
Subject: Works on Linux, not on MacOS
Posted by [Gray](#) on Thu, 04 Mar 2010 15:59:12 GMT
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Hi all,

I've come across a very strange problem. I'm using Astrolib's FIND procedure to look for objects in an image. When I run my program on my Linux work computer, it works; when I run it on my personal MacBook, it doesn't.

I'm using the same version of IDL and the same version of FIND in both cases. Here's my example code (using the same fits file, which was generated on the Linux machine):

LINUX:

```
IDL> img = readfits('resid_BrGamma_con.fits',/silent)
IDL> find, img, x,y,f,s,r,5.d2,0.02,[-1.0,1.0],[0.2,1.0],/silent
IDL> help, x
X          FLOAT    = Array[228]
IDL> print, x[0:9]
    1693.41    201.085    248.418    2107.43    2089.72
2120.00
    1641.70    1942.30    688.136    882.025
```

MAC:

```
IDL> img = readfits('resid_BrGamma_con.fits',/silent)
IDL> find, img, x,y,f,s,r,5.d2,0.02,[-1.0,1.0],[0.2,1.0],/silent
IDL> help, x
X          FLOAT    = Array[249]
IDL> print, x[0:9]
    -NaN    -NaN    -NaN    -NaN    -
NaN    -NaN    -NaN    -NaN    -NaN    -NaN
```

What is going on??

Thanks for your help, as always :)

--Gray

Subject: Re: Works on Linux, not on MacOS
Posted by [penteado](#) on Fri, 05 Mar 2010 04:04:08 GMT
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On Mar 5, 12:49 am, Gray <grayliketheco...@gmail.com> wrote:
> How do I find out which build I'm running? I looked through the

> config details on the "About IDL Workbench" splash screen, but I
> didn't see anything that would indicate either way.

help,!version,/struct

But if the problem is not on readfits, this probably does not matter.

Subject: Re: Works on Linux, not on MacOS
Posted by [Gray](#) on Fri, 05 Mar 2010 14:14:29 GMT
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On Mar 4, 11:04 pm, pp <pp.pente...@gmail.com> wrote:
> On Mar 5, 12:49 am, Gray <grayliketheco...@gmail.com> wrote:
>
>> How do I find out which build I'm running? I looked through the
>> config details on the "About IDL Workbench" splash screen, but I
>> didn't see anything that would indicate either way.
>
> help,!version,/struct
>
> But if the problem is not on readfits, this probably does not matter.

```
IDL> help, !version, /struct
** Structure !VERSION, 8 tags, length=76, data length=76:
ARCH      STRING  'i386'
OS        STRING  'darwin'
OS_FAMILY  STRING  'unix'
OS_NAME    STRING  'Mac OS X'
RELEASE    STRING  '7.0'
BUILD_DATE STRING  'Oct 25 2007'
MEMORY_BITS INT    32
FILE_OFFSET_BITS
          INT      64
```

Subject: Re: Works on Linux, not on MacOS
Posted by [wlandsman](#) on Fri, 05 Mar 2010 15:41:21 GMT
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On Mar 4, 10:59 am, Gray <grayliketheco...@gmail.com> wrote:
> Hi all,
> MAC:
> IDL> img = readfits('resid_BrGamma_con.fits',/silent)
> IDL> find, img, x,y,f,s,r,5.d2,0.02,[-1.0,1.0],[0.2,1.0],/silent
> IDL> print, x[0:9]
> -NaN -NaN -NaN -NaN -

> NaN -NaN -NaN -NaN -NaN -NaN
>
> What is going on??

You are telling find.pro (<http://idlastro.gsfc.nasa.gov/ftp/pro/idlphot/find.pro>) that the approximate FWHM of sources on your image is 0.02 pixels. This is not a plausible value, and results in the spurious centroid positions.

So why does it work on your Linux machine? I suspect you have an older version of find.pro that used a more simplistic (but evidently more robust) centroid algorithm. --Wayne

Subject: Re: Works on Linux, not on MacOS
Posted by [penteado](#) on Fri, 05 Mar 2010 15:49:26 GMT
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On Mar 5, 12:41 pm, wlandsman <wlands...@gmail.com> wrote:
> You are telling find.pro (<http://idlastro.gsfc.nasa.gov/ftp/pro/idlphot/find.pro>)
> that the approximate FWHM of sources on your image is 0.02
> pixels. This is not a plausible value, and results in the spurious
> centroid positions.
>
> So why does it work on your Linux machine? I suspect you have an
> older version of find.pro that used a more simplistic (but evidently
> more robust) centroid algorithm. --Wayne

Now it sounds like a path issue. It seems that IDL is not calling the same find.pro he thinks it is (the one that is the same used in the Linux computer). He should check with `file_which('find.pro')` on both computers, to make sure it is the same file.

Subject: Re: Works on Linux, not on MacOS
Posted by [Gray](#) on Sat, 06 Mar 2010 16:12:45 GMT
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On Mar 5, 10:41 am, wlandsman <wlands...@gmail.com> wrote:
> On Mar 4, 10:59 am, Gray <grayliketheco...@gmail.com> wrote:
>
>> Hi all,
>> MAC:
>> IDL> img = readfits('resid_BrGamma_con.fits',/silent)
>> IDL> find, img, x,y,f,s,r,5.d2,0.02,[-1.0,1.0],[0.2,1.0],/silent
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>> NaN -NaN -NaN -NaN -NaN -NaN
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> that the approximate FWHM of sources on your image is 0.02
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> centroid positions.
>
> So why does it work on your Linux machine? I suspect you have an
> older version of find.pro that used a more simplistic (but evidently
> more robust) centroid algorithm. --Wayne

Okay... From the writeup of find.pro it seemed that that keyword should be the FWHM of the filter (as in, the width of the filter in wavelength). How do I figure out the FWHM of my sources w/o using find to pick them out?

Subject: Re: Works on Linux, not on MacOS
Posted by [penteado](#) on Sat, 06 Mar 2010 16:52:29 GMT
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On Mar 6, 1:12 pm, Gray <grayliketheco...@gmail.com> wrote:
> Okay... From the writeup of find.pro it seemed that that keyword
> should be the FWHM of the filter (as in, the width of the filter in
> wavelength). How do I figure out the FWHM of my sources w/o using
> find to pick them out?

No. It is a spatial filter. It is the fwhm of the kernel used in the convolution. Find does spatial processing on single images, there is nothing in it related to wavelengths.
