Subject: fitting after rebinning
Posted by Greg Hennessy on Thu, 06 Dec 2007 20:46:40 GMT
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Assume I create a large array containing a function (such as a gaussian) and I use my favorite routine to fit the function. I then rebin the array to a smaller array, and fit again. It seems that the answers for the peak, and width of the smaller function should be the values for the large array divided by the scaling I rebinned by, so long as I haven't rebinned so badly that I'm no longer properly sampled, right? I'm finding offsets which I can't explain easily.

```
a=psf_gaussian(npix=512,fwhm=90)
b=rebin(a,64,64)
c=rebin(a,16,16)
t1=gauss2dfit(a,p1,/tilt)
t2=gauss2dfit(b,p2,/tilt)
t3=gauss2dfit(c,p3,/tilt)
print,p1/32,p2/4,p3
```

yeilds:

```
 6.91216e-10 0.031247 1.19436 1.19436 7.98438 7.98438 0.00000
 3.84789e-08 0.247748 1.19650 1.19650 7.87500 7.87500 0.00000
-3.39881e-05 0.869213 1.22937 1.22937 7.50000 7.50000 0.00000
```

I'd like to figure out where those half and .375 pixel offsets come from.