3. Review of Investigations in 2010-2011 to Progress Drifter Technology

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Abstract: Continued study of drogued Iridium SVP-B/RTC/GPS drifters, deployed in 2010 in South Atlantic, showed that buoys provided failure free set of hourly samples and GPS fixes under any weather condition for near 2-year interval. The Argos-3 SVP-B mini drifters, deployed in 2010, demonstrated that they have less power consumption in contrast with Argos-2 buoys. New system to have tether line laid on radials of drogue decreased probability to have the Holey Sock drogue lost quickly. Analysis was completed to determine the reasons, which have an influence on air pressure samples accuracy for drifters with 41-cm and 34-cm hulls. Experiment with Iridium SVP-BTC80/RTC/GPS temperature-profiling drifter, carried out together with Meteo-France in Bay of Biscay, demonstrated that last prototype of this buoy can keep its operational status up to one year. Additional study was completed to prepare the technical proposals for wave-estimating WOCE drifters. New versions of the drifters with 20-cm hull were developed. The buoys with Tristar drogues can be used for study of shallow water currents with depth less than 1 m; for tracking of drifting ice-floe by means of parachute drop and for study of oil pollution movement. On basis of drifter technology the water level gauge was developed to monitor water level inside boreholes, drilled in regions, which are difficult of access.