Subject: Re: How to add 5% possion noise for a image in IDL
Posted by wlandsman on Fri, 12 Apr 2013 11:29:09 GMT
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On Friday, April 12, 2013 4:59:10 AM UTC-4, huiqian...@gmail.com wrote:
> Thank you for replying.

If you use poidev, adapted from Numerical Recipes,
(http://idlastro.gsfc.nasa.gov/ftp/pro/math/poidev.pro) then you can simply write

im = im + 0.05*poidev(im)

The problem with using the POISSON keyword to RANDOMU is that it only accepts a scalar Poisson mean. So one has to iterate over each value in the image, and compute the Poisson random deviate for that value. Here is some quick (not well tested) code to do this:

```
function addpoisson,im, seed = seed
; return an image with each value replaced by a Poisson deviate
h = histogram(im, min=0, reverse=rr)
newim = im

for i = 0,N_elements(h)-1 do begin
    if h[i] NE 0 then begin
        sub = rr[rr[i]:rr[i+1]-1]       ;Get subscripts
  newim[sub] = randomu(seed,poisson=i)
    endif
endfor

return, newim
end
```

--Wayne