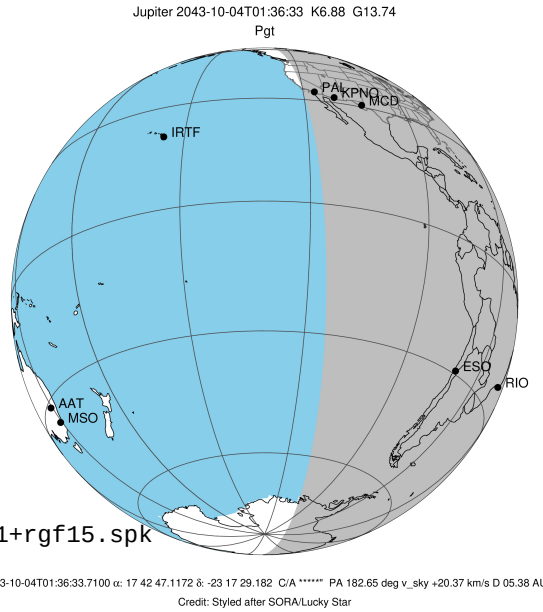
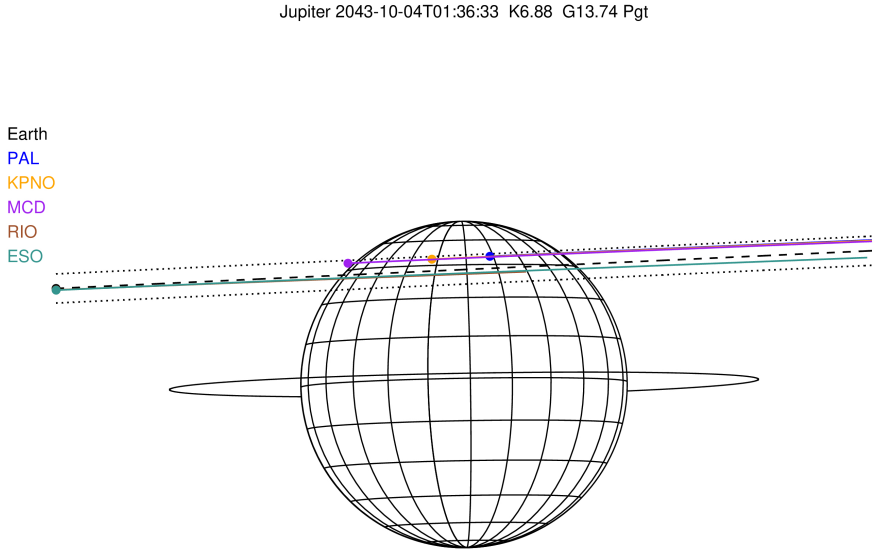
Stellar occultation prediction by rfrench@wellesley.edu Sun Jun 25 13:07:21 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2043-10-04T01:36:33.710
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Gaia source ID : 4116478733180318720
2Mass ID (if available) : 17424711-2317289

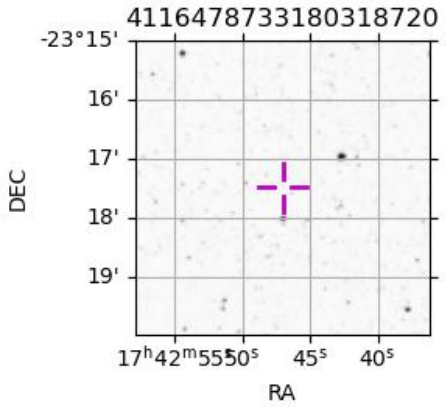
ICRS Star Coord at Epoch: 17h 42m 47.11717s -23:17:29.18167s
RUWE (>1.4 is poor) : 0.83
K magnitude : 6.877
G magnitude : 13.741
RP magnitude : 12.161
BP magnitude : 17.529
DUPflag : 0
Distance (au) : 5.382
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 20.37
Sun-Target sep (deg) : 75.92
Sun-Moon sep (deg) : 65.35
B (ring opening deg) : -2.19
PA of pole (deg) : 1.02
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 12.883
C/A sky separation (km) : 50285.0
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp





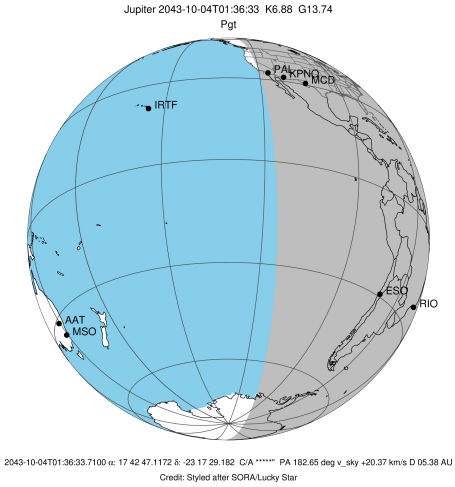
Observable events with sun below -5 deg and altitude above 5 deg

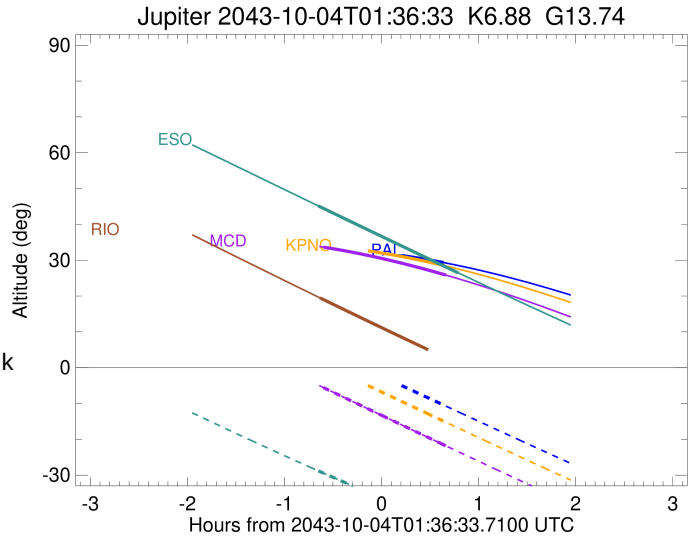
Obs	Location	lat	Elon	Target		Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1				Pnn
PAL	Palomar Mt (200")	33.4	243.1		+	OCT 04 02:14 - OCT 04 02:14	Pne
PMO	Purple Mtn Obs. Nanking	32.1	118.8				Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4		+	OCT 04 02:15 - OCT 04 02:15	Pne
MCD	McDonald Obs. 2.7m	30.7	256.0	+	+	OCT 04 01:00 - OCT 04 02:16	Pie
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				Pnn
RIO	Rio de Janeiro	-22.9	316.8	+		OCT 04 00:58 - OCT 04 00:58	Pin
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	+	OCT 04 00:57 - OCT 04 02:24	Pie
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



Jupiter_2043-10-04T01_36_33.7100_PAL.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:17:08 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2043-10-04T01:37:28.330
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code : PAL
Location : Palomar Mt (200")
Latitude (deg) : 33.35622
E. Longitude (deg) : 243.13601
Altitude (km) : 1.706
Gaia source ID : 4116478733180318720
2Mass ID (if available) : 17424711-2317289
ICRS Star Coord at Epoch: 17h 42m 47.11717s -23:17:29.18167s
RUWE (>1.4 is poor) : 0.83
K magnitude : 6.877
G magnitude : 13.741
RP magnitude : 12.161
BP magnitude : 17.529
DUPflag : 0
Distance (au) : 5.382
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 20.37
Sun-Target sep (deg) : 75.92
Sun-Moon sep (deg) : 65.87
B (ring opening deg) : -2.19
PA of pole (deg) : 1.02
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 14.241
C/A sky separation (km) : 55586.5
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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



