

CODE EXTRACTION PROGRAM - UPDATED INFORMATION

This archive contains a revised version of the CODE program. Many small bugs have been fixed, and improvements have been added. The fancy GUI has not been added yet, but the program runs consistently with the Technical Memo if you follow the parts for the DOS program of the Mac non-GUI, and note the following changes.

- 1) There are now three support files that must be in the same location as the CODE program. These are:
 - code.prm
 - code.msg
 - code.att

- 2) There are changes in how different wind parameters are treated, and thereby the code.prm files has more options - you must use the new code.prm file, and be aware that you set the new options correctly.
 - In the first option, if you are using estimated wind data, you have the option of correcting the wind measurement using a formula derived by Levitus and coworkers:
$$\text{new_wind} = (0.7870 * \text{old_wind}) + (0.9547 * \text{SQRT}(\text{old_wind}))$$
 - where old_wind is the original wind speed and new_wind is the corrected wind speed. When this option is chosen, then the same correction is made for the components of the wind and for any calculations using wind, such as pseudo-stress.

- 3) Secondly, there are now three options for calculating pseudo-stress.
 - The first option, for which you put an A in the code.prm file, calculates pseudo-stress as in the original CODE program, as the magnitude of the component times the component.
 - The second option, for which you put a B in the code.prm file, calculates pseudo-stress as the magnitude of the wind vector times the wind component.
 - The third option, for which you put a C in the code.prm file, calculates pseudo-stress as the magnitude of the wind vector times the component times a nonlinear drag coefficient times an air density coefficient. The calculations follow the basic calculation described by Levitus in the writeup of the "Atlas of Surface Marine Data."

- 4) The present version is designed to do large extracts - it may require upwards of 10Mb to run in. The limits of an extract (number of time periods*number of latitudes*number of longitudes) is now 2 million. If this exceeds what your computer can handle, let us know and we will give you a smaller version.