Subject: Re: Gridding options
Posted by Craig Markwardt on Tue, 29 Aug 2000 07:00:00 GMT
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Ben Tupper <btupper@bigelow.org> writes:

> Craig Markwardt wrote:
>
>>
>> I don't exactly understand what your data is like. It sounds like you
>> have 0.5 m x 15000 m resolution, ie. extremely well sampled along one
>> axis and poorly sampled along another. If that's the case, then the
>> following description may need to be modified.
>
> You have the right idea. The ship traveled along a long (mostly) straight
> path. Every 10-20km the vessel stops and drops the CTD overboard, sampling
> every 0.5 m over a total depth of 50m - 200m.

Okay now I understand. So in this case X would be the distance along
the cruise path, and Y would be the depth from the surface.

...
> I do see what you are describing. This is quite similar (in
> methodology) to the iterative gridding process used by a built in
> function GRID in PV-Wave (which I am not using.)
>
> How are NRX and NRY, for the response function, determined?

The more appropriate question is probably, how broad should the
gaussian be in X and Y? This depends on how much smoothing you want
to acomplish, and the new sampling. For example, if your original
sampling was 10-20 km, then the interpolated image might have ~2 km
resolution. With minimal smoothing, the gaussian sigma would be
around 15 km (ie, comparable to your sampling). The response function
should have around +/- 2 sigmas = +/- 30 km, which is about 30 pixels.

Craig

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