
Subject: Problem with Polar_contour

Posted by [tarequeaziz](#) on Mon, 25 Aug 2008 19:46:50 GMT

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Dear IDL GODS,

I am back with another problem.

I am having troubles regarding polar_contour. The problem is as follows. I got the following code from one of my buddy where he uses polar_contour procedure to plot polar data.

```
" tit='cf_100_ave_POLAR.DAT'
```

```
fileout='cf_100_polar.eps'
```

```
;------  
device, retain=0          <----- THIS IS ONE OF  
THE PLACES WHERE I GET STUCK !!!!  
device, decomposed=0  
device, true_color=2048   <----- THIS IS ANOTHER  
POINT  
loadct,1  
;------
```

```
!p.multi=[0,1,1]
```

```
;------  
Ntime=1  
Ntime1=Ntime-1  
Nr=0  
Nthe=0  
openr,1,'E_NrNp.dat'  
readf,1,Nr  
readf,1,Nthe  
close,1  
;------
```

```
Nrighe=Ntime*Nr*Nthe  
Nslide1=Nr*Nthe  
Nslide=Nr*Nthe-1  
NDT=1
```

```

Tstart=0l
TIMEEPS=Ntime1
nn=0l
;

openr,1,'POL.data'
polaro=dblarr(2,Nslide1)
readf,1,polaro
close,1

;

nlev=128
lab=findgen(nlev)+1

wrk=dblarr(2,Nslide1)
wrk(0,*)=polaro(0,0:Nslide)
wrk(1,*)=polaro(1,0:Nslide)
r=reform(wrk(0,*),Nthe,Nr)
t=reform(wrk(1,*),Nthe,Nr)

openr,2,tit,/f77_unformatted
data1=dblarr(Nslide1)
data0=dblarr(Nr,Nthe)

nframe=0l
for j=0l,Ntime1 do begin
    readu,2,data0
endfor

RMIN=MIN(data0)
RMAX=MAX(data0)
;RMIN=ABS(RMAX - RMIN)/

nn=0l
for ir=0l,Nr-1 do begin
    for ithe=0l,Nthe-1 do begin
        data1(nn)=data0(ir,ithe)
        nn=nn+1l
    
```

```

        endfor
    endfor

    ttt=j*1.0

    tit0=string(ttt,format='(" - F - Time = ",F10.2)')

    z1=reform(data1,Nthe,Nr)

;~~~~~
    polar_contour, z1,t[*],r[0,*],/
    FILL,nlevels=nlev,title=tit,zr=[-0.3,RMAX]
;~~~~~

close,2 "

```

Now when he runs it in his machine (with IDL version 6.2) it just works like a charm but the same code breaks down when I want to run on machine (with IDL 7.0).

As I showed on the code, program breaks down at weird places, like "DEVICE,RETAIN=0" (shown above). It says that, retain is NOT allowed for device command, how ridiculous!!!!

Even if I circumvent this area, when it gets down to polar_contour command, it says, it cannot plot since the points are collinear !! How come then it works on his machine?????

As far as I can see, the code seems alright. I just cannot figure out why it is breaking down on my machine.

Please help...!!!!!!!

Best,

T

Subject: Re: Problem with Polar_contour
 Posted by [David Fanning](#) on Mon, 25 Aug 2008 22:36:15 GMT
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tarequeaziz@gmail.com writes:

> My God....!
>
> You are RIGHT!!!!

Well, yes, but don't go crazy on me. If you check my record, I think you will see there is a better than average chance I am right about these kinds of things. I'm used to seeing bad IDL code. :-)

> And just to add a little to this, why "polar_contour" gets all berserk
> when its in my machine. As you can see, I use set_plot command long
> after I used "polar_contour"...?
>
> Does it have to do anything with the conflict between Linux and
> Windows? It shouldn't..right???

Right, it shouldn't.

I'm thinking right at the moment that this is a red-herring. Maybe if you get the other things sorted out, this will sort itself out, too. If not, then tell me if this is **exactly** the same data that ran on your colleagues machine, or just data that you are trying to run. If the latter, have you tried making it double precision data?

> I am sorry that I am asking too many questions, but you have no idea
> how much you are helping me out in this.

Well, goodness. Maybe you could write a short note to my wife. She thinks I goof off all day long. :-)

Cheers,

David

--

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

Subject: Re: Problem with Polar_contour
Posted by [tarequeaziz](#) on Mon, 25 Aug 2008 22:46:08 GMT
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On Aug 25, 6:36 pm, David Fanning <n...@dfanning.com> wrote:
> tarequea...@gmail.com writes:
>> My God....!

