Subject: Re: Random problem with Delaunay triangulation
Posted by wgallery on Tue, 11 Sep 2007 21:15:58 GMT
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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