
Subject: Re: Extract Data from Point on Plot
Posted by [Brian Larsen](#) on Thu, 29 Jan 2009 20:26:37 GMT
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On Jan 29, 2:56 pm, mrjejo...@gmail.com wrote:

> I would like to be able to specify in coordinates (x,y) a point on my
> plot and IDL tell me what latitude, longitude, and reflectivity (I am
> using the Z device then read into PS for 2-D display) is plotted at
> that point. Basically, I want the raw data for that specific plot
> point. It must be command-line based.
>
> Any help would be appreciated!

I have done a bit of this. Have a look at my routine `interp2d_click()`
http://people.bu.edu/balarsen/IDLdoc/interp2d_click.html

This may give you a good start (and may not :))

Cheers,

Brian

Brian Larsen
Boston University
Center for Space Physics
<http://people.bu.edu/balarsen/Home/IDL>

Subject: Re: Extract Data from Point on Plot
Posted by [mrjeJones](#) on Thu, 29 Jan 2009 21:15:45 GMT
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On Jan 29, 3:26 pm, Brian Larsen <balar...@gmail.com> wrote:

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>
> Brian
>
> -----
> Brian Larsen
> Boston University
> Center for Space Physics <http://people.bu.edu/balarsen/Home/IDL>

Brian, that's not exactly what I'm looking for, but it did point me to seeing what's contained in the cursor.pro and see if I can explicitly give the coordinates and work from there. I appreciate your help.

Just for more clarification, I am reading this information from a netCDF file into IDL and doing a "plots" to draw it over a map_set. I just want to give the coordinate in the PS (x,y coords) and get the lat, long, and albedo for that pixel.

Subject: Re: Extract Data from Point on Plot
Posted by [David Fanning](#) on Thu, 29 Jan 2009 22:42:44 GMT
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mrjejones@gmail.com writes:

> Just for more clarification, I am reading this information from a
> netCDF file into IDL and doing a "plots" to draw it over a map_set. I
> just want to give the coordinate in the PS (x,y coords) and get the
> lat, long, and albedo for that pixel.

This is pretty much what I do for a living these days, although I have pretty much completely given up on MAP_SET for much of anything. The secret is being able to set up a coordinate system for a rectangular area of the graphics display. This could be an image, a line plot, a contour plot, etc. For a map coordinate system, I use the MAPCOORD object in the Catalyst Library. Normally, I use this in conjunction with a ScaleImage object, which has a method (via the CatImage object) to convert a location in the local (map) coordinate system into a location in a pixel coordinate system, so it can obtain the value of that pixel.

I don't expect you to dive into the Catalyst Library, but you can see the guts of this system at work in

TVINFO, which works with TVIMAGE to allow you to click on any displayed image and get the value of the image at that location. (More or less, of course, since this works no matter what resolution you are displaying your image in.)

I should be charging you thousands of dollars for this information, but I'll give it away to you for free, since Matt Savoie spilled the beans to me and didn't charge me. The real secret is using SCALE_VECTOR together with VALUE_LOCATE to locate the correct pixel value. It is so slick it is embarrassing to think it only took Matt and me a combined 35 years to think of it. :-(

Here are some articles to read. They all use this idea:

<http://www.dfanning.com/catalyst/imgwin.html>
<http://www.dfanning.com/catalyst/maponimage.html>
http://www.dfanning.com/graphics_tips/tvinfo.html

Cheers,

David

--

David Fanning, Ph.D.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Extract Data from Point on Plot
Posted by [mrjeJones](#) on Thu, 05 Feb 2009 21:19:21 GMT
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On Jan 29, 5:42 pm, David Fanning <n...@dfanning.com> wrote:
> mrjejo...@gmail.com writes:
>> Just for more clarification, I am reading this information from a
>> netCDF file into IDL and doing a "plots" to draw it over a map_set. I
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>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Coyote's Guide to IDL Programming (www.dfanning.com)
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

I appreciate your help. I've read and use gobs of information from your website and turned the Coyote library documentation into a PDF (very handy). I'm going to read everything you said to but meanwhile I had found this procedure "MAP_PROJ_INVERSE". What you described is exactly what I want so I may ditch the map_proj.

Thanks for all the assistance you give the IDL community.
