Ocean Sci. Discuss., 7, C741–C742, 2011
www.ocean-sci-discuss.net/7/C741/2011/

Ocean Science
Discussions

Interactive comment on "Comparison of the fall rate and structure of recent T-7 XBT manufactured by Sippican and TSK" *by* S. Kizu et al.

Anonymous Referee #2

Received and published: 9 February 2011

This paper tests the fall rate of T-7 XBT probes, which are presently provided by two companies to the oceanographic community, by comparing with CTD observations. Within the context of analyzing long term series of temperature observations, especially at depth, such study is valuable because it gives the order of correction for the fall rate and it also raises some important questions on the origins of the temperature restitution between different XBT probes. However, the issues are mainly technical and it is not clearly demonstrate or state how the authors found their results significant or not (noticing that only two dozen of probes have been tested). This is the most important point that needs to be clarified. The last part of results focuses on the probe structure (weights, probe wire, metal nose, etc. . .) but here also, a summary about the potential impacts of probe structure is needed to help the reader for oversee the consequences on temperature measurements. At the present stage, I do recommend the publication

of this study but I also suggest that the authors simplify their presentation of the different technical issues.

Some minor points: - Mention somewhere the nominal depth for T-7 probes - Insert a reference for the "warm 1970s" bias (line 17 page 1815) - The discussion on the probe weight (after lines 25 in page 1817) should be moved in the part regarding the probe structure - Precise the positive and negative temperature offset (lines 17-18 in page 1820) - Page 1820, line 28: does 'is not clear' means are not significant? - Line 8, page 1830: consider "effective" in place of "real"

Interactive comment on Ocean Sci. Discuss., 7, 1811, 2010.