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Subject: Re: contour lines on shades surface ?

Posted by [David Fanning](#) on Thu, 01 Aug 2002 16:19:45 GMT

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Jochen Weller (jw249@damtp.cam.ac.uk) writes:

- > can somebody tell me how to place contour lines
- > on the surface of a shaded surface plot ?

Well now, it is the "on the surface" part that is going to cause you the heartache. Because when lines are "on the surface" sometimes they are a bit in front of the surface and sometimes they are a bit behind the surface (all due to round-off errors and the way computers store numbers, for those of you who love a long digression), so that the actual line appears a bit blotchy, at least in practice.

The best results are when the contour lines are a tiny bit "above the surface", but getting this to happen is easier said than done.

In any case, you can see the basic technique (as well as the problems) by using this code:

```
thisDevice = !D.Name
data = Dist(40)
LoadCT, 0
Set_Plot, 'Z'
Shade_Surf, data, /Save
Contour, data, NLevels=1, /Overplot, /T3D
snapshot = TVRD()
Set_Plot, thisDevice
TV, snapshot
```

You might be better off working out some other visualization method. Here is an example program that allows you to move a filled contour plot through a shaded surface.

[http://www.dfanning.com/misc/surf\\_contour.pro](http://www.dfanning.com/misc/surf_contour.pro)

Run it like this:

```
IDL> Surf_Contour
```

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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