First Seaglider with Rockland Scientific Turbulence Sensor

Kongsberg Underwater Technologies, USA, has delivered the first Seaglider vehicle equipped with a Rockland Scientific International (RSI) MicroPod turbulence sensor. The vehicle was commissioned by the UK's University of East Anglia (UEA). The MicroPod package is the result of extensive collaboration between KUTI and RSI in an effort to develop a sensor solution that is suitable for integration on Seagliderâ€™s low-drag composite fairing. This sensor configuration minimises any potential impact on the high glide efficiency of the Seaglider.

Ocean turbulence is being recognised as an increasingly important parameter for understanding and modelling climate change. It provides a measure of the interaction between the ocean and the atmosphere and thereby the regulation of the oceanic deposition of greenhouse gases, carbon and pollutants. It also controls the exchange of water masses, which affect polar ice melt rates and global ocean circulation. Having this optional sensor package available for Seaglider will greatly enhance the customer’s ability to investigate these phenomena.

This Seaglider with the RSI sensor will allow UEA to map ocean turbulence and mixing rates over much wider areas than possible with a traditional microstructure profiler. It will be used to map the 3-D structure of internal, tide driven mixing around submarine ridges and canyons, and investigate the impact of near-surface turbulence in the Indian Ocean on monsoon dynamics.

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