NAME

mbm_utm – Macro to perform forward and inverse UTM projections of ASCII data triples.

VERSION

Version 5.0

SYNOPSIS

mbm_utm **–I***infile* **–O***outfile* **–Z***zone* **–E***ellipsoid* [**–F –Q –H –V**]

DESCRIPTION

mbm_utm is a macro to perform forward and inverse UTM projections of ASCII data triples using the GMT program mapproject. Forward projections translate from geographic data (lon, lat, value) to UTM eastings and northings (x, y, value). Inverse projections translate from (x, y, z) to (lon, lat, z). Both the input and output files must be specified.

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SIMPLE DESCRIPTION OF BASIC OPTIONS

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

–E*ellipsoid*
Sets the ellipsoid to be used. The default is to use the WGS-84 ellipsoid, in accordance with the NAD-83 datum. If ellipsoid = "Clarke-1866", then the Clarke-1866 ellipsoid will be used in accordance with the NAD-27 datum. Note that this macro cannot be used to accomplish a true datum shift between NAD-27 and NAD-83 because the 1986 transition to NAD-83 also involved additional adjustments to positions.

–F Causes **mbm_utm** to use or generate eastings and northings in feet rather than meters.

–I*infile* Sets the name of the data file to be processed. The first two columns of the ASCII input data stream must be either longitude and latitude values (for geographic to projected transformation) or easting and northing values (for projected to geographic transformation). Any additional columns of data are passed unaltered to the output.

–O*outfile*
Sets the name of the output data file to be generated. The first two columns of the ASCII output data stream will be either easting and northing values (for geographic to projected transformation) or longitude and latitude values (for projected to geographic transformation). Any additional columns of data are passed unaltered to the output.

–Q This option causes the transformation to be from projected coordinates (eastings and northings) to geographic coordinates (longitude and latitude). The default is to transform from geographic to projected coordinates.

–Z*zone* Sets the UTM zone.

EXAMPLES

Suppose we have a file containing longitude, latitude, and depth triples called llz.dat. To transform the coordinates to eastings and northings in the UTM Zone 10 projection, use:

mbm_utm –Illz.dat –Z10 –Oenz.dat

The file enz.dat will contain eastings and northings instead of longitude and latitude values. To transform back to geographic coordinates, use:

mbm_utm −Ienz.dat −Z10 −Q −Ollz2.dat

SEE ALSO

mbsystem(1), **project**

BUGS

Too new to have bugs.