Subject: Re: Random problem with Delaunay triangulation - Correction
Posted by wgallery on Tue, 11 Sep 2007 21:56:38 GMT
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On Sep 11, 5:15 pm, Bill Gallery <wgall...@aer.com> wrote:
> On Sep 11, 3:27 pm, "Haje Korth" <haje.ko...@nospam.jhuapl.edu> wrote:
>
>> Bill, here a practical tip: Have you tried to randomly reshuffle your input
>> data? Does this make a difference? H.
>
>> "Haje Korth" <haje.ko...@nospam.jhuapl.edu> wrote in message
>
>> news:fc6oi5$ei3$1@aplnetnews.jhuapl.edu...
>
>>> Bill,
>>> you just hit a nerve with me. I thought I was the only one having those
>
> Haje,
>
> I did not try reshuffling the input data, but did find a fix.
> Originally, the input data had a minimum latitude of 30.0 deg N and
> the specified regular grid also had a minimum latitude of 30.0. When
> I expanded the input data to have a minimum latitude of 20 deg N, the
> error message went away. Apparently you need data outside the area of
> interest for the interpolation to be robust.
>
> Further experimentation showed that when the minimum latitude of the
> input data was 30. deg, the interpolated values at 30 deg for the
> cases that did not fail showed large excursions from expected values.
> This may be partially due to the nature of the input data, which is
> poorly sampled below ~40 deg N (temperature data from the SABER
> instrument on the TIMED satellite.)
>
> Does anyone has any experience with the relative merits of the
> following routines for interpolation on a sphere?
>
> 1. qhull and griddata
>
> 2. sph_scat.pro
>
> 3. triangulate and trigrid
>
> Bill

Correction, expanding the input data did not correct the problem: I
got the same message from a different case.

Puzzled