
Subject: bug in CONTOUR

Posted by [paul](#) on Wed, 31 May 1995 07:00:00 GMT

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I've discovered a bug in CONTOUR which occurs when you try to use keywords C_LABEL and DOWNHILL at the same time. The bug has the unfortunate side effect of corrupting your IDL session. So far it looks like the bug is independent of platform -- it occurs on either our DECSTATION or ALPHA workstations. Has anybody else ran across this one? Does anyone know if its fixed in version 4.0?

Here is the session log: [IDL. Version 3.6 (ultrix mipsel)]

```
.....  
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

```
IDL> lev=indgen(14) & c_label=replicate(0,14)
```

```
IDL> contour,dist(20),levels=lev,/down ; works fine
```

```
IDL> contour,dist(20),levels=lev,c_label=c_label ; works fine
```

```
IDL> contour,dist(20),levels=lev,/down,c_label=c_label ; bombs out  
% Array has a corrupted descriptor: <No name>. ; IDL dumps core  
% Execution halted at $MAIN$ (CONTOUR). ; if you try to  
; do more work
```

Paul Ricchiazzi email: paul@icess.ucsb.edu
Institute for Computational Earth System Science
University of California, Santa Barbara

If I have seen farther than others, it is by standing on the shoulders of giants.		If I have not seen as far as others, it is because giants were standing on my shoulders.
Isaac Newton		Hal Abelson


```

|> like the bug is independent of platform -- it occurs on either our
|> DECSTATION or ALPHA workstations. Has anybody else ran across this
|> one? Does anyone know if its fixed in version 4.0?
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|> Here is the session log: [IDL. Version 3.6 (ultrix mipsel)]
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|> % Array has a corrupted descriptor: <No name>. ; IDL dumps
|> core
|> % Execution halted at $MAIN$ (CONTOUR). ; if you try to
|> |> ; do more
|> work

```

Or maybe IDL is confused about your use of the c_label keyword.
 If all elements are zero, why not just omit the c_label keyword?
 To test my theory, make c_label(3)=1 and re-run your code!

--

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 University of Colorado, CIRES voice: (303) 492-0707
 Campus Box 449 fax: (303) 497-7013
 Boulder, CO 80309-0449 USA

Subject: Re: bug in contour
 Posted by [Richard French](#) on Tue, 19 Aug 2003 13:23:30 GMT
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On 8/19/03 9:08 AM, in article bht7hc\$akln\$1@zam602.zam.kfa-juelich.de,
 "Reimar Bauer" <R.Bauer@fz-juelich.de> wrote:

```

> Dear all,
>
>
> we found a special bug in contour.
>

```

> We can't explain where the 1.3 at the yaxis comes from.
>
> This happens only by /fill not by fill=0 and not by /cell_fill.
>
> The value is alog10 of yrange[0]. If you change the yrange starting at 40
> then it is 1.6
>
> I have informed CREASO too.
>
> regards
>
> Reimar
I'm missing something, Reimar. I just ran test_contour and I don't get any
contours on the screen at all. I'm not sure what you mean by the 1.3 at the
y axis - I get no labels at all on the axis tick marks - just the words
'test' along each axis. Please let me/us know how to illustrate the bug you
mentioned.

Dick French

Subject: Re: bug in contour
Posted by [R.G. Stockwell](#) on Tue, 19 Aug 2003 14:49:46 GMT
[View Forum Message](#) <> [Reply to Message](#)

"Reimar Bauer" <R.Bauer@fz-juelich.de> wrote in message
news:bht7hc\$akln\$1@zam602.zam.kfa-juelich.de...
> Dear all,
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> Reimar

Yep, it quacks like a bug.
It seems that the ytickname is being ignored in that situation.

Also, I do see the same type of problem with the /cell keyword (the following prints "19" on the y-axis, and not where the y-axis should have a value of 19).

