Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by pgrigis on Fri, 16 Jan 2009 17:30:32 GMT

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Hi Brian,

I agree that extending the minimum and maximum values
by half pixels would look nicer.

I'll check how I can modify the code to implement that behaviour.

Ciao,
Paolo

Brian Larsen wrote:
> Paolo (and anyone else who uses pg_plotimage),
>
> I am having trouble using/modifying pg_plotimage in a way that
> produces the output that I want, so I'll try here.
>
> using the following idl code:
> ctload, 39
> pg_plotimage, dist(10), findgen(10), findgen(10), /iso
>
> I expect to get 100 "pixles" of different values all the same size.
> Instead what I get is an 8x8 region of square pixels surrounded by a
> border of 1/2 sized pixels and corners of 1/4 sized pixels. At least
> for what I am trying to do this isn't the desired output.
>
> In hunting through pg_plotimage I am unable to figure out where the
> border resizing is happening so I can undo it. Does anyone have any
> ideas (or real knowledge) on where they are being changed?
>
> Thanks
>
> Brian
>
> --- --------------
> Brian Larsen
> Boston University
> Center for Space Physics
> http://people.bu.edu/balarsen/Home/IDL

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by Brian Larsen on Fri, 16 Jan 2009 17:39:01 GMT

At least it isn't immediately obvious that I was doing something
horridly wrong as my day so far would suggest :)

Brian

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

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by pgrigis on Fri, 16 Jan 2009 17:43:51 GMT

Hi Brian,
I uploaded a new version to the web.

 http://hea-www.cfa.harvard.edu/~pgrigis/idl_stuff/pg_plotima ge.pro

Try to call it with the keywords /fulledges
and please report if it does what you want.

Thanks for your feedback.

Ciao,
Paolo

Brian Larsen wrote:
> Paolo (and anyone else who uses pg_plotimage),
>
> I am having trouble using/modifying pg_plotimage in a way that
> produces the output that I want, so I'll try here.
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> --- -------------
> Brian Larsen
> Boston University
> Center for Space Physics
> http://people.bu.edu/balarsen/Home/IDL

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by pgrigis on Fri, 16 Jan 2009 17:55:31 GMT
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Paolo wrote:
> Hi Brian,
> I uploaded a new version to the web.
>
> http://hea-www.cfa.harvard.edu/~pgrigis/idl_stuff/pg_plotima ge.pro
>
> Try to call it with the keywords /fulledges
> and please report if it does what you want.

Actually, belay that,
I am not happy with the way /fulledges work.

I'll let you know.

Ciao,
Paolo

>
> Thanks for your feedback.
>
> Ciao,
> Paolo
>
> Brian Larsen wrote:
>> Paolo (and anyone else who uses pg_plotimage),
>>
>> I am having trouble using/modifying pg_plotimage in a way that
>> produces the output that I want, so I'll try here.

\>\>
\>\> using the following idl code:
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\>\> Thanks
\>\>
\>\> Brian
\>\>
\>\> -- --------------
\>\> Brian Larsen
\>\> Boston University
\>\> Center for Space Physics
\>\> http://people.bu.edu/balarsen/Home/IDL

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by pgrigis on Fri, 16 Jan 2009 18:04:07 GMT

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Paolo wrote:
\> Paolo wrote:
\>\> Hi Brian,
\>\> I uploaded a new version to the web.
\>\>
\>\> http://hea-www.cfa.harvard.edu/~pgrigis/idl_stuff/pg_plotima ge.pro
\>\>
\>\> Try to call it with the keywords /fulledges
\>\> and please report if it does what you want.
\>
\> Actually, belay that,
\> I am not happy with the way /fulledges work.

OK, try now.
It's all these half-pixels offsets that drive one crazy...

\>
\> I'll let you know.
\>

> Ciao,
> Paolo
>
>>
>> Thanks for your feedback.
>>
>> Ciao,
>> Paolo
>>
>> Brian Larsen wrote:
>>> Paolo (and anyone else who uses pg_plotimage),
>>>
>>> I am having trouble using/modifying pg_plotimage in a way that
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>>> --- -------------
>>> Brian Larsen
>>> Boston University
>>> Center for Space Physics
>>> http://people.bu.edu/balarsen/Home/IDL

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by Brian Larsen on Fri, 16 Jan 2009 19:55:59 GMT
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Paolo,

thanks much. You got some of it fixed, with
pg_plotimage, dist(10), findgen(10), findgen(10), /iso, /fulledges
I have still half pixels on the bottom and left sides.

I will take a look at what you did to see if I can fix it also.

Brian

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

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by Brian Larsen on Fri, 16 Jan 2009 20:12:49 GMT
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While I'm not sure how to fix it the error is evident int he
difference between these two cases.
IDL> pg_plotimage, dist(4), findgen(4), findgen(4), /iso, /fulledges
IDL> pg_plotimage, dist(4), findgen(4), findgen(4), /iso, /fulledges,
xrange=[-1,5], yrange=[-1,5]

In the first one you get 4x4 pixels but all the borders are half sized
In the second one you get 4x4 pixels that are all the same size.

