
Subject: Re: Image activities mapped to colorbar
Posted by [davidf](#) on Wed, 03 Jun 1998 07:00:00 GMT
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Koon-Pong Wong (enkpong@encserver.en.polyu.edu.hk) writes:

```
> I have some data sets of SPECT images that I want to display in a
> window. For example:
>
> IDL> for i=0,30 do tvscl, ImageSeq(*,*,i), i
>
> where "ImageSeq" is a 3D FLTARR which contains a particular slice of the
> brain. Since the images represent the activities in the brain at different
> time, if I display the images with the above way, all of the images would
> be scaled to their own maxima. What I want to do is to display the images
> according to their activities and mapped the activities to a color bar so
> that the first image frame may appear black while the last frame may
> appear grey/white with background still black (assume that I use B/W for
> display). How can I do that ??
```

Here is the very first rule I teach in my IDL programming classes:

If color is important to you never, NEVER use TVSCL!

It appears color is important to you here, so what you have to do is scale the data using the BYTSCL command and display it with the TV command.

Suppose, for example, that you want to scale the data into the number of colors you have on your display. (How many is that? You may not know. You certainly can't be sure of it. That is **exactly** why you don't want to be using TVSCL.) But suppose you can count on 200 colors on the monitors your data will typically be display on.

And suppose that you want to scale the data linearly between the data values of 10 and 1550. (Let's assume your data is integer data.) Then you would display the data like this:

```
IDL> scaledData = BytScl(ImageSeq, Top=199, Min=10, Max=1550)
IDL> FOR j=0,30 DO TV, scaledData(*,*,j), j
```

Now you will see **exactly** what you hoped to see!

These ideas are spelled out in excruciating detail in

my IDL Programming Techniques book. :-)

Cheers,

David

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

Subject: Image activities mapped to colorbar
Posted by [enkpong](#) on Thu, 04 Jun 1998 07:00:00 GMT
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Hi folks,

I have some data sets of SPECT images that I want to display in a window. For example:

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Any hints would be greatly appreciated !!

KP.

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Subject: Re: Image activities mapped to colorbar
Posted by [David Foster](#) on Thu, 04 Jun 1998 07:00:00 GMT
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Koon-Pong Wong wrote:

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> Hi folks,
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> display). How can I do that ??

Koon-Pong -

You might be interested in a program I wrote called SHOW_IMG that allows you to display a wide variety of medical images in a variety of different window configurations. This program can read many different medical image formats, so long as the images are square, with dimensions of either {64, 128, 256 or 512}; the image data must be in raw 8-bit or 16-bit format; there can be an initial header of unknown size, the image reader will skip over it appropriately.

You say that your images are FLTARR. Is this after pre-processing?
As far as I understand it, SPECT images in raw form are usually 16-bit signed integer data.

You can get this program and many other routines related to medical imaging at:

ftp://bial8.ucsd.edu pub/software/idl/share

You can download just the SHOW_IMG program and it's required routines, or get a larger set of routines. There's a README file listing the routines and their use. All are written for UNIX, most should work on Windows/Mac without much work. All routines/programs have .doc documentation files; you can use my LHELP program to view these easily.

Hope this helps.

Dave

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