

Introduction to Conductivity-Temperature-Depth Methods

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As a result of several years of work, a SCOR Working Group (#51) produced a report, (Unesco, No. 54, 1988), dealing with the acquisition, calibration, and analysis of conductivity, temperature, and depth (CTD) data. That report should be used as a technical manual for *in situ* measurements with CTDs. Issues about laboratory calibration and salinity validation measurements have been discussed elsewhere in this WHP Operations and Methods document and generally update and augment information in the SCOR WG 51 report. Further areas in which recent developments or methodology augment the SCOR report are contained in this section.

Algorithms for use in oceanographic computations have been documented in Unesco, No. 44, 1983: Algorithms for computation of fundamental properties of seawater, commissioned and endorsed by SCOR WG 51. Another SCOR Working Group (#77) is currently preparing a report which deals with laboratory calibration of CTDs. This should also be of interest to those in the WHP program interested with *in situ* measurements. Since publication of the Unesco algorithms, a change has been instituted in the International Temperature Scale. This change will affect some of the calculations of oceanographic variables. Until a new set of algorithms is published, users should be aware of the change and the variables most affected. This is discussed in one of the contributions (Fofonoff and Millard) in this section.

References:

- Unesco, 1983. Algorithms for computation of fundamental properties of seawater. *Unesco Technical Papers in Marine Science, No. 44*, 53 pp.
- Unesco, 1988. The acquisition, calibration, and analysis of CTD data. A report of SCOR Working Group 51. *Unesco Technical Papers in Marine Science, No. 54*, 92 pp.