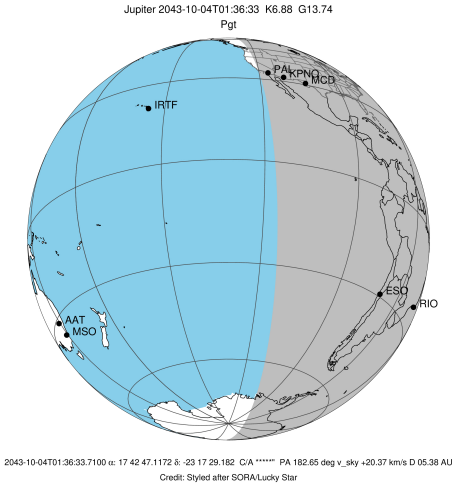


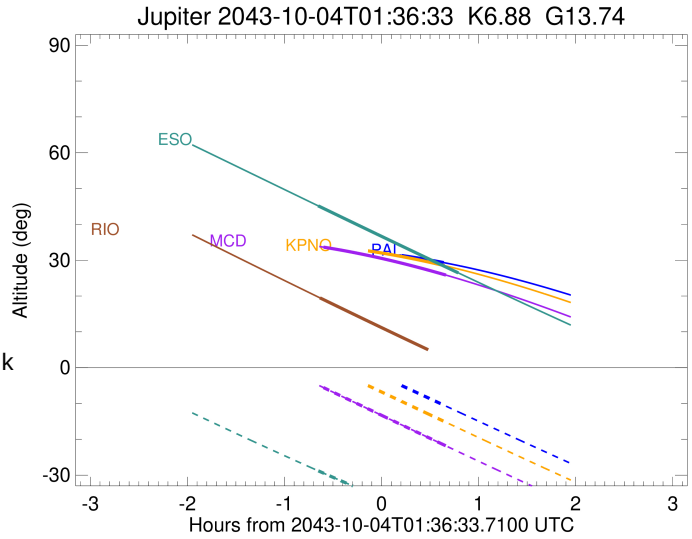
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-04T00:59:56.513	33.35	5.23x	71488.2	49.38	52.99
Jupiter	E	2043-10-04T02:14:57.041	29.33	-10.43	71487.9	52.52	56.01

Jupiter_2043-10-04T01_36_33.7100_KPNO.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:21:12 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2043-10-04T01:37:55.520
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code : KPNO
Location : Kitt Peak Natl Obs
Latitude (deg) : 31.96333
E. Longitude (deg) : 248.40000
Altitude (km) : 2.120
Gaia source ID : 4116478733180318720
2Mass ID (if available) : 17424711-2317289
ICRS Star Coord at Epoch: 17h 42m 47.11717s -23:17:29.18167s
RUWE (>1.4 is poor) : 0.83
K magnitude : 6.877
G magnitude : 13.741
RP magnitude : 12.161
BP magnitude : 17.529
DUPflag : 0
Distance (au) : 5.382
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 20.37
Sun-Target sep (deg) : 75.92
Sun-Moon sep (deg) : 65.90
B (ring opening deg) : -2.19
PA of pole (deg) : 1.02
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 14.209
C/A sky separation (km) : 55463.6
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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