```
pro test_contour
erase
x=findgen(100)
y=findgen(100)/99.*70+20
z=randomn(seed,100,100) ;random looks pretty imho
CONTOUR,z,x,y,ylog=1,/cell
end
```

also interesting,

```
> CONTOUR,z,x,y,ylog=1,yr=[16,90],/cell,ytickname=string(findgen(10))
prints a "16"
> CONTOUR,z,x,y,ylog=1,yr=[17,90],/cell,ytickname=string(findgen(10))
prints "17"
> CONTOUR,z,x,y,ylog=1,yr=[18,90],/cell,ytickname=string(findgen(10))
prints "18"
> CONTOUR,z,x,y,ylog=1,yr=[19,90],/cell,ytickname=string(findgen(10))
also prints "18"
> CONTOUR,z,x,y,ylog=1,yr=[20,90],/cell,ytickname=string(findgen(10))
prints "19"
> CONTOUR,z,x,y,ylog=1,yr=[22,90],/cell,ytickname=string(findgen(10))
prints,"20"
> CONTOUR,z,x,y,ylog=1,yr=[10,90],/cell,ytickname=string(findgen(10))
behaves as expected
> CONTOUR,z,x,y,ylog=1,yr=[40,90],/cell,ytickname=string(findgen(10))
prints,"2"
> CONTOUR,z,x,y,ylog=1,yr=[40,100],/cell,ytickname=string(findgen(10))
behaves properly
```

also, to switch x and y, the bug appears on the x axis

```
> CONTOUR,z,y,x,xlog=1,xr=[20,90],/cell,ytickname=string(findgen(10))
prints,"19" on the x axis.
```

So, the combo of

- 1) xylog=1,
- 2) /fill or /cell,
- 3) particular range of values (i.e. it almost looks like there are no major ticks being plotted

cause a bug in the axis labelling

IDL 6.0, win2000

-bob

Subject: Re: bug in contour
Posted by [R.Bauer](#) on Tue, 19 Aug 2003 15:11:14 GMT
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Richard G. French wrote:

> On 8/19/03 9:08 AM, in article bht7hc\$akln\$1@zam602.zam.kfa-juelich.de,
> "Reimar Bauer" <R.Bauer@fz-juelich.de> wrote:
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> contours on the screen at all. I'm not sure what you mean by the 1.3 at
> the y axis - I get no labels at all on the axis tick marks - just the
> words 'test' along each axis. Please let me/us know how to illustrate the
> bug you mentioned.
>
> Dick French

Dear Dick,

this result which you describe for the axis I would expect to have too but I haven't.

I believe you see no contours because you'll have no default colortable loaded. I missed to add a line to load a colortable.

I see on the xaxis no ticklabels only a title and on the y axis I got one ticklabel the 1.3 and two times a title with a small distance.

We have tried idl5.6 windows and idl6.0 beta Linux. Both the same results.

regards

Reimar

--

Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de
<http://www.fz-juelich.de/icg/icg-i/>

=====

a IDL library at Forschungszentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro.html

Subject: Re: bug in contour
Posted by [R.Bauer](#) on Tue, 19 Aug 2003 16:04:35 GMT
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Reimar Bauer wrote:

> Richard G. French wrote:
>
>> On 8/19/03 9:08 AM, in article bht7hc\$akln\$1@zam602.zam.kfa-juelich.de,
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> We have tried idl5.6 windows and idl6.0 beta Linux. Both the same results.
>

I was too fast only linux 6.0 beta has no problems with the /cell_fill
method.

Reimar

--

Forschungszentrum Juelich
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<http://www.fz-juelich.de/icg/icg-i/>

=====

a IDL library at Forschungszentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro.html

Subject: Re: bug in contour
Posted by [Richard French](#) on Tue, 19 Aug 2003 16:41:58 GMT
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On 8/19/03 11:11 AM, in article bhteob\$a6fd\$1@zam602.zam.kfa-juelich.de,
"Reimar Bauer" <R.Bauer@fz-juelich.de> wrote:

> Richard G. French wrote:
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>> On 8/19/03 9:08 AM, in article bht7hc\$akln\$1@zam602.zam.kfa-juelich.de,
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> We have tried idl5.6 windows and idl6.0 beta Linux. Both the same results.
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> regards
>
> Reimar
>

Dear Reimar - tried it again, loading a color table first. Still get the same result: no tick labels on either axis, and no contours. I am running IDL6.0 on Mac OS X10.2.

Dick

Subject: Re: bug in contour
Posted by [R.Bauer](#) on Tue, 19 Aug 2003 16:55:30 GMT
[View Forum Message](#) <> [Reply to Message](#)

Richard G. French wrote:

> On 8/19/03 11:11 AM, in article bhteob\$a6fd\$1@zam602.zam.kfa-juelich.de,
> "Reimar Bauer" <R.Bauer@fz-juelich.de> wrote:
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>
> Dick

Dear Dick,

that's good news and bad news. This seems to be another bug. What happens by this example:

```
pro test_contour
erase
loadct,15
x=findgen(100)
y=findgen(100)/99.*70+20
z=findgen(100,100)
CONTOUR,z,x,y, /ylog,ystyle=1,/fill
end
```

I see 1.3 in the middle of yaxis and filled contours.

Reimar

--

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<http://www.fz-juelich.de/icg/icg-i/>

=====

a IDL library at Forschungszentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro.html

Subject: Re: bug in contour
Posted by [R.Bauer](#) on Tue, 19 Aug 2003 17:06:42 GMT
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R.G. Stockwell wrote:

> So, the combo of
> 1) xylog=1,

> 2) /fill or /cell,

> 3) particular range of values (i.e. it almost looks like there are no
> major ticks being plotted

Good idea

a workaround is to use ytickv and yticks. Then they are major ticks.

```
pro test_contour
erase
loadct,15
x=findgen(100)
y=findgen(100)/99.*70+20
z=findgen(100,100)
CONTOUR,z,x,y,/ylog,ystyle=1,/fill,ytickv=[20,30,40,50],ytic ks=3
end
```

Reimar

>
> cause a bug in the axis labelling
>
> IDL 6.0, win2000
>
> -bob

--

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Subject: Re: bug in contour
Posted by [Chris Lee](#) on Thu, 21 Aug 2003 08:37:51 GMT
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In article <bhtlgr\$ao62\$1@zam602.zam.kfa-juelich.de>, "Reimar Bauer"
<R.Bauer@fz-juelich.de> wrote:

```

> R.G. Stockwell wrote:
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> z=findgen(100,100)
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> Reimar
>
>> cause a bug in the axis labelling
>> IDL 6.0, win2000
>> -bob
>

```

The bug is caused by IDL plotting in log coordinates for the axis, 1.3 is $\text{alog}_{10}(20)$. Try giving the contour a range between 11 and 99, the number you get on the axis is $\text{alog}_{10}(\text{min_range})$

```

pro contour_test
x=findgen(100)
y=findgen(100)/99.*70+20
z=findgen(100,100)
number=14
CONTOUR,z,x,y,/ylog,ystyle=1,/fill,yrange=[number,max(y)]
;the axis will show 1.14 for number=14
end

```

For some reason, this only happens with when using /fill (I don't see a problem using /cell_fill) and when the range is less than one unit in log₁₀ space (1->10, 10->100, 100->1000 etc.). Setting 'number=9' above fixes the problem, but doesn't look good.

--
Chris.

Subject: Re: bug in contour

Chris Lee wrote:

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> problem using /cell_fill) and when the range is less than one unit in
> log_10 space (1->10,10->100, 100->1000 etc.). Setting 'number=9' above
```

> fixes the problem, but doesn't look good.
>
> --
> Chris.

Dear Chris,

someone from CREASO informed me that this bug does not occur with IDL6.0 windows.

with idl6.0beta linux I have this bug.

I will get 6.0 soon. But if you or someone else could confirm this bug in the 6.0 version then you should do a request to RSI or CREASO.

Reimar

--

Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de
<http://www.fz-juelich.de/icg/icg-i/>

=====

a IDL library at Forschungszentrum Juelich
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Subject: Re: bug in contour
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"Reimar Bauer" <R.Bauer@fz-juelich.de> wrote in message
news:bi2g1b\$b450\$1@zam602.zam.kfa-juelich.de...

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The bug does indeed appear in idl6.0 on windows (win2000).

Cheers,
bob
