

Chart-quality Wide Swath Sonar Deployed on Man-Portable AUV



A man-portable Autonomous Underwater Vehicle (AUV) has been fitted with a wide swath sonar, capable of collecting bathymetry data for chart use. The Gavia AUV was fitted with a GeoSwath Plus 500 kHz sonar, and was demonstrated end of March 2007 in Singapore.

Over 90 people witnessed a beach-based launch-collect-recover mission from the Changi Sailing Club (CSC) beach. The Gavia was programmed to run a short survey pattern, collecting GeoSwath sonar data. For this type of mission, the modular Gavia base vehicle was fitted with the GeoSwath 500 kHz sonar module, an RD Instruments doppler velocity log (DVL) and a Kearfott inertial navigation system (INS). These are in addition to the Gavia's standard GPS, Iridium phone, wireless link, obstacle avoidance sonar, pressure depth sensor and mini sound velocity sensor. The 20cm diameter vehicle is about 2.6m

long in this configuration.

The GeoSwath Plus wide swath sonar gives high resolution swath bathymetry and co-registered true digital side scan, for making bathymetry maps and georeferenced side scan images of the survey area. For several years, GeoSwath Plus data collected from boat-mount systems has been used in nautical charts produced by the UK Hydrographic office. With the positioning and attitude accuracy provided by a DVL aided Kearfott INS, data from a GeoSwath Gavia mission has the same kind of accuracy and repeatability.

<https://www.hydro-international.com/content/news/chart-quality-wide-swath-sonar-deployed-on-man-portable-auv>
