Subject: Re: tv with axes routine
Posted by David Fanning on Sat, 02 Dec 2006 22:08:45 GMT

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Brian Larsen writes:

> Has anyone out there written a wrapper for tv that makes the output
> look like contour?
>
> By like contour I mean with axes, and in the center of the window,
> scalable zrange, log scales, ability to add a colorbar (using colorbar
> would work separately also so long as position works)
> Contour is great but it inherently smooths and takes forever, I don't
> want either.
>
> This would be a blocky version of
> IDL> contour, dist(100), /fill, nlevels=100
>
> but of course
> IDL> tvscl, dist(100)
> doesn't have any axes, is in the wrong place and all.
>
> This would be the equivalent then of imagesc() in matlab.

```
  xrange = [-5, 5]
  yrange = [5, 15]
  image = Dist(256)
  LoadCT, 33, NColors=100, Bottom=1, /Silent
  position = [0.1, 0.1, 0.9, 0.75]
  TVImage, BytScl(image, Top=99), Position=position, $
 /Keep_Aspect, /Erase, /NoInterpolate
  Plot, xrange, yrange, XRANGE=xrange, YRANGE=yrange, $
    Position=position, XStyle=1, YStyle=1, /NoData, /NoErase
  Colorbar, Range=[Min(image), Max(image)], Divisions=10, $
    Minor=5, NColors=100, Bottom=1, $
    Position=[position[0], 0.88, position[2], 0.95]
```

You could easily slap this into a wrapper procedure if you
like. Call it IMAGESC. :-)

You can find the relevant programs in the Coyote Library.

   http://www.dfanning.com/documents/programs.html

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: tv with axes routine
Posted by Brian Larsen on Sat, 02 Dec 2006 22:27:28 GMT
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Odd enough this doesn't work the first time I call it. I get
non-square axes and a colorbar but nothing in it.

Then I can it again and I get the right thing splattered overtop the
wrong thing...

-Brian

Subject: Re: tv with axes routine
Posted by Brian Larsen on Sat, 02 Dec 2006 22:30:20 GMT
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OK,
fixed there was an ancient version of this hiding on my system that was
ahead of the version from solarsoft (same version as from your site) in
my path. Getting rid of the ancient version makes it work.

Thanks much this will greatly speed things up I hope,

Brian

Subject: Re: tv with axes routine
Posted by Brian Larsen on Sat, 02 Dec 2006 22:33:29 GMT
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Oops, this being TVIMAGE

Brian Larsen wrote:
> OK,
> fixed there was an ancient version of this hiding on my system that was
> ahead of the version from solarsoft (same version as from your site) in
> my path. Getting rid of the ancient version makes it work.

>
> Thanks much this will greatly speed things up I hope,
>
> Brian

Subject: Re: tv with axes routine
Posted by mmeron on Sat, 02 Dec 2006 23:53:08 GMT
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In article <1165095337.186137.225850@n67g2000cwd.googlegroups.com>, "Brian Larsen"
<balarsen@gmail.com> writes:
> Has anyone out there written a wrapper for tv that makes the output
> look like contour?
>
> By like contour I mean with axes, and in the center of the window,
> scalable zrange, log scales, ability to add a colorbar (using colorbar
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> but of course
> IDL> tvscl, dist(100)
> doesn't have any axes, is in the wrong place and all.
>
> This would be the equivalent then of imagesc() in matlab.
>
> Cheers,
>
My Display_mm will do these things. Unfortunately, even though I
forwarded ti RSI (sorry, ITT) an updated version of my library (called
MIDL_LIB) few months ago, their user contributions page still provides
only the older version of the library, from 2002 (which lacks
Display_mm). If you want a newer version you'll have to contact me.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

Subject: Re: tv with axes routine
Posted by Brian Larsen on Sun, 03 Dec 2006 00:03:37 GMT
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I tried to send you this with this result, so I will just post here

---

```
    ----- The following addresses had permanent fatal errors -----
<m...@cars3.uchicago.edu>  (I added the ...)
    (reason: 550 5.7.1 Unable to relay for m...@cars3.uchicago.edu)


------------

        I would love to have the newer version, this could save a bunch
of time
        of me reinventing a perfectly good wheel.

        If you wouldn't mind and its small enough for email
balarsen@gmail.com
        is as good as any address.

        Thanks much,

        Brian



> My Display_mm will do these things.  Unfortunately, even though I
> forwarded ti RSI (sorry, ITT) an updated version of my library (called
> MIDL_LIB) few months ago, their user contributions page still provides
> only the older version of the library, from 2002 (which lacks
> Display_mm).  If you want a newer version you'll have to contact me.
>
> Mati Meron              | "When you argue with a fool,
> meron@cars.uchicago.edu      | chances are he is doing just the same"
```

Subject: Re: tv with axes routine
Posted by mmeron on Sun, 03 Dec 2006 01:28:46 GMT
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In article <1165104217.422708.91740@n67g2000cwd.googlegroups.com>, "Brian Larsen"
<balarsen@gmail.com> writes:
> I tried to send you this with this result, so I will just post here
>   ----- The following addresses had permanent fatal errors -----
> <m...@cars3.uchicago.edu> (I added the ...)
>   (reason: 550 5.7.1 Unable to relay for m...@cars3.uchicago.edu)
>
Oh, that's a dead mailbox, the proper address is in the sig. But no
matter, got your address, I'll zip the library and email it to you.