So it has something to do with letting idl set the x and y ranges in
the plot. That I can live with since I can set it manually.

Brian

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

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by pgrigis on Fri, 16 Jan 2009 20:40:32 GMT
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Brian Larsen wrote:
> While I'm not sure how to fix it the error is evident int he
> difference between these two cases.
> IDL> pg_plotimage, dist(4), findgen(4), findgen(4), /iso, /fulledges

> IDL> pg_plotimage, dist(4), findgen(4), findgen(4), /iso, /fulledges,
> xrange=[-1,5], yrange=[-1,5]
>
> In the first one you get 4x4 pixels but all the borders are half sized
> In the second one you get 4x4 pixels that are all the same size.

Yes, because the image is clipped to the plot area.
This si a failure of the automatic xrange selection process.
I have fixed that (but you may have to
use /xstyle and /ystyle to avoid a margin around the
image, simmilar to the way plot works).

pg_plotimage, dist(4), findgen(4), findgen(4), /iso, /fulledges,/xst,/
yst

Ciao,
Paolo

>
> So it has something to do with letting idl set the x and y ranges in
> the plot. That I can live with since I can set it manually.
>
>
>
> Brian
>
> -- -------------
> Brian Larsen
> Boston University
> Center for Space Physics
> http://people.bu.edu/balarsen/Home/IDL

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by liamgumley on Sat, 17 Jan 2009 14:26:06 GMT
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On Jan 16, 11:01 am, Brian Larsen <balar...@gmail.com> wrote:
> Paolo (and anyone else who uses pg_plotimage),
>
> I am having trouble using/modifying pg_plotimage in a way that
> produces the output that I want, so I'll try here.
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> for what I am trying to do this isn't the desired output.
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> In hunting through pg_plotimage I am unable to figure out where the
> border resizing is happening so I can undo it. Does anyone have any
> ideas (or real knowledge) on where they are being changed?
>
> Thanks
>
> Brian

Brian,

You could try IMDISP (http://www.gumley.com/PIP/Programs/imdisp.pro),
e.g.,

loadct, 39
imdisp, dist(10), /axis

Is this what you want?

Cheers,
Liam.
Practical IDL Programming
http://www.gumley.com/

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by Brian Larsen on Tue, 20 Jan 2009 14:00:30 GMT
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Liam,

thanks this is another great solution to this.

I find it infinitely interesting how different people approach
problems. There are inherent "betters" and "worses" with each way
based much on the approach and the particulars of the problem it was
intended for.

pg_plotimage has the advantage of specifying img, x, y so it does the
axes for you and will scale the pixels log etc but doesnt provide a
clean way to set the zrange (color range), and has some 1/2 pixel
things that are more or less worked out now

imdisp has the advantage of being a very clean way to display an image

but the user has to specify the axes themselfs, which is often a good
thing. The zrange capability works easy also, but log scaling isnt
obvious in x and y

Just goes to show that when you need a hammer you need a hammer, and
when you need a screwdriver you need a screwdriver, each can
substitute in a pinch but it certainly best to understand your
tools...

Thanks much both of you, I will find a solution from the combination
I'm sure. A screwhammer :)

Brian

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

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by Craig Markwardt on Tue, 20 Jan 2009 18:19:10 GMT
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On Jan 20, 9:00 am, Brian Larsen <balar...@gmail.com> wrote:
> Liam,
>
> thanks this is another great solution to this.
>
> I find it infinitely interesting how different people approach
> problems. There are inherent "betters" and "worses" with each way
> based much on the approach and the particulars of the problem it was
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>
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> but the user has to specify the axes themselfs, which is often a good
> thing. The zrange capability works easy also, but log scaling isnt
> obvious in x and y

...

And it's strange to see PG_PLOTIMAGE, since PLOTIMAGE has been doing
the same thing for close to a decade.... :-)   (with image intensity
scaling, axes, standard graphics keywords, pan and zoom, the works).

Craig

Available from my web page...
http://www.physics.wisc.edu/~craigm/idl/graphics.html

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by David Fanning on Tue, 20 Jan 2009 18:31:40 GMT
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Craig Markwardt writes:

> And it's strange to see PG_PLOTIMAGE, since PLOTIMAGE has been doing
> the same thing for close to a decade.... :-)   (with image intensity
> scaling, axes, standard graphics keywords, pan and zoom, the works).

