

Title: **NASNet® DPR NASNet® as a Deepwater Acoustic DP Position Reference**

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Abstract

With the trend to explore and develop resources in increasingly deep waters, much reliance will be on deepwater DP class 2 or 3 vessels to drill and build infrastructure in these outer margins of the Continental Shelves. Solar cycle 24 has commenced, and periods of GPS instability due to the increasing solar activity are increasingly likely throughout the 11 year cycle, peaking around 2011. As a result there will be more emphasis on acoustic position reference systems to DP systems.

Nautronix has a long track record in provision of DP references systems and its latest NASNet® DPR (Dynamic Positioning Reference) product aims to provide solutions to some current and future problems.

NASNet® DPR builds on the track record established by NASNet® as a subsea positioning system, during which time data was also collected and analysed for surface positioning performance in deep water.

The paper will initially explain the concepts and technology behind NASNet® as an acoustic positioning system, along with the key features of the system.

We will then review NASNet® positioning data for surface vessels in water depths between 1000m and 2700m, comparing results against DGPS for accuracy, stability and update rates. The paper will also look at different position calculation approaches and their suitability for DP applications. Finally we will discuss the quality control measures and user feedback/guidance implemented in NASNet® DPR, and their role in ensuring reliable and stable positioning.

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