Subject: How to create white noise in IDL?
Posted by Sonu Tabitha on Sat, 16 Apr 2016 09:51:30 GMT
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How to create white noise image in IDL? I have heard about RANDOMN and RANDOMU but do they create white noise?

Subject: How to create white noise in IDL?
Posted by Helder Marchetto on Sat, 16 Apr 2016 14:48:17 GMT
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From wiki:
In digital image processing, the pixels of a white noise image are typically arranged in a rectangular grid, and are assumed to be independent random variables with uniform probability distribution over some interval

I guess that randomu (the "u" stands for uniform) is what you need. In case you're not sure, you can look at the statistics using something like:
p = plot(histogram(randomu(100000)))
Just for the fun of it.

Cheers, Helder

Subject: How to create white noise in IDL?
Posted by Helder Marchetto on Sat, 16 Apr 2016 19:09:09 GMT
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Sorry, got the wrong syntax:
p = plot(histogram(randomu(s,100000)))

Cheers

Subject: How to create white noise in IDL?
Posted by Helder Marchetto on Sat, 16 Apr 2016 19:09:09 GMT
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Sorry, got the wrong syntax:
p = plot(histogram(randomu(s,100000)))

Cheers

Subject: Re: How to create white noise in IDL?

Posted by Craig Markwardt on Sat, 16 Apr 2016 22:21:08 GMT
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On Saturday, April 16, 2016 at 5:51:32 AM UTC-4, Meegle_Jade wrote:
> How to create white noise image in IDL? I have heard about RANDOMN and RANDOMU but do they create white noise?

Typically, white noise is the same as Gaussian deviate noise (RANDOMN). The "whiteness" refers to the power spectrum of the data.

RANDOMU provides uniform deviates. While this *also* will produce noise with a white spectrum, it is not typical. And RANDOMU deviates have a DC bias. The deviates are between 0 and 1 which means the average is 0.5, and this will show up as a non-white DC frequency component.

So for a 100x200 image use RANDOMN(SEED,100,200).

Craig