4. New Technical Developments in Tropical Cyclones Observing Systems: Ocean-Air Observations During Typhoon Fanapi

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Abstract: In 2003 we have begun air-deploying drifters of various types and with different sensors' configurations to make measurements of upper ocean temperature, surface currents, atmospheric pressure, wind velocity, and, more recently, of subsurface ocean currents and solar radiation, within tropical cyclones and in their cold wakes. The co-ordination of multiple projects sponsored by the Office of Naval Research and by NOAA has led to the accumulation of a dataset that includes drifter observations of six hurricanes and four typhoons, covering the Cat 1 through Cat 5 range. The air-deployment success rate of the drifters is 93%.

This presentation will focus on new sensors and instruments which were deployed in front of typhoon Fanapi in September 2010 during the ITOP/TCS10 field project in the Western Pacific. We will discuss wind and atmospheric pressure measurements obtained with a new meteorological package, as well as upper ocean temperature changes.