
Subject: Re: Particle_Trace question ?

Posted by [wfzhao](#) on Thu, 20 Mar 2008 08:40:45 GMT

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> On Mar 18, 4:56 pm, millward.geo...@gmail.com wrote:

>

>

>

>

>

>> Hi there,

>

>> I am trying to use particle_trace to create streamlines from a vector

>> field - but I'm having quite a lot 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,

>

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>> 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 file 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.