EMMAPPRJ.DOC

(last update May 16, 1986)

EMMAPPRJ projects sections of a 3D MAP, in any orientation, to produce a 2D MAP. The view orientation is specified using three angles:

THETA = angle in xz plane measured positive from z towards x.

PHI = angle in xy plane measured positive from

OMEGA = rotation angle about viewing axis

3D MAPs contain NSEC sections of dimensions NCOL x NROW. The MAP is stored by rows, with NCOL data points/row, and NROW rows/section. The first section corresponds to the section with the lowest z-value, i.e the bottom-most section in a typical stack display of the MAP. Each row of the MAP represents data points in the x-direction whereas each column represents data points in the y-direction. This gives a normal right-handed Cartesian coordinate system (i.e. x horizontal to the right, y vertical toward the top, and z toward the viewer).

Enter a filename for output of the projected MAP and indicate the sections to be used in projecting the MAP (2I format: the default is to project the entire MAP). Eventually the program will be changed to allow the user to specify the range in z in the direction of view from which the projected data is obtained. This is more reasonable than specifying which sections are to be projected from the input MAP which can lead to rather bizarre appearances.

This program will eventually allow a 2D MAP to be projected (i.e. if the user wants, for example, to obtain a distorted view), but at the moment there is a bug so the program is forced to terminate.

WARNING: Please be aware that, presently, this program only works correctly for projecting 3D MAPS which are orthogonal and where NCOL=NROW=NSEC. Sorry!!! Note, however, that if you project down the z-axis, NCOL, NROW and NSEC need not be the same.