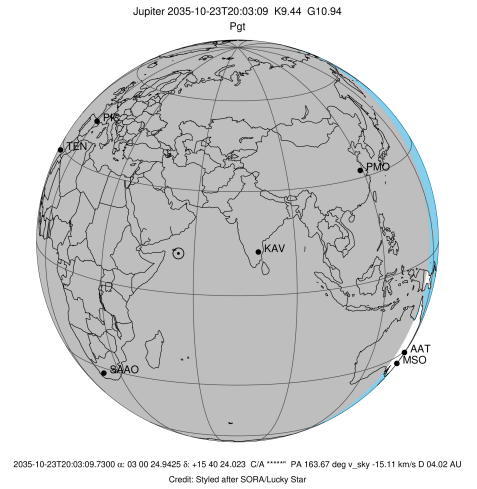
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+ +	OCT 23 19:53 - OCT 23 20:21	Pie
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	OCT 23 19:30 - OCT 23 20:26	Pie
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	+ +	OCT 23 19:51 - OCT 23 20:25	Pie
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+ +	OCT 23 19:31 - OCT 23 20:35	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	+ +	OCT 23 19:31 - OCT 23 20:46	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2035-10-23T20:07:17.630
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       : 34010299829019648
2Mass ID (if available) : 03002494+1540238
ICRS Star Coord at Epoch: 03h 00m 24.94251s +15:40:24.02327s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.438
G magnitude          : 10.936
RP magnitude         : 10.418
BP magnitude         : 11.282
DUPflag             : 0
Distance (au)        : 4.024
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.11
Sun-Target sep (deg) : 162.52
Sun-Moon sep (deg)   : 72.57
B (ring opening deg) : 3.42
PA of pole (deg)     : -17.09
Pole direction: RA (deg): 268.05639
Dec (deg): 64.49682
C/A sky separation ("): 24.100
C/A sky separation (km): 70334.7
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
    
```

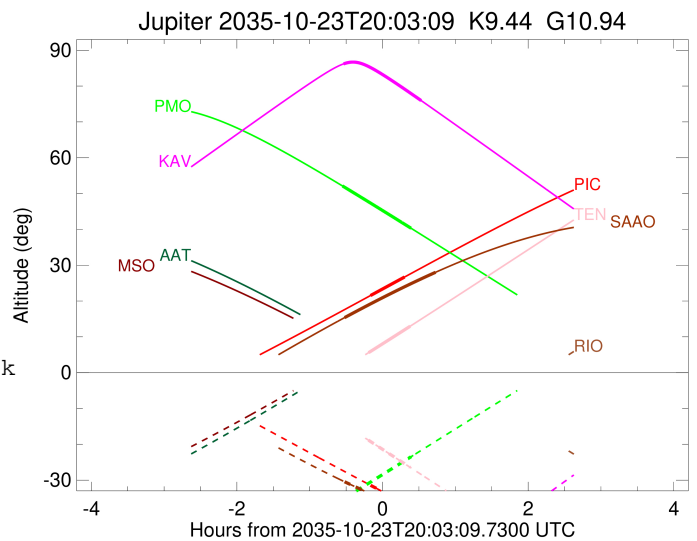
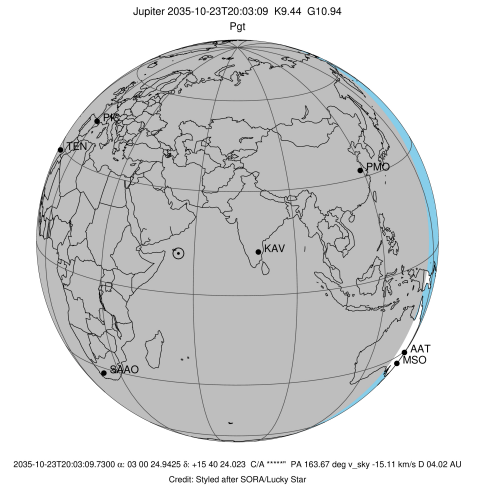


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2035-10-23T19:53:18.990	21.54	-31.44	71476.4	80.31	81.44
Jupiter	E	2035-10-23T20:21:15.150	26.68	-36.34	71476.6	78.05	79.44

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2035-10-23T19:58:27.910
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       : 34010299829019648
2Mass ID (if available) : 03002494+1540238
ICRS Star Coord at Epoch: 03h 00m 24.94251s +15:40:24.02327s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 9.438
G magnitude           : 10.936
RP magnitude         : 10.418
BP magnitude         : 11.282
DUPflag              : 0
Distance (au)        : 4.024
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.11
Sun-Target sep (deg) : 162.52
Sun-Moon sep (deg)   : 72.50
B (ring opening deg) : 3.42
PA of pole (deg)     : -17.09
Pole direction: RA (deg): 268.05639
Dec (deg): 64.49682
C/A sky separation ("): 22.796
C/A sky separation (km): 66530.7
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
    
```

