

Acknowledgements - How the Data on This Site Came About

By J. Swift - Version of 24 March 2021

Carefully collected and curated multi-parameter vertical profile data offer the opportunity to learn much about the origin, circulation, and sensitivity to environmental change of ocean waters. Although hugely significant advances have been made in various forms of remote and autonomous ocean sensing, data from carefully and expertly carried out CTD/rosette casts (and their predecessor, bottles-on-wire casts) remain uniquely powerful and crucially important.

The vertical profile data on this site represent a phenomenal level of human effort in the development and improvement of methodologies; in the planning, construction, operation, and maintenance of research ships and facilities; in the creation of programs of sustained ocean observations; in a vast amount of effort from captains, officers, crews, scientists, technical support teams, and students at sea; in the curation of the data; and in protracted support and encouragement from institutions, agencies, programs, and nations. The sea work alone involves teams whose expertise, experience, and dedication sum to something akin to 200-300 person hours per station, often under unfavorable conditions.

A highlight of the Java OceanAtlas Suite data collection is a collection of carefully groomed vertical profile data. These are 'cleaned' data? Why make 'cleaned' data files from already carefully prepared data? Original oceanographic profile data might not have been collected in the geographical order preferred by many data users. An original data set may contain extra profiles not of primary interest. It may have taken multiple bottle casts at some locations to produce the data which most data users would consider to be a single vertical profile (though generally only the deepest cast would be preferred for the CTD data). The data from multiple cruises might be needed to form a complete trans-oceanic section. The original data may contain known bad values (usually quality coded as such) that may complicate interpretation for researchers and students using applications which do not work well with data quality codes. A few applications might be easiest to use with ocean profile data if exactly the same parameters, with the same names and units, were present in the exact same order in each bottle data file. Some of the original data files may be missing header data such as depth to bottom. Incomplete casts - for example caused by rosette problems - sometimes leave vertical data gaps that distort profiles and contoured vertical sections. The original data file names might not be helpful to some users. And so forth.

From the time of the first release of OceanAtlas for Macintosh in 1991 a team of professional technical staff and undergraduate research assistants has worked (under supervision from J. Swift) grooming data files for use in the application, and later for more general use. Their procedures have evolved and been considerably refined over the past 30 years, to the point where the data issues described in the preceding paragraph have now been largely addressed in the collection "'The Best' CTD/Hydrographic Data". Here is an alphabetical list of persons - SIO staff and UCSD undergraduate students - who have worked on the data on this site - and the site itself - over the past three decades:

Sarilee Anderson, Andrew Barna, Carolina Berys-Gonzalez, Joshua Brandel, Heidi Buck, Theresa Calderon, Irene Chan, Lauren Coartney, Kimberley Coles, Victoria Coles, Nathaniel Ben Cohen, Ben Crane, Ana Davis, Steve Diggs, Justin Fields, Maddy Gardner, Nicholas (Nick) Gardner, Mingyu Hu, Linda Huynh, Bhavika Kanaria, Jerry Kappa, Bophadarany Kim, Danielle Bartolacci Kincaid, Samantha Kuglen, Carolyn Le, Roxanne Lee, Kevin Lieu, Kimberly Lieu, Lisa Lowry, Jessicah Morison, David Muus, Rebecca Orris, Caroline Quaker, Geetha Ratnam, Dakshh Saraf, Andrew Shen, Matthew Shen, Tim Sherwood, Kerri Sismilich, Lyle Tagawa, Rachel Tam, Karla Uribe, Jeremy Ward, and Jeremy Weir.

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