Subject: Re: Iso-contours at maximum/minimum levels
Posted by David Fanning on Thu, 29 Jan 2009 22:51:55 GMT
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Gianluca Li Causi writes:

> In order to find the iso-value lines of a 2D surface I'm using the
> CONTOUR procedure, which works very well except that it's NOT ABLE to
> compute the contour when the LEVEL equals the maximum or minimum of
> the function.
>
> I've the following simple fuction:
> Z = shift(dist(100, 100), 50,50)
> Z = abs(Z - max(Z)*.3)
> which have a circular minimum at LEVEL=0, but CONTOUR is unable to
> find it!

According to my colleague Matt, what you should see at the
minimum of a contour plot is....nothing! I think I have to
agree. A contour line is suppose to enclose something.
What could be enclosed at the minimum value of a data set?
Right. Nothing.

You could hold a flat sheet of paper under your 2D surface
and draw a line where the surface touched the paper. But
the word for that would be an "etching" or an "imprint",
not a "contour". What you want, and what a contour plot
is designed to give, are two different things. Or at least
it seems that way to us. :-)

Cheers,

David

--
David Fanning, Ph.D.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")