It's eye-opening, isn't it, to see how many people
actual use software that you couldn't imagine getting
through the day *without* using. I guess, collectively,
we are willing to put up with just about anything. ;-)

Cheers,

David

P.S. I just point out, that almost any image display
command you can download (with the notable exceptions of TV
and TVSCL) allows you to display axes on an image. They
have to if they expect to keep up with the competition.
Let's just say I haven't used TV or TVSCL for close to
a decade. :-)

--
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: Different sized pixels in pg_plotimage (is this a "feature")
Posted by ben.bighair on Tue, 20 Jan 2009 19:20:52 GMT
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On Jan 20, 1:19 pm, Craig Markwardt <cbmarkwa...@gmail.com> wrote:
> On Jan 20, 9:00 am, Brian Larsen <balar...@gmail.com> wrote:
>
>
>
>> Liam,
>
>> thanks this is another great solution to this.
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> And it's strange to see PG_PLOTIMAGE, since PLOTIMAGE has been doing
> the same thing for close to a decade.... :-)   (with image intensity
> scaling, axes, standard graphics keywords, pan and zoom, the works).
>
> Craig
>
> Available from my web page...http://www.physics.wisc.edu/~craigm/idl/graphics.html

Hi,

It is true that there are some very nice routines out there to handle
image display. One of the distinctive features that Paolo built into
pg_plotimage is the ability to log scale the image in the x and/or y
directions. Otherwise, it is hard to beat the old standbys such as
TVImage, TVScale, ImDisp and PlotImage.

Cheers,
Ben

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")

Posted by ben.bighair on Tue, 20 Jan 2009 19:21:02 GMT

On Jan 20, 1:19 pm, Craig Markwardt <cbmarkwa...@gmail.com> wrote:
> On Jan 20, 9:00 am, Brian Larsen <balar...@gmail.com> wrote:
>
>
>
>> Liam,
>
>> thanks this is another great solution to this.
>
>> I find it infinitely interesting how different people approach
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directions. Otherwise, it is hard to beat the old standbys such as
TVImage, TVScale, ImDisp and PlotImage.

Cheers,
Ben

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by pgrigis on Tue, 20 Jan 2009 19:58:21 GMT
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Craig Markwardt wrote:

>> Liam,
>>
>> thanks this is another great solution to this.
>>
>> I find it infinitely interesting how different people approach

>> based much on the approach and the particulars of the problem it was
>> intended for.
>>
>> pg_plotimage has the advantage of specifying img, x, y so it does the
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>> obvious in x and y
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> ...
>
> And it's strange to see PG_PLOTIMAGE, since PLOTIMAGE has been doing
> the same thing for close to a decade.... :-)   (with image intensity
> scaling, axes, standard graphics keywords, pan and zoom, the works).

Hi Craig,

the one and only reason I wrote pg_plotimage was log-scaling in y for
spectrograms
(but it was a good learning experience too;-)).

There are solarsoft routines that do it, but they are not stand-alone
and are a bit
more tricky to fine-tune. But that's where I stole the main ideas ;-)

But the fact that several different versions of programs with similar
functionality
exists does point out to a deficency of IDL bult-ins, and is a mistery
for me why
such basics stuff has never been implemented by ITT.

Ciao,
Paolo

>
> Craig
>
> Available from my web page...
> http://www.physics.wisc.edu/~craigm/idl/graphics.html

Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by pgrigis on Tue, 20 Jan 2009 20:03:51 GMT

Paolo wrote:
> Craig Markwardt wrote:

>>> Liam,
>>>
>>> thanks this is another great solution to this.
>>>
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>>> pg_plotimage has the advantage of specifying img, x, y so it does the
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>> And it's strange to see PG_PLOTIMAGE, since PLOTIMAGE has been doing
>> the same thing for close to a decade.... :-)   (with image intensity
>> scaling, axes, standard graphics keywords, pan and zoom, the works).
>
> Hi Craig,
>
> the one and only reason I wrote pg_plotimage was log-scaling in y for
> spectrograms
> (but it was a good learning experience too;-)).

The time, of course, would have better been spent
by building an improved google news-reader/writer

---

that doesn't mangle posts so much and uses fixed-width
fonts ;-)

Ciao,
Paolo

>
> There are solarsoft routines that do it, but they are not stand-alone
> and are a bit
> more tricky to fine-tune. But that's where I stole the main ideas ;-)
>
> But the fact that several different versions of programs with similar
> functionality
> exists does point out to a deficency of IDL bult-ins, and is a mistery
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> Ciao,
> Paolo
>
>>
>> Craig
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>> Available from my web page...
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Subject: Re: Different sized pixels in pg_plotimage (is this a "feature")
Posted by Craig Markwardt on Wed, 21 Jan 2009 07:59:51 GMT
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On Jan 20, 2:58 pm, Paolo <pgri...@gmail.com> wrote:
> Craig Markwardt wrote:
>> On Jan 20, 9:00 am, Brian Larsen <balar...@gmail.com> wrote:
>>> Liam,
>
>>> thanks this is another great solution to this.
>
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>>> things that are more or less worked out now

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\>\>\> imdisp has the advantage of being a very clean way to display an image
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\>\> scaling, axes, standard graphics keywords, pan and zoom, the works).
\>
\> Hi Craig,
\>
\> the one and only reason I wrote pg_plotimage was log-scaling in y for
\> spectrograms
\> (but it was a good learning experience too;-)).

Heh, I understand.

It was easy enough to add XLOG and YLOG logarithmic axes to PLOTIMAGE,
so I did.   At the same time I edited the documentation, which took
about ten times as much time and work as log axes. :-)

Craig

\>\> Available from my web page...
\>\> http://www.physics.wisc.edu/~craigm/idl/graphics.html