Data Processing Challenges in Marine AGC  
Kevin Kingdon

This presentation will discuss some of the unique data processing challenges associated with Advanced Geophysical Classification (AGC) data acquired in a marine environment. Techniques will be presented that have been developed to address and mitigate challenges encountered when deploying UltraTEM sensors in the marine environment. The presence of dynamic noise sources (e.g., generator throttling, poor grounding, and fluctuating thruster speeds) that vary over time in the marine environment required the development of improved coverage analysis tools that are functions of both altitude and noise level. Deploying an underwater AGC sensor involves relative positional errors between overlapping passes over an anomaly due to inaccurate positioning. The independent model location inversion (IMLI) algorithm is a critical tool for marine AGC. By allowing for separate source locations on each pass, IMLI can account for observed lag in marine data and recover improved polarizability estimates. Examples will be presented from a range of marine project sites.