



Booth's lemniscate and directional errors

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There are two aspects of position coordinates accuracy in navigation: global accuracy and local accuracy – relative to navigational dangers. The latter case refers to the assessment of position (distance) accuracy relative to the nearest navigational danger that is a hazard to navigation. The directional error is a relevant measure for such assessment.

The directional error curve is analyzed in this article as a particular case of the Booth's elliptical lemniscate. The curve graph illustrates the confidence interval of point position errors in a given direction (about 68%).