Subject: problem defining vectors
Posted by heoa on Mon, 24 May 2004 21:09:06 GMT
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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
```

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.

Subject: Re: problem defining vectors
Posted by heoa on Tue, 25 May 2004 22:30:47 GMT
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Thank you for all your advice, I have one more question:

I want to combine xplot3D with flow3....IDL won't let me as I am doing it.... How can I fix that?

xplot3D,flow3, /OVERPLOT

Thnaks,
Elias

Subject: Re: problem defining vectors
Posted by David Fanning on Tue, 25 May 2004 22:43:50 GMT
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elias writes:

> Thank you for all your advice, I have one more question:
>
> I want to combine xplot3D with flow3....IDL won't let me as I am doing
> it.... How can I fix that?
>
> xplot3D,flow3, /OVERPLOT

Oh, my goodness. You are trying to go from the frying pan into the fire!

This particular transformation can't be done. They are in two completely different graphics systems. They do not overlap in any way, shape, or form.

If you like XPLOT3D and want to go in the direction of object graphics, then you should consider the SREAMLINE procedure. But I really don't think this newsgroup has the bandwidth to help much in this direction. :-(

I'd recommend getting ahold of Ronn Kling's book, Power Graphics, if you want to learn more about object graphics. I think you might find the normal IDL documentation quite daunting.

Cheers,

David

--
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Coyote's Guide to IDL Programming: http://www.dfanning.com/
