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 <graylikethec...@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
>> IDL> print, x[0:9]
>> -NaN -NaN -NaN -NaN -

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

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.
