

Engineering and Operational Approaches Adopted for the Installation of IMS Hydroacoustic Station HA04 Crozet

The installation of HA04 Crozet took place during December 2016 in exceptionally harsh weather, which added a further challenge on top of the known local scenario that includes a complex bathymetry and strong underwater currents. A number of engineering and operational decisions adopted during the preparatory phases of this installation made it possible to manage the risks and contributed to the success of the mission despite these difficult environmental conditions. The collection of high resolution bathymetric data and currents measurements during the February 2016 preparatory cruise with the French Oceanographic and Supply Vessel Marion Dufresne II (MDII) made it possible to optimize the location of the hydrophone triplets and to confirm that the impact of currents on the hydrophone risers was mitigated by the chosen design. Furthermore, an analysis of 9 years of daily weather data from the local weather station, and the consideration of appropriate thresholds for installation operations, made it possible to identify together with the Contractor design improvements which enabled the safe deployment of the hydrophones in the presence of higher sea states. An overview of the above engineering and operational approaches is presented, together with video footage and photography illustrating the different phases of the work.

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