Subject: Re: Pain with the contour() function
Posted by lecacheux.alain on Thu, 15 Jun 2017 08:56:30 GMT
View Forum Message <> Reply to Message

Le mercredi 14 juin 2017 17:45:39 UTC+2, Markus Schmassmann a écrit :
> On 06/14/2017 05:09 PM, Helder wrote:
>> I was trying to plot an image with the contour function and I banged my head against the monitor for a while. I now have the solution and I'm sharing it. Probably most people know this very well. I didn't.
>> I followed the example given for the colorbar() function (Example: Discrete Contour Levels with Colorbar):
>> http://www.harrisgeospatial.com/docs/Colorbars.html
>>
>> So I generated my data with the code below and it appeared strangely shifted to the side.
>>
>> dis = dist(688)
>> n_levels = 6
>> levels = findgen(n_levels)
>> ct_number = 4
>> ct_indices = bytscl(levels)
>> loadct, ct_number, rgb_table=ct, /silent
>> step_ct = congrid(ct[ct_indices, *], 256, 3)
>> dis = (n_levels-1)*dis/max(dis)
>> ii = contour(dis, c_value = levels, rgb_table = step_ct, rgb_indices = ct_indices, /fill, axis_style=0)
>>
>> I then started playing around with the position and margin keywords, but had no luck. Finally it all comes down to using xRange and yRange (or xStyle=1, yStyle=1):
>>
>> ii = contour(dis, c_value = levels, rgb_table = step_ct, rgb_indices = ct_indices, /fill, axis_style=0, xStyle=1, yStyle=1)
>>
>> The reason is that contour() plots images as if they were plots, so it defines some axis around it and you have to make sure you're not having uncovered regions.
>>
>> Well, back to work.
>
> another pain with contour, or any combination of raster graphics and
> vector graphics elements is, that they are natively offset by half a
> pixel (or whatever you want to call the data unit here):
>
> c=contour(dist(10),overplot=image(35*dist(10),dimension=[250 ,250], $
>   position=[25,25,225,225],/dev))
>
> the solution to that is
>
> contour, dist(10), path_xy=line, path_info=info, /path_data_coord, $
>   closed=0,levels=[0:6]

```
>  i1=image(35*dist(10),dimension=[250,250], $
>       position=[25,25,225,225],/dev)
>  foreach in,info do p=plot(line[*,in.offset+[lindgen(in.n),in.type ? 0 :$
>       !null]]+.5, color=255b-[40b,40b,0b]*byte(in.value),overplot=i1)
>
>  -- Markus
```

I would rather write:

```
 c=contour(dist(10),overplot=image(35*dist(10),dimension=[250 ,250], $
    IMAGE_LOCATION=[-0.5,-0.5], $
    position=[25,25,225,225],/dev))
```

since, by convention, the image grid locates the lower left point of each pixel.

alx.