>
 >> You are RIGHT!!!!
 >
 > Well, yes, but don't go crazy on me. If you
 > check my record, I think you will see there is a better
 > than average chance I am right about these kinds of things.
 > I'm used to seeing bad IDL code. :-)
 >
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 >> after I used "polar_contour"...?
 >
 >> Does it have to do anything with the conflict between Linux and
 >> Windows? It shouldn't..right???
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 > Right, it shouldn't.
 >
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 > Maybe if you get the other things sorted out, this will sort
 > itself out, too. If not, then tell me if this is **exactly**
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 >> how much you are helping me out in this.
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 > Well, goodness. Maybe you could write a short note to my
 > wife. She thinks I goof off all day long. :-)
 >
 > Cheers,
 >
 > David
 > --
 > David Fanning, Ph.D.
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 > Sepore ma de ni thui. ("Perhaps thou speakest truth.")

"--- tell me if this is **exactly**
 the same data that ran on your colleagues machine, or just
 data that you are trying to run."

---It is actually the 'same' data my colleague is using. The data was
 generated by his fortran program. But after that, he uses IDL to do
 all sorts of image processing.

" --Well, goodness. Maybe you could write a short note to my
> wife. She thinks I goof off all day long. :-)"

---ha ha haif this helps, I am willing to write a very nice
testimonial for you!

All I need is her email address....ha ha ha ...

Subject: Re: Problem with Polar_contour

Posted by [David Fanning](#) on Mon, 25 Aug 2008 23:03:06 GMT

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tarequeaziz@gmail.com writes:

> ---It is actually the 'same' data my colleague is using. The data was
> generated by his fortran program. But after that, he uses IDL to do
> all sorts of image processing.

OK, are you sure, then, that this isn't a byte order
problem? When you read the data, do the minimum
and maximum values look OK to you? Are they in the
range you expect? Have you put them in a variable
that maintains all the precision of the data?
Have you tried plotting the data as points instead
of contouring it? Does it still look reasonable?

Have you printed out t and r to see if those values
look OK? Have you tried to display Z1 as a surface?

Still a lot of possibilities left... :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Subject: Re: Problem with Polar_contour

Posted by [tarequeaziz](#) on Mon, 25 Aug 2008 23:44:27 GMT

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On Aug 25, 7:03 pm, David Fanning <n...@dfanning.com> wrote:

> tarequea...@gmail.com writes:

>> ---It is actually the 'same' data my colleague is using. The data was
>> generated by his fortran program. But after that, he uses IDL to do
>> all sorts of image processing.

>

> OK, are you sure, then, that this isn't a byte order
> problem? When you read the data, do the minimum
> and maximum values look OK to you? Are they in the
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> of contouring it? Does it still look reasonable?

>

> Have you printed out t and r to see if those values
> look OK? Have you tried to display Z1 as a surface?

>

> Still a lot of possibilities left... :-)

>

> Cheers,

>

> David

>

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

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

> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Looks like its going to be a long night for me!

Anyways, one more question, and then I will let you go...I promise.

why do we need to use 'triangulate' procedure to draw a polar_contour
plot? please excuse my ignorance regarding this. because right now it
seems like this is the last bone of contention. Triangulate is
standing between me and the solution.

BTW...have u noticed the uncanny resemblance between 'strangulation'
and 'triangulation'....??

he he he

Subject: Re: Problem with Polar_contour

Posted by [David Fanning](#) on Tue, 26 Aug 2008 00:09:30 GMT

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tarequeaziz@gmail.com writes:

> why do we need to use 'triangulate' procedure to draw a polar_contour
> plot?

Because contour expects a rectangular Cartesian grid, and you want to pass it something else, entirely. Thus, you are going to have to re-grid your data to display it in this new way. I would guess the polar points are causing you grief. Probably all these spherical triangles are collapsing to a point and appear to the triangulation algorithm to be co-linear. It is a common problem, as you will see if you search the newsgroup archives for "co-linear".

> please excuse my ignorance regarding this. because right now it
> seems like this is the last bone of contention. Triangulate is
> standing between me and the solution.

You may have to try some other way of gridding your data instead of letting IDL attempt to solve the problem. IDL procedures exists to help you do this. (MESH_DECIMATE, for example, helps to get rid of overlapping vertices in the data.)

> BTW...have u noticed the uncanny resemblance between 'strangulation'
> and 'triangulation'....??

Not until just recently. :-)

I have a son who sometimes asks me to edit one of his papers. Then he ignores my good suggestions and re-submits the paper to me for further editing, and I make the same good suggestions (usually concerning the difference between "there" and "their"), etc. This conversation is beginning to remind me of that. :-)

Cheers,

David

--

David Fanning, Ph.D.

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