Subject: Re: Particle_Trace question ?
Posted by Michael Galloy on Thu, 20 Mar 2008 13:29:56 GMT
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wfzhao@bjmb.gov.cn wrote:

>> On Mar 18, 4:56 pm, millward.geo...@gmail.com wrote:
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>>
>>> Hi there,
>>> I am trying to use particle_trace to create streamlines from a vector
>>> field - but I'm having quite alot of trouble
>>> understanding the documentation.
>>> I have a velocity field which is a longitude,latitude array of
>>> Southward and Eastward velocities.
>>> My arrays are 20 longitudes by 91 latitudes. So my 2 arrays are:
>>> V_south(20,91) and V_east(20,91)
>>> I now want to feed these into Particle_trace.
>>> The syntax for Particle_trace requires a single array (which they call
>>> Data) of
>>> size Data[2,dx,dy]
>>> I'm assuming that dx and dy are the indexes for longitude and latitude
>>> and the first dimension (2)
>>> is for the 2 components of the field, so:
>>> data(0,lon,lat) = V_east(lon,lat)
>>> data(1,lon,lat) = 0.0 - V_south(lon,lat)
>>> Nowhere in the documentation does it define the directions - is dx
>>> Eastwards - is dy Northwards? Very confusing !!
>>> And the seed points - are these longitude, latitude points or
>>> something ? Again, no real explanation in the documentation.
>>> ....or have I got it completely wrong ?
>>> Any help with this very much appreciated
>>> Cheers,
>>> George.
>> Here's an example of using PARTICLE_TRACE:
>>
>> ; defines u, v, x, and y
>> restore, filepath('globalwinds.dat', subdir=['examples','data'])
>>
>> data = fltarr(2, 128, 64)
>> data[0, *, *] = u
>> data[1, *, *] = v
>>
>> ; define starting points
>> seeds = [[32, 32], [64, 32], [96, 32]]

>>
>> particle_trace, data, seeds, verts, conn, max_iterations=30
>>
>> ; plot the underlying vector field
>> velovect, u, v, x, y
>>
>> ; overplot the streamlines
>> i = 0
>> sz = size(verts, /structure)
>> while (i lt sz.dimensions[1]) do begin
>>   nverts = conn[i]
>>   plots, x[verts[0, conn[i+1:i+nverts]]], y[verts[1, conn[i+1:i
>> +nverts]]], $
>>   color='0000FF'x, thick=2, linestyle=2
>>   i += nverts + 1
>> endwhile
>>
>> Mike
>> --www.michaelgalloy.com
>> Tech-X Corporation

>>

>
> Hi,
> I copy your code and save as a pro fle and run in IDL,but nothing is
> display.
> if I want to display the image created from your code in a temporary
> window, what can I do?
> thanks.

It should display an image. Are there any error messages when you run it?

The easiest way to start might be to just copy and paste the code from
the original message onto the command line. Does that work?

Mike
--
www.michaelgalloy.com
Tech-X Corporation
Software Developer II