Subject: Re: CUDA version of RANDOMN?
Posted by wlandsman on Fri, 15 Aug 2008 14:28:31 GMT
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On Aug 15, 10:11 am, "hotplainr...@gmail.com" <hotplainr...@gmail.com>
wrote:

```
>  Hey guys,
>
>  I need to write a kernel to replace the IDL RANDOMN POISSON
>
>  for loop
>    for loop
>       for loop
>                          c = data[x,y,b]
>                           if c gt 0.0 then begin
>                                  n = RANDOMN( seedP, POISSON=c )
>                           endif else begin
>                                  n = 0
>                           endelse
>                          data[x,y,b] = n
>      endfor
>    endfor
>  endfor
>
>  Could someone point out an example code of how RANDOMN POISSON so that
>  I can implement it in CUDA?
```

Your best bet is to probably look at the Poisson generating algorithm
in "Numerical Recipes in C" if you are going to implement it CUDA.

I have implemented the "Numerical Recipes in C" algorithm into the IDL
procedure poidev.pro at http://idlastro.gsfc.nasa.gov/ftp/pro/math/poidev.pro.
Although poidev.pro is normally slower than calling randomn(POISSON=),
it has advantages for just the problem you describe, which can be
written as simply

```
          data = poidev(data)
```

rather than using a triple FOR loop.   --Wayne