
Subject: vector magnitude

Posted by [heoa](#) on Tue, 25 May 2004 03:38:35 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi!

I would like to use GRID3 in my program. For that, I have to use an array "F" that includes the values associated with a location in the space. I don't have this F array yet. I have to calculate it, as the square root of the summation of the velocity components to the square power each.

- Can IDL do this calculations or should I do them in a different software and bring them ready into IDL?

Thank you!

Elias

Subject: Re: vector magnitude

Posted by [Chris Lee](#) on Tue, 25 May 2004 06:55:52 GMT

[View Forum Message](#) <> [Reply to Message](#)

In article <e920fce6.0405241938.6e4dd6d6@posting.google.com>, "elias" <heoa@hotmail.com> wrote:

> Hi!
> I would like to use GRID3 in my program. For that, I have to use an
> array "F" that includes the values associated with a location in the
> space. I don't have this F array yet. I have to calculate it, as the
> square root of the summation of the velocity components to the square
> power each.
> - Can IDL do this calculations or should I do them in a different
> software and bring them ready into IDL? Thank you!
> Elias

Hi,

If you want to calculate the square of a variable

$\text{square} = \text{variable}^2$

will do it, for your velocity amplitude (which is what you are calculating...)

$\text{amp} = \text{sqrt}(u^2 + v^2 + w^2)$

should 'work'. u,v,w are the velocity vectors, they should be the same

size and shape (for your sanity, if nothing else).

How you get the velocity data into your program is up to you, at some point you'll need to READF it in, unless it's in a format supported by IDL (NetCDF, CDF,HDF,HDF5 etc...) then you should use the library functions to read the data.

Then it's

```
data_3d=grid3(x,y,z,amp)
```

and your 3d dataset is made

Chris.
