Subject: Re: Spherical gridding
Posted by hunter on Fri, 20 Jun 2003 18:06:27 GMT
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Haje,

In the interest of completeness. I delved into griddata more thoroughly and, of course, found that I had been a bit lax initially. Griddata works fine in this application. Thanks for the pointer.

Interestingly, comparing the two resulting fields, one adhereing to spherical coordinates and one approximating the sphere with cartesian coordinates, the results are quite similar(using linear interpolation in both cases). In fact, the difference in the resulting fields is, at most, 1% of the minimm value of the original field. Typically, the difference is at 0.01%.

As for having "found a way around the physics", both methods generate geometric approximations to a real field, not physical models. It just a matter of establishing the error tolerances of the application.

Eli

"hunter" <elhunter@rci.rutgers.edu> wrote in message news:3ef1d88d$1@rutgers.edu...
> I tried griddata using keywords for spherical gridding, but the results were
> poor. However, assuming the lat lon coordinates were cartesian. gave a much
> better representation of the data (visually).
>
> Eli
>
>
> "Haje Korth" <haje.korth@jhuapl.edu> wrote in message
> news:bcs8ba$24n$1@houston.jhuapl.edu...
>> I am using "griddata", which has been included with IDL since version 5.5.
>> It is much more powerful than sph_sct.
>>
>> Haje
>>
>>
>> --
>>
>> "Elias J. Hunter" <hunter@imcs.rutgers.edu> wrote in message
>> news:3EF0A470.1080008@imcs.rutgers.edu...
>>> Hello,

>>>
>>> I have a matrix of surface pressure north of 60N, that is currently on
a
>>> gaussian lat-lon grid. My goal is to interpolate this grid to a one
>>> degree by one degree lat-lon grid. Now when I attempt this using
>>> sph_sct, the field south of 75 degrees lat looks good, the grid north
of
>>> 75 degrees lat is a mess.
>>>
>>> My guess is that the longitudinal resolution north of 75 degrees on
the
>>> new grid is so fine relative to the old grid, its creating a problem.
I
>>> suppose it could also be becasue I'm getting closer to the singularity
>>> at the pole.
>>>
>>> Has anybody addressed a similar difficulty using sph_scat?
>>>
>>> Thanks,
>>> Eli
>>>
>>
>>
>
>