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I seem to be having a fairly common problem when using GRID3, even though it is common I still can't fix it!

The info; I have a model simulation (of atmospheric densities) which is spaced over a grid and have lat (dimension 36), lon (dimension 72) and alt (dimension 54) arrays and then the actual densities (dimension [36,72,54]). However what I want to do is sample this simulation space with a (different) specific set of lat's, lon's and alts (I am trying to compare the output to observations, but of course the observations don't fall exactly on the model grid!).

I have created some form of mesh grid from the model to give me x_lat (dimension 139968), y_lon (139968), z_alt (139968), mesh_den (139968) so they can be used in GRID3.

```
Result = GRID3(x_lat, x_lon, x_alt, mesh_den, obs_lat, obs_lon, obs_alt, /GRID)
```

However the GRID3 call gives me:

[illegible]

Many thanks,

Subject: Re: GRID3 Problems

Posted by [David Fanning](#) on Thu, 20 Jun 2013 19:52:17 GMT

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Sean Elvidge writes:

> Does anyone have any pearls of wisdom to help me along?

Multiply your data by a large offset before gridding?

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: GRID3 Problems

Posted by [seanelvidge](#) on Thu, 20 Jun 2013 20:03:55 GMT

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Thanks for the speedy reply David.

I tried, separately, multiplying the data by 1e11 and 1e17 (with and without the dtol) with the same results.

When I use the very small dtol (and the result is filled with -NaN's) I get the following errors:

% Program caused arithmetic error: Floating divide by 0

% Program caused arithmetic error: Floating underflow

% Program caused arithmetic error: Floating illegal operand

Which I guess means that -NaN's are coming from the machine just rounding values to 0.
