Subject: Re: RANDOMU not very random
Posted by David Fanning on Wed, 16 Jun 2004 22:34:23 GMT
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Ian Chapman writes:

> A colleague and I are working on simulating cosmic glitches in
> interferograms. The way we are trying to accomplish this is assigning
> each point in an interferogram a random number using IDL's RANDOMU.
> Once the random number falls below a specified threshold, we insert a
> cosmic ray.
>
> We originally used an undefined seed to get the random numbers, but we
> quickly discovered that if we ran the routine over and over again, the
> random numbers shifted by 1 position each time. We corrected this by
> defining our seed using the SYSTIME function. Now, however, we find
> that if you run the program a number of times, you see the same
> positions popping up (not in an identifiable pattern, but they show up
> more often than you would expect).
>
> For example, Cosmic rays in ifgm1 appeared at pts 107 and 534. After
> running the program ~20 more times, these same points popped up. This
> seems to happen fairly frequently over long times of many runs.
>
> Is there anything that we can do to introduce more randomness into the
> procedure? Are there any fixes for the IDL random number generators?

Oh, oh. Are you storing the seed somewhere safe between
calls to your program? You should be. :-)

Once set, you shouldn't be changing it if you want
a truly (pseudo) random sequence.

Cheers,

David
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