
Subject: contour plots on walls of a cube

Posted by [eddie haskell](#) on Thu, 11 Nov 1999 08:00:00 GMT

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Hello all,

I have what feels like a simple problem but I haven't been able to tweak the right strings yet.

I have a 3-D data set and am trying to visualise it by placing contour plots on the back three walls of a cube. The problem is that I can not get one of the contour plots to properly fill the wall without manually adjusting the position. In the example code that follows I always end up with an empty space down the left side of the plot on the back left wall. I can get it to fit by setting the x1 value in the contour call to 0.18 by hand but that just doesn't seem IDL-correct and I would have to manually determine new positions everytime I moved the cube on the page.

Am I missing something obvious, is there a subtle trick that I either haven't learned or have displaced from memory, or is there a completely different way of doing what I want? Thanks for any and all suggestions.

Cheers,
eddie

(IDL 5.1 on Solaris and IDL 4.01 on Win95)

;-----

```
dat = randomu(seed,11,11)
```

```
x1 = 0.2    ;position coordinates
```

```
x2 = 0.8
```

```
y1 = 0.2
```

```
y2 = 0.8
```

```
z1 = 0.0
```

```
z2 = 1.0
```

```
surface, dat, /nodat, xr=[0,10], yr=[0,10], zr=[0,10], $  
  xs=1, ys=1, zs=1, pos=[x1,y1,x2,y2,z1,z2], /save
```

```
plots,[x1,x2,x2],[y2,y2,y1],[z1,z1,z1],/nor,/t3d
```

```
;;;;;back left This is the problem.
```

```
t3d,/yz
```

```
contour, dat, /fill, nlev=10, /noer, /t3d, zval=y2, xr=[0,10], $  
  yr=[0,10], xs=5, ys=5, pos=[x1,z1,x2,z2,z1,z2]
```

```
;-----  
;the following do fit properly for me, although I get the front  
; corner cut out of the contour on the 'floor'
```

```
;;;;;back right  
t3d,/xz  
contour, dat, /fill, nlev=10, /noer, /t3d, zval=x2, xr=[0,10], $  
  yr=[0,10], xs=5, ys=5, pos=[y1,z1,y2,z2,z1,z2]
```

```
;;;;;floor  
t3d,/xz  
t3d,/yz  
contour, dat, /fill, nlev=10, /noer, /t3d, zval=z1, xr=[0,10], $  
  yr=[0,10], xs=5, ys=5, pos=[x1,y1,x2,y2,z1,z2]
```

```
;-----
```

```
-----  
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-----
```

Subject: Re: contour plots on walls of a cube
Posted by [davidf](#) on Fri, 12 Nov 1999 08:00:00 GMT
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Eddie Haskell (haskell@see.signature.edu) writes:

> I have been delaying learning object graphics as I
> have spent the past several weeks learning object-oriented C++ and did
> not want to potentially confuse myself with two new language styles at
> the same time (seniscanisneofabricaphobia).

Thank *God* I finally have a name for it! I've been
going crazy for a month now, afraid to tell my
wife what's wrong with me and more afraid yet
to open that fat JAVA book. :-)

Cheers,

David

--

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Subject: Re: contour plots on walls of a cube
Posted by [eddie haskell](#) on Fri, 12 Nov 1999 08:00:00 GMT
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David Fanning wrote:

- > I think this has something to do with the axis rotation.
- > Notice that it does **exactly** what you want if you set
- > the AZ keyword on the Surface command to 0.

I had noticed that myself, which only added to my confusion.

Using /NOCLIP does fix the front corner problem (I should have known that) and fixes the back wall MOST of the time. For some datasets it fills the wall completely but for others it doesn't seem to make a difference. Go figure.

- > I'll bet it would work correctly if you put this into
- > object graphics. :-)

I am sure it would. I have been delaying learning object graphics as I have spent the past several weeks learning object-oriented C++ and did not want to potentially confuse myself with two new language styles at the same time (seniscanisneofabricaphobia). However, I suppose it's time to bite the bullet and give it a whirl.

Thanks,
eddie

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