Subject: Re: Smooth Contour Plot
Posted by David Fanning on Tue, 01 Nov 2011 12:17:56 GMT
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Sofie Fehlmann writes:

> I have just started using IDL and have now a question:
>
> How can plot smooth 2d Plots? I have tried the following:
>
> c1 = contour(data,x,y,rgb_table=34,/fill,n_levels=55)
>
> The result is a 2D plot which looks like a surrealistic picture of
> art. If I use the function min_curve_surf(data), the program crashes.
> If I increase the number of levels, the result looks even worse.
>
> Is there a way to create a colored 2D plot with smooth color
> variations?

The secret to producing smooth contour plots is
to start with smoothly varying data. If your
data is not smoothly varying, you have two
choices. You can get used to disappointment
(the usual solution), or you can try to smooth
it (the SMOOTH function is a likely candidate).

If you choose to smooth it, you are going to
have to come up with compelling arguments about
why you think changing your data and creating
numbers that don't exist in the data is justified.
"Because it looks better" doesn't usually cut
much ice with the folks who judge these things. :-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Smooth Contour Plot
Posted by Sofie Fehlmann on Tue, 01 Nov 2011 14:59:16 GMT

I finally found the solution.

Maybe I didn't state the problem very well. I have a matrix with data points. What I wanted to do is the following: Each point should have a certain color such that I get a smooth picture. Somehow, when I changed the number of levels (n_levels), the color scheme just started from the beginning.

The following pattern worked finally:

```
levels = 256
step = (Max(data) - Min(data)) / levels
userLevels = IndGen(levels) * step + Min(data)

contour(data,x,y,rgb_table=33,/
fill,c_value=userlevels,c_color=indgen(levels)+1)
```

Doing so, I have created an array of data-steps. Further, the c_color command defines the corresponding color.