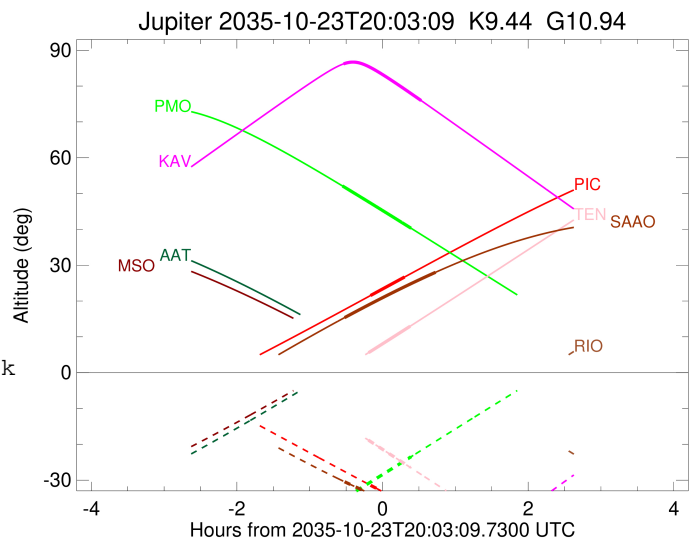
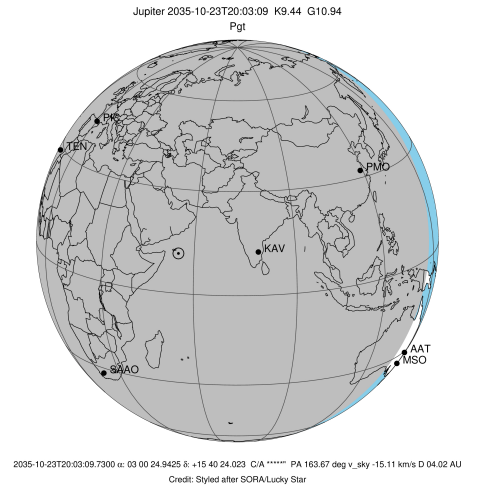


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2035-10-23T19:30:15.443	52.10	-35.39	71478.0	69.10	71.41
Jupiter	E	2035-10-23T20:26:43.416	40.30	-23.46	71478.3	67.57	70.02

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2035-10-23T20:08:48.600
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       : 34010299829019648
2Mass ID (if available) : 03002494+1540238
ICRS Star Coord at Epoch: 03h 00m 24.94251s +15:40:24.02327s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 9.438
G magnitude           : 10.936
RP magnitude          : 10.418
BP magnitude          : 11.282
DUPflag              : 0
Distance (au)        : 4.024
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.11
Sun-Target sep (deg) : 162.52
Sun-Moon sep (deg)   : 72.39
B (ring opening deg) : 3.42
PA of pole (deg)     : -17.09
Pole direction: RA (deg): 268.05639
Dec (deg): 64.49682
C/A sky separation ("): 23.908
C/A sky separation (km): 69776.8
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
    
```

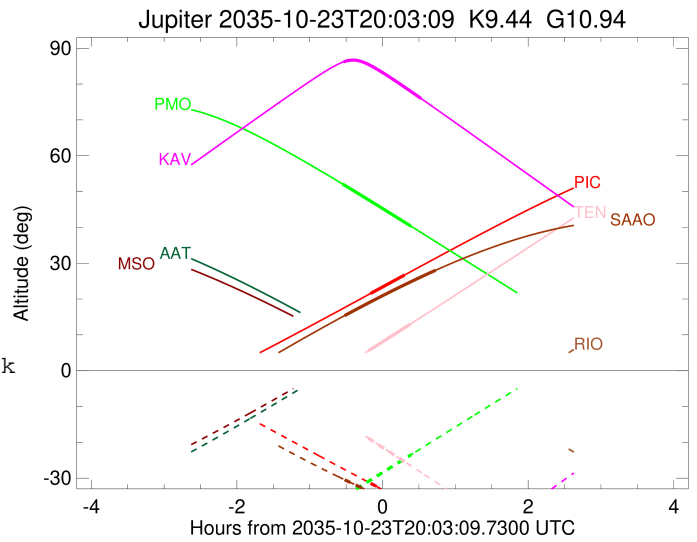
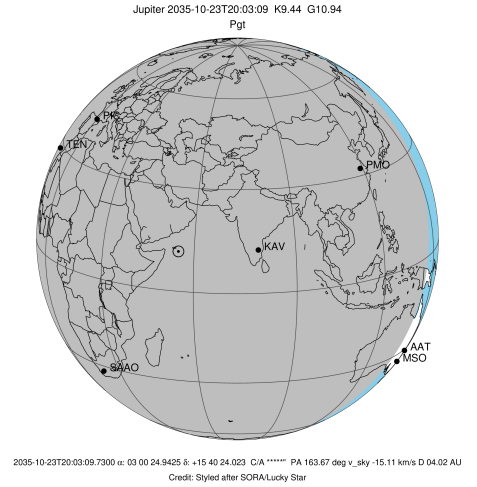


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2035-10-23T19:51:39.966	5.58	-18.86	71476.6	78.15	79.52
Jupiter	E	2035-10-23T20:25:55.112	12.95	-26.41	71476.9	75.87	77.49

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2035-10-23T20:03:05.720
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      : 34010299829019648
2Mass ID (if available) : 03002494+1540238
ICRS Star Coord at Epoch: 03h 00m 24.94251s +15:40:24.02327s
RUWE (>1.4 is poor) : 1.00
K magnitude         : 9.438
G magnitude         : 10.936
RP magnitude        : 10.418
BP magnitude        : 11.282
DUPflag            : 0
Distance (au)       : 4.024
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -15.11
Sun-Target sep (deg) : 162.52
Sun-Moon sep (deg)  : 72.95
B (ring opening deg) : 3.42
PA of pole (deg)    : -17.09
Pole direction: RA (deg): 268.05639
Dec (deg): 64.49682
C/A sky separation (" ) : 22.258
C/A sky separation (km) : 64959.5
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
    
```

