Geophysical Research Abstracts, Vol. 9, 03037, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-03037


# Quality control of dissolved oxygen data measured by profiling floats: a preliminary result based on historical data

**T. Kobayashi** (1,2)

(1) Institute of Observational Research for Global Change, Japan Agency for Marine-Earth Science and Technology, Japan, (2) National Oceanography Centre, Southampton, United Kingdom (txk@noc.soton.ac.uk / Fax: +44-23-8059-6204 / Phone: +44-23-8059-6438)

Since the first profiling float with a Dissolved Oxygen (DO) sensor was deployed in 2002, a lot of DO profiles are obtained by floats. DO measurements by sensors are fairly improved, but it is difficult to overcome all of their degradations (biases, long-term drifts, etc.) during 4-years float operation in the ocean without maintenance. It means we need to prepare methods of data quality control for float DO measurements. Here, a prototype of quality control of DO data will be shown, which uses a similar strategy of Argo salinity measurements, based on a historical dataset as reference. The system of the reference estimation is improved so as to take account of similarities of water-mass properties, which makes geographic biases of the reference estimation reduced very much in frontal regions. The reference based on historical data clarifies negative DO biases of float measurements, which are very similar to independent results of the comparison with the shipboard observations at float deployments. This system also suggests almost no long-term drift of the sensor for the float which has moved far away from its deployed position.