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A NEW CURRENT DROGUE SYSTEM FOR REMOTELY MONITORING SHELF CURRENT CIRCULATION

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SIGNIFICANT RESULTS

A new ocean current drogue system has been developed for use in the coastal zone and continental shelf region. The method features an extremely simple radio-sonde device whose position is determined from a pair of cooperative shore stations. These ocean sondes follow the tradition of the atmospheric radiosonde in that they are economically disposable at the end of their mission. Thus, the risks and costs of re-recovery are avoided. The system has been successfully tested in a number of environments, including the North Atlantic in two winter coastal storm. Tracking to the edge of the Baltimore and Wilmington trenches has been achieved. Any of several methods for position-fixing are available, including conventional radio direction-finding, inverse Loran, and re-broadcast of Loran-C or Omega signals. However, for operations out to 100 miles or so, the radio direction-finding method is recommended. The new drogue system is presently used in conjunction with remote sensing aircraft and satellites to chart current circulation at ocean waste disposal sites 40 miles off Delaware's coast.