>
> ------------
>

>   I would love to have the newer version, this could save a bunch
> of time
>   of me reinventing a perfectly good wheel.
>
>   If you wouldn't mind and its small enough for email
> balarsen@gmail.com
>   is as good as any address.
>
>   Thanks much,
>
>   Brian
>
>
>
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>> forwarded ti RSI (sorry, ITT) an updated version of my library (called
>> MIDL_LIB) few months ago, their user contributions page still provides
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>> Display_mm). If you want a newer version you'll have to contact me.
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Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

Subject: Re: tv with axes routine
Posted by Brian Larsen on Sun, 03 Dec 2006 01:46:44 GMT
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Mati,

thanks much, this routine is great. Just what I would have tried to
write.

Thanks again,

Brian

Subject: Re: tv with axes routine
Posted by mmeron on Sun, 03 Dec 2006 02:54:02 GMT
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In article <1165110404.479762.213230@73g2000cwn.googlegroups.com>, "Brian Larsen"

\<balarsen@gmail.com\> writes:
> Mati,
>
> thanks much, this routine is great. Just what I would have tried to
> write.
>
> Thanks again,
>
You're very welcome. I'm glad to see it being useful.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

Subject: Re: tv with axes routine
Posted by Paolo Grigis on Mon, 04 Dec 2006 09:21:18 GMT
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The solution proposed are useful, but actually sometimes you want
a behaviour similar to contour even for *not-uniformely* spaced
data, such that you specify an image z and two axis vectors
x and y with the coordinates of each horizontal and vertical
channel. In solarsoft, the routine "spectro_plot" will do that
for you.

Example:

;create some data
nx=800
ny=600

;image
im=dist(nx,ny)

;log scaled axis
x=10.^(findgen(nx)/(nx-1)*2)
y=10.^(findgen(ny)/(ny-1)*2+1)

;pick color table
loadct,5

;linear color scale
spectro_plot,im,x,y,/xlog,/ylog,/xstyle,/ystyle,/no_ut

;logarithmic color scale
 spectro_plot,im,x,y,/xlog,/ylog,/zlog,/xstyle,/ystyle,/no_ut

;linear axis & color

spectro_plot,im,x,y,/xstyle,/ystyle,/no_ut

Ciao,
Paolo

Brian Larsen wrote:
> Has anyone out there written a wrapper for tv that makes the output
> look like contour?
>
> By like contour I mean with axes, and in the center of the window,
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> This would be the equivalent then of imagesc() in matlab.
>
> Cheers,
>
> -Brian
>

Subject: Re: tv with axes routine
Posted by Brian Larsen on Mon, 04 Dec 2006 15:40:56 GMT
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spectro_plot is a good routine but seems to have a touch of odd
behavior (I didn't know about this routine before)

odd behavior:
;; setup some data
dat = dist(100)
;; x is just 1:100
x = findgen(100)
y = findgen(100)
;; y has a datagap at 49 by 100
y[50:*] += 100
spectro_plot, dat, x, y, /no_ut
END

I would expect the plot to have a 100 unit gap in y but instead I get oddness.

Have a look,

Cheers,

Brian

Paolo Grigis wrote:
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> a behaviour similar to contour even for *not-uniformely* spaced
> data, such that you specify an image z and two axis vectors
> x and y with the coordinates of each horizontal and vertical
> channel. In solarsoft, the routine "spectro_plot" will do that
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> Example:
>
> ;create some data
> nx=800
> ny=600
>
> ;image
> im=dist(nx,ny)
>
> ;log scaled axis
> x=10.^(findgen(nx)/(nx-1)*2)
> y=10.^(findgen(ny)/(ny-1)*2+1)
>
> ;pick color table
> loadct,5
>
> ;linear color scale
> spectro_plot,im,x,y,/xlog,/ylog,/xstyle,/ystyle,/no_ut
>
> ;logarithmic color scale
> spectro_plot,im,x,y,/xlog,/ylog,/zlog,/xstyle,/ystyle,/no_ut
>
> ;linear axis & color
> spectro_plot,im,x,y,/xstyle,/ystyle,/no_ut
>
> Ciao,
> Paolo
>
>