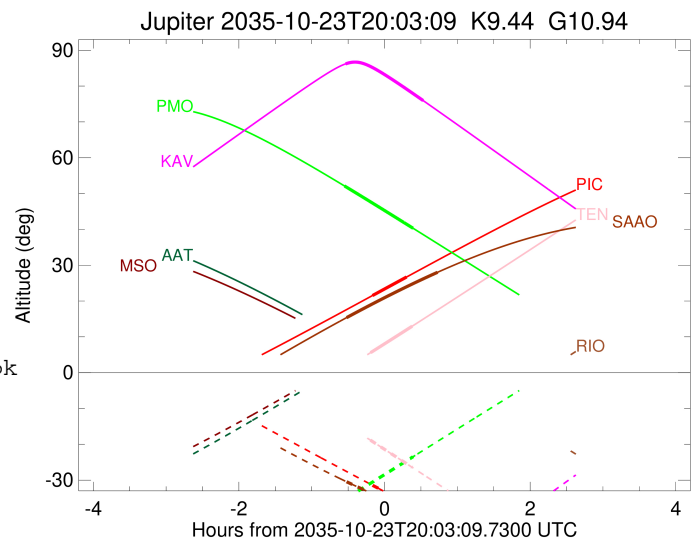
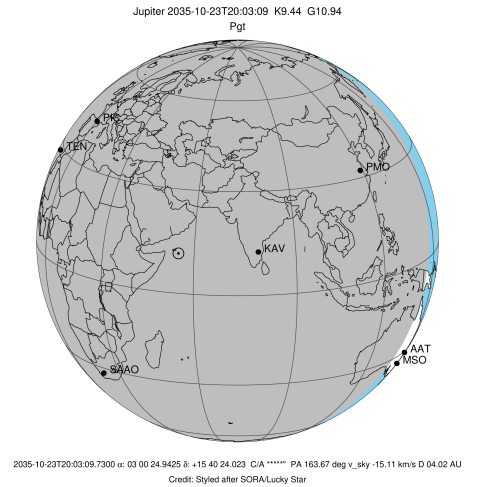


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2035-10-23T19:31:10.033	86.20	-74.76	71478.5	66.31	68.87
Jupiter	E	2035-10-23T20:35:01.081	75.95	-59.17	71479.0	63.99	66.75

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2035-10-23T20:09:31.390
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      : 34010299829019648
2Mass ID (if available) : 03002494+1540238
ICRS Star Coord at Epoch: 03h 00m 24.94251s +15:40:24.02327s
RUWE (>1.4 is poor) : 1.00
K magnitude         : 9.438
G magnitude         : 10.936
RP magnitude        : 10.418
BP magnitude        : 11.282
DUPflag            : 0
Distance (au)       : 4.024
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -15.11
Sun-Target sep (deg) : 162.52
Sun-Moon sep (deg)  : 72.61
B (ring opening deg) : 3.42
PA of pole (deg)    : -17.09
Pole direction: RA (deg): 268.05639
Dec (deg): 64.49682
C/A sky separation (" ) : 21.452
C/A sky separation (km) : 62607.3
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	2035-10-23T19:31:57.216	15.37	-30.45	71479.4	62.26	65.16
Jupiter	E	2035-10-23T20:46:57.238	28.03	-40.79	71480.0	59.66	62.74