

Sight Planning Data Valid for Date, Time & Position Shown Below

Use "Nav Bodies" Worksheet to specify DR Position, Date & Time

Date & Zone Time @ DR Position
18-May-03 21:18:14

DR L 48 deg. 8.5 min. N

Date & MeanTime @ Greenwich
19-May-03 4:18:14

DR Lo 123 deg. 26.0 min. W

Select Bodies from Dropdown List associated with Yellow Cells in Column D

GHA = 184° 36.9'
Dec = 28° 01.2' N
Hc = 39° 20.1'

1st Body Zn = 270°
POLLUX
Valid Zn Ranges for 2nd Body

315 → 360 → 45 & 135 → 180 → 225

GHA = 123° 40.9'
Dec = 14° 33.3' N
Hc = 56° 24.8'

2nd Body Zn = 180°
Denebola

Select 1st Body & use a value of Zn near one of the values shown in the Gold Cells (G9 & K9) as a guide for selecting the 2nd Body of a Two Body Fix

Crossing Angle of LOPs From Body 1 & Body 2 is 90 deg.

GHA = 212° 09.5'
Dec = 07° 24.5' N
Hc = 06° 21.5'

1st Body Zn = 274°
BETELGEUSE
Valid Zn Ranges for 2nd Body

304 → 334 → 4 → 34 → 64

Valid Zn Ranges for 3rd Body

124 → 154 → 184 → 214 → 244

Select 1st Body & use values of Zn near the values shown in the Gold cells (I19 & G22) as a guide for selecting the 2nd & 3rd Bodies of a Three Body Fix

Bodies flagged as "Valid for Sight Taking" sorted by Zn value

GHA = 350° 36.1'
Dec = 45° 17.2' N
Hc = 12° 07.7'

2nd Body Zn = 032°
DENEBO

Azimuth Spread 242 deg.

Set conditions required for flagging visible Stars & planets as valid for sight taking.

GHA = 099° 38.7'
Dec = 11° 10.8' S
Hc = 27° 02.4'

3rd Body Zn = 154°
SPICA

Specify Visual Magnitude of Stars to flag as valid for sight taking 2

Enter Data Into Yellow Cells

Minimum Altitude of a Body 0 deg.
Maximum Altitude of a Body 90 deg.
Upper Limit on the Sun's Altitude 0 deg.
Lower Limit on the Sun's Altitude -9 deg.

Crossing Angle of LOPs From Body 1 & Body 2 is 62 deg.
Crossing Angle of LOPs From Body 1 & Body 3 is 60 deg.
Crossing Angle of LOPs From Body 2 & Body 3 is 58 deg.

Sun's Altitude -4.7 deg.

Zn (deg.)	HO 249 Vol. I Star	Names of Bodies Flagged as Valid for Sight Taking	Hc (deg.)	Hc (min.)	Visual Magnitude
21	Yes	Kochab	57	40.7	2.1
32	Yes	DENEBO	12	7.7	1.3
45	Yes	Alloth	77	29.6	1.8
49	-	Eltanin	34	49.2	2.2
55	Yes	VEGA	21	9.4	0.0
76	Yes	Alkaid	70	42.7	1.9
84	Yes	Rasalhague	11	49.2	2.1
95	Yes	Alphecca	41	48.7	2.2
122	Yes	ARCTURUS	48	45.0	0.0
154	Yes	SPICA	27	2.4	1.0
180	Yes	Denebola	56	24.8	2.1
219	Yes	REGULUS	48	3.7	1.4
219	Yes	Alphard	25	4.9	2.0
245	-	JUPITER	43	39.8	-2.0
252	Yes	PROCVON	21	52.5	0.4
270	Yes	POLLUX	39	20.1	1.1
274	Yes	BETELGEUSE	6	21.5	0.5
285	-	SATURN	16	49.1	1.1
294	-	Elnath	17	13.2	1.7
309	Yes	CAPELLA	27	56.6	0.1
327	Yes	Mirfak	18	18.4	1.8
339	Yes	Dubhe	74	55.1	1.8
353	Yes	Schedar	15	13.1	2.2
359	-	Polaris	47	35.5	2.0

The Geocentric Lunar Distance to ARCTURUS is 079° 22.6' However the Moon is below the horizon for the date, time & position shown above.

GHA = 087° 01.9'
Dec = 19° 09.9' N
Hc = 48° 45.0'
Zn = 122°

A Sun - Moon 2 Body Fix may be possible around the dates of First Quarter & Last Quarter.

New Moon 1-May-03
First Quarter 9-May-03
Full Moon 16-May-03
Last Quarter 23-May-03

Waning Gibbous Moon
Moon's Altitude -28.1 deg.
Δ Moon Cycle 0
Moon's Age 18 Days
Moon's Visual Magnitude = -11