NAME

a2h − 'rectangular' ASCII data to IMM defined irregular HIPS format

SYNOPSIS

a2h −s *nvar nobs* [**−skip** *n*] [**−r** | **-g**] [**−min** *minval*] [**−max** *maxval*]
[**-0D** | **−1D** | **−2D** | **−3D**] [**−x** *xcol* [*ycol* [*zcol*]]] [**−b** *lambda* | **−l**]
[**−t** *n low.1 ... low.n* | **−T** *n low.1 ... low.n*] [**−seed** *seedval*]
[**−B** | **−S** | **−I** | **−F** | **−D** | **−M**]

DESCRIPTION

a2h reads a 'rectangular' data set in ASCII format and turns it into the IMM defined irregular HIPS format (defined below under a separate heading). By 'rectangular' we mean that the data contains the same number of observations for each variable. By default *a2h* reads the ASCII data column-wise but it can read data row-wise by specifying **−r**. Data values below a detection limit can be simulated from a triangular distribution from 0 to the specified detection limits (**−T**) or from a triangular distribution from 1 to the specified detection limits (**−t**). Default is no simulation. After the simulation (if carried out) the data can be transformed either by the natural logaritm (**−l**) or by a Box-Cox transformation (**−b** *lambda*) if so desired. Default is no transformation. Data are witten in byte, short, int, float (default), double or mixed format.

IRREGULAR HIPS FORMAT

The IMM defined irregular HIPS format consists of a HIPS file with number of frames equal to the number of variables (including x- and possibly y- and z-coordinates). The number of columns equals the number of observations per variable and the number of rows equals one. The dimensionality of the data is given by a byte parameter in the extended header called *Irregular*. *Irregular* equals 1 for 1-D data (such as time series data), 2 for 2-D data (such as data in a plane with x- and y-coordinates) and 3 for 3-D data (such as data in 3-D space with x-, y- and z-coordinates).

OPTIONS

−s *nvar nobs*
number of variables and number of observations (cases) in input data, **not optional**.

−skip *n* skip *n* lines n input file before reading

−r read data row-wise (default is column-wise)

−g ASCII file is GSLIB file, see *gslib2hips(1)*

−min *minval*
you are warned if values in input data below (<=) *minval* (defaults to −1.0e+31)

−max *maxval*
you are warned if values in input data above (>=) *maxval* (defaults to 1.0e+31)

−0D data is ordinary HIPS file (with number of rows equal to 1); no extended header variable is written

−1D data is 1-D (such as time series data); the extended header byte variable *Irregular* is set to 1 and the first frame in the HIPS file is a coordinate

−2D (default dimension) data is 2-D (such as data in the plane); the extended header byte variable *Irregular* is set to 2 and the first two frames in the HIPS file are coordinates

−3D data is 3-D (such as data in 3-D space); the extended header byte variable *Irregular* is set to 3 and the first three frames in the HIPS file are coordinates

−x *xcol* [*ycol* [*zcol*]]
specifies column (row if **−r** is specified) number(s) of coordinate(s) in ASCII file if not the first one(s); *xcol* is specified if data are 1-D, *xcol* and *ycol* are specified if data are 2-D, and *xcol*, *ycol* and *zcol* are specified if data are 3-D

−b *lambda*
apply Box-Cox transformation with parameter *lambda* to non-coordinate data

−l transform non-coordinate data with natural logarithm

−t *n low.1 ... low.n*
if data values are below *low.i* for the *i*th non-coordinate variable replace values with values from a simulated triangular distribution from 1 to *low.i*; *n* must match number of non-coordinate variables in the data

−T *n low.1 ... low.n*
if data values are below *low.i* for the *i*th non-coordinate variable replace values with values from a simulated triangular distribution from 0 to *low.i*; *n* must match number of non-coordinate variables in the data

−seed *seedval*
use *seedval* to start random number generator (defaults to 4711007)

−B HIPS output is byte format

−S HIPS output is short format

−I HIPS output is int format

−F HIPS output is float format (default)

−D HIPS output is double format

−M HIPS output is mixed format

SEE ALSO

atop(1), asc2hips(1), gslib2hips(1)

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