



Remocean : a marine radar as a safety tool for offshore platforms

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In the recent years, there is a growing interest towards offshore platforms for electric power energy with a focus to the ones exploiting wind or sea surface currents force. In this frame, an important role can be played by the marine X-band radar systems, which are able to acquire high resolution information (of the order of the meters) on the sea state (direction and height of the waves) and sea surface current in a range of several kilometers from the radar platform.

The information gained from the radar is therefore very useful for many issues related to the offshore platforms installation and safety. In fact, the X-band radar system can be deployed to gain a long-term information about the direction and the velocity of sea surface current so to drive in a proper way the installation of the turbines by choosing the right areas; to use the information about the long-term sea state monitoring to evaluate the vulnerability of the platforms not only against the extreme climate events but also against the structural solicitation due to ordinary conditions; to gain indirect information about the wind intensity and direction for the right management of the wind farms.

In this work, we will present the marine radar system designed and developed by REMOCEAN (www.remocean.com), a Spin-off of the National Research Council (CNR, Italy). In particular, we will present the application of the REMOCEAN system to the case of the monitoring of the sea state for the offshore platform safety in real conditions.