Subject: Subtracting arrays of same dimension, different size - interpolating one to fit the other
Posted by polystethylene on Mon, 01 Nov 2010 16:10:17 GMT
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Hi All,

I have some data and a model, both 2 column - one column phase, the second column a ratio...

They both have different sizes, and the model's phase points don't match up with those of the data...

I'd like to plot the residual i.e. data - model, but obviously that's not immediately accessible without interpolating the model so that every data phase point has a corresponding model value...

Anyone got any ideas how I can do this?

Please no-one say histogram :-/ *crosses fingers*

Cheers,

Stef

Subject: Re: Subtracting arrays of same dimension, different size - interpolating one to fit the other
Posted by Paul Van Delst[1] on Mon, 01 Nov 2010 17:17:25 GMT
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recalculate the model data to match the measured data. Then direct compare.

If you don't have access to the model software itself, then try to get your hands on it. Otherwise you're going to have
to interpolate. I always interpolate model data (initially at least) since it is typically better behaved (e.g.
smoother/less noisy) than measured data and thus less likely to suffer from egregious interpolation artifacts.

Now, which interpolation method you employ (linear, polynomial, spline, fourier(!) etc) is a decision *you* need to make
based on the data.

cheers,

paulv

polystethylene wrote:
> Hi All,
>
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> second column a ratio...
>
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> Anyone got any ideas how I can do this?
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> Please no-one say histogram :-/ *crosses fingers*
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> Cheers,
>
> Stef

Subject: Re: Subtracting arrays of same dimension, different size - interpolating one to fit the other
Posted by polystethylene on Mon, 01 Nov 2010 20:41:40 GMT
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On Nov 1, 5:17 pm, Paul van Delst <paul.vande...@noaa.gov> wrote:
> recalculate the model data to match the measured data. Then direct compare.
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> polystethylene wrote:
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>
>> Please no-one say histogram :-/ *crosses fingers*
>
>> Cheers,
>
>> Stef
>
>

I need to interpolate it unfortunately - I just don't understand how I do it using the various interpolation functions...

Essentially, I one set of phases for the measured data that are irregularly gridded, and the model points which are regularly gridded...

How do I get IDL to evaluate the model value through interpolation at the irregularly (measured) grid points?

I can't see how to do it using the Interpolate function; can it be done with the provided IDL functions?

Subject: Re: Subtracting arrays of same dimension, different size - interpolating one to fit the other
Posted by polystethylene on Mon, 01 Nov 2010 21:35:05 GMT
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Nevermind! Figured it out: got the INTERPOL function to do the trick...

Subject: Re: Subtracting arrays of same dimension, different size - interpolating one to fit the other
Posted by Kenneth P. Bowman on Mon, 01 Nov 2010 21:49:58 GMT
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In article
<7c44103e-c422-4011-a714-d765de6fd76a@v20g2000yqb.googlegroups.com>,
 polystethylene <polystethylene@hotmail.com> wrote:

> I can't see how to do it using the Interpolate function; can it be
> done with the provided IDL functions?

You might want to look at this

  http://csrp.tamu.edu/pdf/idl/sample_chapter.pdf

Ken Bowman
