Subject: Re: problem defining vectors
Posted by Chris Lee on Tue, 25 May 2004 07:09:50 GMT
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In article <e920fce6.0405241309.637e4067@posting.google.com>, "elias" <heoa@hotmail.com> wrote:

> Dear experts,
> I have a file with 6 columns and 5,000 records. Each of these records
> contain spatial coordinates (x,y,z) and vector components (vx,vy,vz).
> The coordinates are from a Cubic space, however, not all the points
> inside this cube are in the array. How can I build the arrays so that
> they can have the same size? I thought about inserting zeros in between.
> Cube space
> x=50
> y=50
> z=50
> the program that I wrote looks like this: I think the second line is
> not good!
> thank you and best regards,
> elias
> file=DIALOG_PICKFILE(FILTER=['*.dat'])
> array=fltarr(6,50*50L*50L)
> Openr,1,file
> readF,1,array
> x=array[2,*]
> y=array[1,*]
> z=array[0,*]
> u=array[3,*]
> v=array[4,*]
> w=array[5,*]
> close,1
> end

Aha, reading the newsgroup backward is...interesting.

The second line is not good because your reading in 50*50*50 groups of 6 values, which is 125000, not 5000.

What you probably want is

```
file=DIALOG_PICKFILE(FILTER=['*.dat'])
array=fltarr(6,5000L)
Openr,1,file
readF,1,array
x=array[2,*]
```

```
 y=array[1,*]
 z=array[0,*]
 u=array[3,*]
 v=array[4,*]
 w=array[5,*]
 close,1

amp=sqrt(u^2+v^2+w^2)
amp=reform(amp) ;for luck :)
x=reform(x)
y=reform(y)
z=reform(z)

data_3d=grid3(x,y,z,amp,ngrid=50)
end
```

now you have a 3d data set. Check the keywords for GRID3 for anything you need, NGRID=50 makes the 3d dataset 50x50x50, as requested, you might also want START=[x0,y0,z0] and DELTA=[dx,dy,dz] to determine the ranges in x,y and z (range is delta*ngrid+start I guess)

Chris.
