
Subject: Re: Displaying 3-D vector fields

Posted by [Rick Towler](#) on Tue, 12 Nov 2002 20:47:10 GMT

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"Jim" <jim.blackwell@gsfc.nasa.gov> wrote

> Hey this is almost what I need. How would one draw more than 1 vector
> at a time in the same window ? 3-D axes ?

By following the steps I laid out in my original post.

Say you want 100 vectors:

; create an object array to hold them

vectors = OBJARR(100)

; create a 100 instances of my vector object

for n=0, 99 do vectors[n] = OBJ_NEW('vector')

; Add our vectors to a model

vecModel = OBJ_NEW('IDLgrModel')

vecModel -> Add, vectors

; Now you have 100 vectors rooted at [0,0,0]

; with a magnitude of [0,0,1]. You probably want them

; to do something now...

; Use the SetProperty method to set each vectors

; magnitude and location. I assume you have 2

; arrays named "mag" and "loc" containing this

; data.

for n=0, 99 do vectors[n] -> SetProperty, MAGNITUDE=mag[n,*], \$
LOCATION=loc[n,*]

; Now take a look at what we have.

xobjview, vecModel, /block

; we're done for now, clean up

OBJ_DESTROY, vecModel

If you wanted to animate the vectors you would set up a loop around the call to the setproperty method where you would loop thru the time dimension of your array (if the locations were fixed you wouldn't need to change that property). The only problem with this is that you can't use XOBJVIEW to view an animation. I would suggest working on some static views making sure you understand what you are doing (using XOBJVIEW), then go over to David Fanning's website (www.dfanning.com) and take one of his object graphics programs and hack the vector animation stuff into it (I suggest FSC_SURFACE? I think that might come with axes too).

-Rick
