

# Mapping the ocean with HF radar: state-of-the-art and future prospects

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## **Abstract**

In addition to their defence surveillance applications, HF radars operating via ground wave, space wave or skywave modes of propagation possess a significant capability for monitoring ocean surface conditions over vast areas at high spatial and temporal resolution. While the basic mechanisms involved in the propagation and scattering processes are reasonably well established, the extraction of more detailed information, with higher fidelity and greater availability, is increasingly dependent on a more profound understanding of the physics and the application of more sophisticated mathematical techniques.

This talk will survey the present state of radio oceanography at HF and then proceed to review some of the recent and emerging developments which are likely to form the basis of the next stage of evolution of this technology.