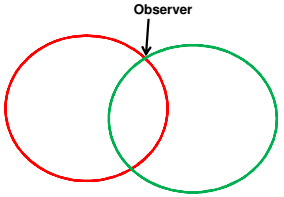
After selecting $Body_1$ visualize that you are standing at the center of a 12 hour clock face and the vertical circle from your zenith passing through $Body_1$ intersects the horizon at the 12 o'clock position. Select $Body_2$ from a vertical circle that intersects the horizon at or near either the 3 o'clock or 9 o'clock position, this will produce the optimum crossing angle of about 90° at the intersection of the 2 **LOPs**.

Two Body Fix Using Intersections of Circles of Equal Altitude

$Body_1$	MOON	Limb		GMT	19:40:00	$Body_2$	Acamar	Limb		GMT	19:40:00
GHA_1	328	deg.	29.8	min		GHA_2	349	deg.	41.74	min	
Dec_1	16	deg.	41.72	min.	N	Dec_2	40	deg.	14.34	min.	S
Ho_1	38	deg.	23.4	min		Ho_2	50	deg.	56.24	min	
$Body_1$ is	ENE	of the observer				$Body_2$ is	SSE	of the observer			
Radius of the Circle of Equal Altitude	3097	n. mi.				Radius of the Circle of Equal Altitude	2344	n. mi.			

Enter Data Into Yellow Cells

Click to view 3 Body Fix Using Intersections of Circles of Equal Altitude



	Day	Month	Year
Date @ Greenwich	30	Dec	2017

Latitude of Fix	7 deg.	57.01 min	S
Longitude of Fix	14 deg.	20.90 min	W

A Circle of Equal Altitude

A Circle of Equal Altitude is centered at the Geographic Position(**GP**) of a Body. The Latitude of the body's **GP** is defined by the body's Declination(**Dec**). The Longitude of the body's **GP** can be determined from the body's Greenwich Hour Angle **(GHA**). The radius of a Circle of Equal Altitude in nautical miles is **60x(90° - Ho).** When two bodies are observed, the two Circles of Equal Altitude will have two intersections. If the sights were "accurate" one of the intersections will be at or near the observer's geographic position.
A Line of Position (**LOP**) is a short segment from a Circle of Equal Altitude.

Intersections of Circles of Equal Altitude

This worksheet assumes all sights were taken from the same geographic position.

Intersection 1					
	Use intersection 1 in Calculating Fix				Yes
$Body_1$ & $Body_2$	Lat	7 deg.	57.01 min		S
	Lon	14 deg.	20.90 min		W
Intersection 2					
	Use intersection 2 in Calculating Fix				No
$Body_1$ & $Body_2$	Lat	28 deg.	59.34 min		S
	Lon	56 deg.	21.45 min		E