
Subject: Re: 3D images

Posted by [Timm Weitkamp](#) on Mon, 21 Jun 2004 13:31:32 GMT

[View Forum Message](#) <> [Reply to Message](#)

On 18.06.04 at 13:49 -0700, Aleks wrote:

> Hello,
> this board has been very helpful and I was wondering if anyone could
> help me with the following.
> I'm trying to construct a cylinder. I made a circle in photoshop and
> made 10 copies of the file just renaming it. (example circle_01.tiff,
>_02.tiff etc)
>
> [...]

If those images do not contain anything more than a binary image of a cylinder, then the best is to forget Photoshop and do everything in IDL. Like this, for example:

```
:: (code starts here)
```

```
nx = 1600  
ny = 1200  
nz = 80  
radius = 500.0
```

```
:: Define coordinates
```

```
xVec = FINDGEN(nx) - (nx - 1) / 2.0  
yVec = FINDGEN(ny) - (ny - 1) / 2.0  
x = xVec # (1.0 + FLTARR(ny))  
y = yVec ## (1.0 + FLTARR(nx))  
r = SQRT(x^2 + y^2)
```

```
:: Calculate image of filled circle
```

```
circle = r LT radius
```

```
:: Extend circle into third dimension
```

```
cylinder = REBIN(circle, nx, ny, nz)
```

```
:: "Cap" cylinder with zero slice on top and bottom
```

```
cylinder[* , * , 0] = 0  
cylinder[* , * , nz-1] = 0
```

```
:: Fire up Slicer3 to visualize interactively
```

```
SLICER3, PTR_NEW(cylinder)
```

```
:: (code ends here)
```

In "Slicer3" you can then simply have a 3D isosurface plot drawn by selecting "Mode: Surface", then "Low", and clicking on "Display". After that, there are lots of ways to change angles, color, etc.

There are alternatives to SLICER3, among which are XVOLUME and Volume Objects. Just try and see which suits you best.

Hope this helps

Timm

--

Timm Weitkamp <<http://people.web.psi.ch/weitkamp>>
