

# Sight Planning Data Valid for Date, Time & What DR Position?

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

Date & Zone Time @ DR Position

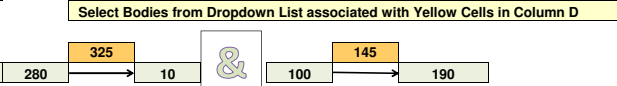
DR L  deg.  min.

Date & MeanTime @ Greenwich  
 17-Oct-18 2:00:00

DR Lo  deg.  min.

GHA = 182° 27.8'  
 Dec = 18° 21.9' S  
 Hc = 05° 14.2'

1<sup>st</sup> Body Zn = 235°  
 JUPITER  
 Valid Zn Ranges for 2<sup>nd</sup> Body



GHA = 098° 59.0'  
 Dec = 19° 44.8' S  
 Hc = 18° 40.0'

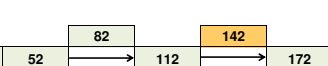
2<sup>nd</sup> Body Zn = 156°  
 MARS

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

Crossing Angle of LOPs From Body 1 & Body 2 is  79 deg.

GHA = 336° 00.6'  
 Dec = 46° 00.7' N  
 Hc = 08° 21.4'

1<sup>st</sup> Body Zn = 022°  
 CAPELLA  
 Valid Zn Ranges for 2<sup>nd</sup> Body



Select 1<sup>st</sup> 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 = 098° 59.0'  
 Dec = 19° 44.8' S  
 Hc = 18° 40.0'

2<sup>nd</sup> Body Zn = 156°  
 MARS

Azimuth Spread  252 deg.

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

GHA = 201° 24.6'  
 Dec = 19° 05.4' N  
 Hc = 22° 01.4'

3<sup>rd</sup> Body Zn = 274°  
 ARCTURUS

Specify Visual Magnitude of Stars to flag as valid for sight taking  1

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  46 deg.

Crossing Angle of LOPs From Body 1 & Body 3 is  72 deg.

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

Zn (deg.)	HO 249 Vol. I Star	Names of Bodies Flagged as Valid for Sight Taking	Hc (deg.)	Hc (min.)	Visual Magnitude
22	Yes	CAPELLA	8	21.4	0.1
96	Yes	DENE	77	6.2	1.3
156	-	MARS	18	40.0	-1.6
171	Yes	ALTAIR	50	28.4	0.8
173	-	MOON	21	17.0	-6.7
197	-	SATURN	17	17.4	1.5
219	Yes	ANTARES	5	24.9	1.0
229	Yes	VEGA	76	54.8	0.0
235	-	JUPITER	5	14.2	-1.8
274	Yes	ARCTURUS	22	1.4	0.0

The Geocentric

Lunar Distance to SATURN is 023° 23.4'  
 GHA = 141° 20.8'  
 Dec = 22° 46.2' S  
 Hc = 17° 17.4'  
 Zn = 197°

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

New Moon  9-Oct-18

First Quarter  16-Oct-18

Waxing Gibbous Moon

Moon's Altitude  21.3 deg.

Δ Moon Cycle  0

Moon's Age  8 Days

Full Moon  24-Oct-18

Last Quarter  31-Oct-18

Moon's Visual Magnitude =  -7