NAME

mbm_xbt − Calculate sound speed from XBT data.

VERSION

Version 5.0

SYNOPSIS

mbm_xbt −I*infile* **[−F***format* **−L***latitude* **−S***salinity* **−V −H]**

DESCRIPTION

mbm_xbt is a perl shellscript to translate various XBT data sets from depth and temperature into depth and sound speed. Header lines are turned into comments beginning with '#' characters. The output filename consists of the input filename with the suffix ".sv". The conversion is done using the DelGrosso equation as referenced in Dusha et al. [1993] (reference below).

MB-SYSTEM AUTHORSHIP

David W. Caress
  Monterey Bay Aquarium Research Institute
Dale N. Chayes
  Center for Coastal and Ocean Mapping
  University of New Hampshire
Christian do Santos Ferreira
  MARUM - Center for Marine Environmental Sciences
  University of Bremen

ALSO CONTRIBUTED TO THIS PROGRAM

Suzanne H. O'Hara
  Lamont-Doherty Earth Observatory

OPTIONS

−F   *format*
    Allows the user to select the type of XBT data. Currently supported formats are: 1 = Sparton XBT, 2 = Sippican MK12 XBT, 3 = Sippican MK21. Default: *format* = 2.

−H   This "help" flag cause the program to print out a description of its operation and then exit immediately.

−I   *file*
    Data file from which the input data will be read.

−L   *latitude*
    Latitude of the XBT cast.

−S   *salinity*
    Sets the salinity used to calculate sound speed from temperature and depth. The default value of 35 ppt may be significantly in error in some areas. Default: *salinity* = 35.

−V   Causes **mbm_xbt** to operate in "verbose" mode so that it outputs more information than usual.

NOTES

There is a hard limit in the code that prevents temperatures less than −2.0 degrees C from being used. Input lines containing temperatures less than −2.0 will be ignored.

SEE ALSO
 mbsystem(1), **mbprocess**(1), **mbset**(1), **mbvelocitytool**(1), **mblevitus**(1)

REFERENCES
 Dusha, B. D., P. F. Worcester, B. D. Cornuelle, B. M. Howe, On equations for the speed of sound in seawater, J. Acoust. Soc. Am., 93, 255-275, 1993.

BUGS
 Let us know.