

NAME

mbm_xbt – Calculate sound speed from XBT data.

VERSION

Version 5.0

SYNOPSIS

mbm_xbt *-Iinfile* [*-Fformat -Llatitude -Ssalinity -V -H*]

DESCRIPTION

mbm_xbt is a perl shellsript 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

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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.