Subject: Re: Contour mapping of elevation points
Posted by David Fanning on Mon, 25 Feb 2013 17:47:32 GMT
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gpeterso@ucsc.edu writes:

> I am trying to create a contour map of elevation points I have. the file is in .txt form and is an array 824 by 914. I know that each elevation point is equally spaced and the longitude starts at 270 and ends at 360 and the latitude starts at 0 and ends at 90S.
>
> I was able to configure a contour plot of that data, by simply reading in the two-dimensional elevation data and plotting. However, I am not sure if this is actually an accurate representation of the data. I've started to create a program that will assign the appropriate longitude and latitude but I am getting stuck.
>
> If anyone knows how to help me, that would be much appreciated! Thanks

```
s = Size(array, /Dimensions)
lats = Scale_Vector(Findgen(s[0]), 0, 90)
lons = Scale_Vector(Findgen(s[1]), 270, 360)
cgContour, array, lons, lats
```

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Contour mapping of elevation points
Posted by David Fanning on Mon, 25 Feb 2013 17:53:19 GMT
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David Fanning writes:

> s = Size(array, /Dimensions)
> lats = Scale_Vector(Findgen(s[0]), 0, 90)
> lons = Scale_Vector(Findgen(s[1]), 270, 360)
> cgContour, array, lons, lats

Oh, 0 to 90S you said. Then,

```
lats = Scale_Vector(Findgen(s[0]), 0, 90) - 90
```

It is always hard to say if your array is upside down or not, but you will have to check. IDL has a different notion of "orgin" on maps then the rest of the world. Quite often you have to reverse the array to get it oriented properly. If you do, then:

```
array = Reverse(array,2)
```

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Contour mapping of elevation points
Posted by gpeterso on Mon, 25 Feb 2013 18:29:40 GMT
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On Monday, February 25, 2013 9:28:56 AM UTC-8, gpet...@ucsc.edu wrote:
> I am trying to create a contour map of elevation points I have. the file is in .txt form and is an array 824 by 914. I know that each elevation point is equally spaced and the longitude starts at 270 and ends at 360 and the latitude starts at 0 and ends at 90S.
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>
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> I was able to configure a contour plot of that data, by simply reading in the two-dimensional elevation data and plotting. However, I am not sure if this is actually an accurate representation of the data. I've started to create a program that will assign the appropriate longitude and latitude but I am getting stuck.
>
>
>
> If anyone knows how to help me, that would be much appreciated! Thanks

thanks so much! however when I try to run the program is says that scale_vector is undefined. I'm confused why it would do this for it is not a variable.

Subject: Re: Contour mapping of elevation points
Posted by gpeterso on Mon, 25 Feb 2013 18:36:05 GMT

View Forum Message <> Reply to Message

On Monday, February 25, 2013 9:28:56 AM UTC-8, gpet...@ucsc.edu wrote:
> I am trying to create a contour map of elevation points I have. the file is in .txt form and is an array 824 by 914. I know that each elevation point is equally spaced and the longitude starts at 270 and ends at 360 and the latitude starts at 0 and ends at 90S.
>
>
>
> I was able to configure a contour plot of that data, by simply reading in the two-dimensional elevation data and plotting. However, I am not sure if this is actually an accurate representation of the data. I've started to create a program that will assign the appropriate longitude and latitude but I am getting stuck.
>
>
>
> If anyone knows how to help me, that would be much appreciated! Thanks

This is my program so far.

```
openr, lun, 'arial.txt',/get_lun
data=dindgen(824,914)
readf, lun, data
close,lun

s=Size(data, /Dimensions)
lats=scale_vector(dindgen(s[0]), 0, 90)-90
lons=scale_vector(dindgen(s[1]), 270, 360)
cgContour, array, lons, lats
```

Subject: Re: Contour mapping of elevation points
Posted by DavidF[1] on Mon, 25 Feb 2013 19:33:05 GMT
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On Monday, February 25, 2013 11:29:40 AM UTC-7, gpet...@ucsc.edu wrote:

> thanks so much! however when I try to run the program is says that scale_vector is undefined. I'm confused why it would do this for it is not a variable.

Oh, sorry. Scale_Vector is a Coyote Library routine:

http://www.idlcoyote.com/code_tips/installcoyote.php

Cheers,

David

Subject: Re: Contour mapping of elevation points
Posted by gpeterso on Tue, 26 Feb 2013 02:17:28 GMT
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On Monday, February 25, 2013 11:33:05 AM UTC-8, Coyote wrote:
> On Monday, February 25, 2013 11:29:40 AM UTC-7, gpet...@ucsc.edu wrote:
>
>
>
>> thanks so much! however when I try to run the program is says that scale_vector is undefined. I'm confused why it would do this for it is not a variable.
>
>
>
> Oh, sorry. Scale_Vector is a Coyote Library routine:
>
>
>
> http://www.idlcoyote.com/code_tips/installcoyote.php
>
>
>
> Cheers,
>
>
>
> David

So I have successfully loaded the coyote library but when I try and run the program there is an error that says x,y, or Z dimensions are incompatible. i tried changing the code to
lons=scale_vector(dindgen(s), 270, 360)
lats=scale_vector(dindgen(s), 0, 90)

to form two dimension arrays for longitude and latitude. When I ran it there was no system errors. However, the nothing really graphed.

Subject: Re: Contour mapping of elevation points
Posted by David Fanning on Tue, 26 Feb 2013 03:31:06 GMT
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gpeterso@ucsc.edu writes:

> So I have successfully loaded the coyote library but when I try and run the program there is an error that says x,y, or Z dimensions are incompatible. i tried changing the code to
> lons=scale_vector(dindgen(s), 270, 360)
> lats=scale_vector(dindgen(s), 0, 90)
>

> to form two dimension arrays for longitude and latitude. When I ran it there was no system errors. However, the nothing really graphed.

Oh, duh! I had this:

```
> s = Size(array, /Dimensions)
> lats = Scale_Vector(Findgen(s[0]), 0, 90)
> lons = Scale_Vector(Findgen(s[1]), 270, 360)
> cgContour, array, lons, lats
```

And, of course, it should have been this:

```
s = Size(array, /Dimensions)
lons = Scale_Vector(Findgen(s[0]), 270, 360)
lats = Scale_Vector(Findgen(s[1]), 0, 90) - 90
cgContour, array, lons, lats
```

Really bad day today. It all started when I misspelled "aerosol" as "areosol". But, it's a long story. :-(

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
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Sepore ma de ni thue. ("Perhaps thou speakest truth.")
