

## Development of deep profiling floats with turbulence sensors

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A float-type repeatable microstructure profiler is developed, and tested in the ocean. The Deep NINJA float (Tsurumi Seiki) equipped with turbulence sensors (Rockland Scientific International Inc.) repeatedly measures turbulence-intensity and CTD down to 4000 m depth with shear probe and FP07 fast thermistor. A field test was conducted in the Shinsei-maru KS-16-10 cruise in August 3-11, 2016.

The profiler completed 8 dives in the Sagami Bay. At each dive, ascending speed and duration of engine operation were monitored by changing pump volume etc. to seek optimal operation for turbulence observations. We also examine to what extent CTD pump or engine operation influence on observed turbulence data. The engine generates noise which sometimes interfere shear probe measurements and might have some influence on thermistor measurements. Noise of CTD pump operation is not detected. Availability and limitation of the measurement are being investigated.