Subject: Re: Scale the psf on images.
Posted by on Thu, 15 Jan 2015 07:58:15 GMT
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Den torsdag 15 januari 2015 kl. 08:13:19 UTC+1 skrev anes.tz...@gmail.com:
> Well perhaps i will get the award for the dumbest person in the world for this.
>
> On the following link there is an fft example
> http://www.exelisvis.com/docs/fftreducebackgroundnoise.html
>
> As you said Mats they do something to reduce the noise. The problem is by using this method, again the final image doesnt make sense. There is no structure actually and the pixel values vary from -1e7 to 1e7. This is the code
>
> fits_read, 'Image1.fits',image1,header1
> fits_read, 'Image1.fits.psf.1.fits',image2,header2
> fits_read, 'Image2.fits',image3,header3
> fits_read, 'Image2.fits.psf.1.fits',image4,header4
>
>
> ;Compute the difference kernel
> p1=fft(image2)
> p2=fft(image4)
>
> ; Compute the power spectrum of the transform and apply a log scale.
>
> powerSpectrum = ABS(p1)^2
> scaledPowerSpect = ALOG10(powerSpectrum)
>
> powerSpectrum2 = ABS(p2)^2
> scaledPowerSpect2 = ALOG10(powerSpectrum2)
>
>
> ; Scale the power spectrum to make its maximum value equal to 0.
> scaledPS = scaledPowerSpect - MAX(scaledPowerSpect)
> scaledPS2 = scaledPowerSpect2 - MAX(scaledPowerSpect2)
>
> surface,powerSpectrum2
>
> mask = REAL_PART(scaledPowerSpect) GT -5
> psf1_trans = p1*mask
> mask2 = REAL_PART(scaledPowerSpect2) GT -5
> psf2_trans = p2*mask2
> kernel = REAL_PART(FFT(psf1_trans/psf2_trans, /INVERSE, /CENTER))
>
>
> image3_prime = convol(image3, kernel)
> diff = image1 - image3_prime

>
>
> WRITEFITS,'im_conv.fits',diff,header3
> end

You are aware that you are trying to construct noise filters based on the power spectra of the PSFs?