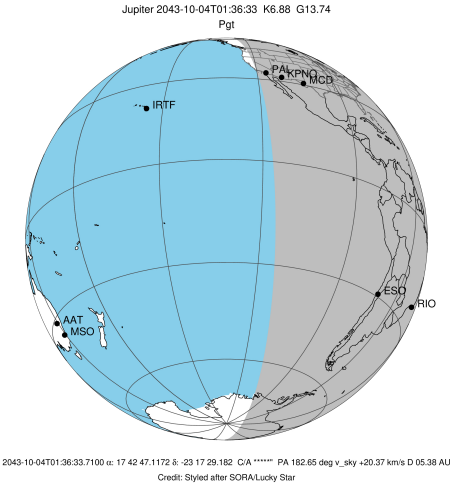


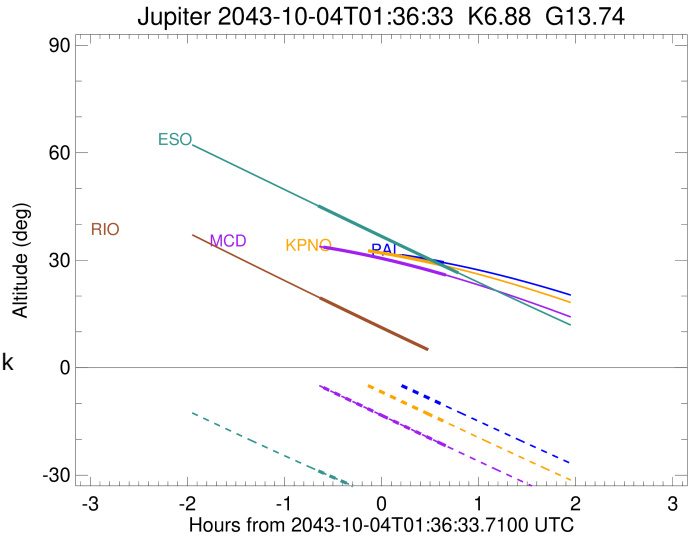
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-04T01:00:16.231	34.11	0.93x	71488.2	49.27	52.88
Jupiter	E	2043-10-04T02:15:30.983	28.47	-15.06	71487.9	52.32	55.82

Jupiter_2043-10-04T01_36_33.7100_MCD.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:23:21 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2043-10-04T01:38:33.410
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code : MCD
Location : McDonald Obs. 2.7m
Latitude (deg) : 30.67158
E. Longitude (deg) : 255.97844
Altitude (km) : 2.075
Gaia source ID : 4116478733180318720
2Mass ID (if available) : 17424711-2317289
ICRS Star Coord at Epoch: 17h 42m 47.11717s -23:17:29.18167s
RUWE (>1.4 is poor) : 0.83
K magnitude : 6.877
G magnitude : 13.741
RP magnitude : 12.161
BP magnitude : 17.529
DUPflag : 0
Distance (au) : 5.382
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 20.37
Sun-Target sep (deg) : 75.92
Sun-Moon sep (deg) : 65.92
B (ring opening deg) : -2.19
PA of pole (deg) : 1.02
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 14.166
C/A sky separation (km) : 55293.8
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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



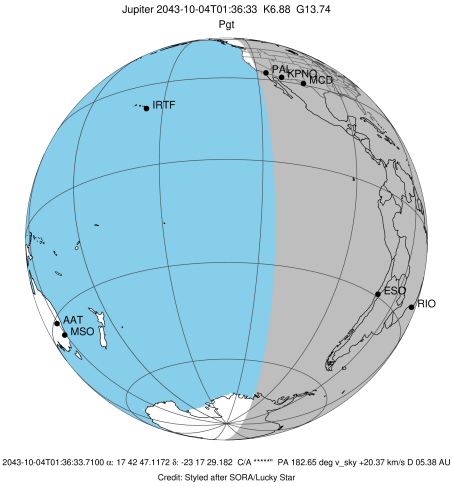


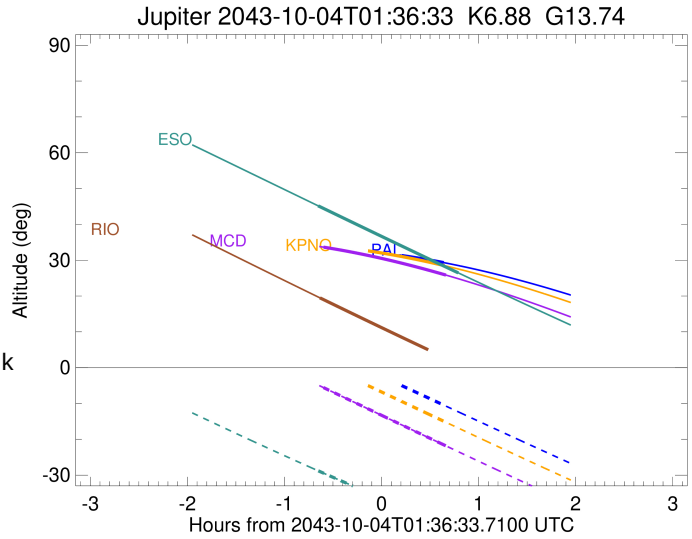
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-04T01:00:44.999	33.64	-5.57	71488.3	49.11	52.73
Jupiter	E	2043-10-04T02:16:16.971	25.85	-21.81	71487.9	52.05	55.56

