Subject: Re: Normal Distributed Random Numbers
Posted by James Kuyper on Tue, 04 Sep 2001 21:24:07 GMT
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Kay Bente wrote:
>
> Hi
> I have to create arrays with normal distributed random numbers, but with
> variable FWHM (Full width half max/standard deviation sigma?).
> I want to add normal distributed noise to an image, so that the values
> differ around a mean value.
> In IDL there is a procedure to create such arrays RandomN, but you canï¿½t
> change the FWHM and I canï¿½t find what FWHM the normal distribution there
> has.

For a normal distribution, FWHM = 2*sqrt(alog(2))*(standard deviation)

RandomN produces a distribution with a mean of 0 and a standard
deviation of 1.0. Therefore, to create an array with a desired mean
value and a desired value for FWHM, use:

 array = mean + fwhm*RandomN(Seed, N)/(2*sqrt(alog(2)))