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Subject: Re: Scale the psf on images.

Posted by [anes.tziamtzis](#) on Thu, 15 Jan 2015 13:33:33 GMT

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On Monday, January 12, 2015 at 4:15:23 PM UTC+8, anes.tz...@gmail.com wrote:

> Hi

>

> I would like to perform a live test during an upcoming observing run. I want to take a series of frames on various sources and check for variability on them. I would like to make the image subtraction as accurate as possible, thus I think that image subtraction should take place after the psf of the frames is matched.

>

> Which technique you think is the best? I tried with the convolve script but the result is not good.

>

> imconv = convolve( image1, image2, FT\_PSF = psf)

>

> image 1 the science frame and image 2 is the psf frame that I created through iraf.

>

> Any suggestions are appreciated

>

> Thanks a lot.

Well the observations are on Fermi sources at optical bands. We want to take a series of frames for every source and check if there is variability. The variation of the psf will be hopefully small, but since the expected variation is low as well (0.1-0.2) magnitudes, I want the best possible accuracy on the image subtraction.

In terms of amplitudes and phases I found a simple example that deals with a function.

```
t=findgen(1024)*10!*pi/1024
S=t/(2!*pi)-fix(t/(2!*pi)) ; sawtooth function
plot,S & wait,1
c=fft(S,1)
plot,abs(c)
```

```
!p.multi=[0,1,2]
plot_io, abs(c[0:99]),title='Amplitudes (log scale)'
phase=atan(imaginary(c),float(c))
plot,phase[0:99],title='Phases (radians)'
```

I guess i want the equivalents of `abs(c[0:99])` and `phase=atan(imaginary(c),float(c))` in the psf images and then do the thing you said on your first comment?

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