Subject: Help setting up an array
Posted by Peter Thorne on Wed, 28 Mar 2001 14:17:28 GMT
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Apologies if this is trivial, but I have been working for about 8 hours on it and can't even begin to see how to code it in IDL. Any help very gratefully received. I am setting up a function which receives the location of points in n-dimensional space for m fields, as well as their weights. On call the function does not know the size of any of these dimensions.

Simplifying to m=1 (this m dimension should be trivial) the input is:

an array of size (n x npoints) locations of each point in the n-dimensional space

a vector of size (npoints) the weights.

Now, what I want to be able to do is re-bin these points into an n-dimensional discretized space array which encloses all points. I can work out the limits of this space by simply finding min and max in each of the n dimensions of the location array. I then need to split this grid into nbox n-dimensional discrete boxes (say 50 divisions per dimension, boxes need not be of equal size in each dimension) and place the respective points in their boxes in this finite representation, weighted by weight (trivial).

At present I am having two major problems:

1. How to declare this discretized array and the limits in n-dimensional space of each box into which I bin my values given that I know n and nbox.

and doubtless much more difficult to overcome:

2. How to sensibly code selection criteria to ascertain whether a particular value belongs to a particular grid box.

Perhaps it is not possible to code without an a priori knowledge of n - the dimensionality of the problem to know how many for loops to use? I can't see how where statements could be used.

Any help or useful pointers very gratefully received.

Thanks

Peter