Jupiter_2043-10-04T01_36_33.7100_RIO.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:31:27 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2043-10-04T01:41:46.160
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 : 4116478733180318720
2Mass ID (if available) : 17424711-2317289
ICRS Star Coord at Epoch: 17h 42m 47.11717s -23:17:29.18167s
RUWE (>1.4 is poor) : 0.83
K magnitude : 6.877
G magnitude : 13.741
RP magnitude : 12.161
BP magnitude : 17.529
DUPflag : 0
Distance (au) : 5.382
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 20.37
Sun-Target sep (deg) : 75.92
Sun-Moon sep (deg) : 65.86
B (ring opening deg) : -2.19
PA of pole (deg) : 1.02
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 12.381
C/A sky separation (km) : 48327.8
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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



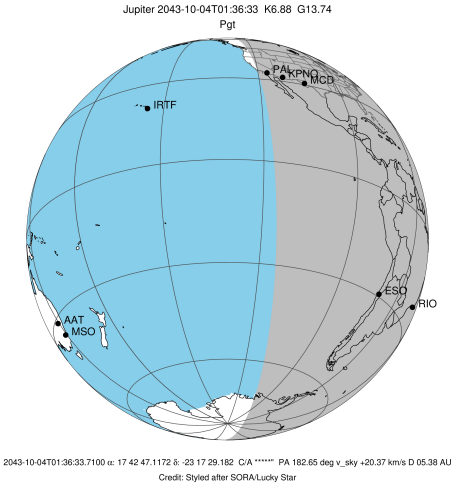


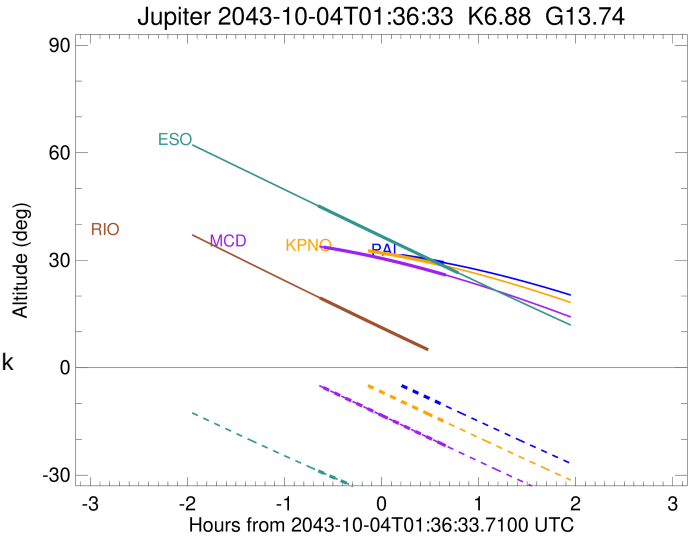
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-04T00:58:31.508	19.48	-53.08	71489.1	41.33	45.05
Jupiter	E	2043-10-04T02:24:48.434	0.91x	-62.67	71488.9	43.65	47.36

Jupiter_2043-10-04T01_36_33.7100_ESO.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:33:29 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2043-10-04T01:40:51.490
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 : 4116478733180318720
2Mass ID (if available) : 17424711-2317289
ICRS Star Coord at Epoch: 17h 42m 47.11717s -23:17:29.18167s
RUWE (>1.4 is poor) : 0.83
K magnitude : 6.877
G magnitude : 13.741
RP magnitude : 12.161
BP magnitude : 17.529
DUPflag : 0
Distance (au) : 5.382
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 20.37
Sun-Target sep (deg) : 75.92
Sun-Moon sep (deg) : 66.13
B (ring opening deg) : -2.19
PA of pole (deg) : 1.02
Pole direction: RA (deg): 268.05674
Dec (deg): 64.49731
C/A sky separation (") : 12.481
C/A sky separation (km) : 48718.2
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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	2043-10-04T00:57:30.994	45.15	-28.80	71489.1	41.64	45.36
Jupiter	E	2043-10-04T02:24:01.332	26.46	-44.71	71488.8	44.15	47.86