
Subject: Period of RANDOMU generated random numbers??

Posted by [pasi.hakala](#) on Thu, 10 Mar 2016 09:07:47 GMT

[View Forum Message](#) <> [Reply to Message](#)

Dear All,

I have recently encounter some weird behaviour with RANDOMU (IDL 7.1, OSX 10.6 and 10.10). It seems like the random numbers generated by it have a reoccurrence period of 2148×1000000 i.e. $2.148e9$! OR, can someone otherwise explain this? Consider a simple piece of code (started freshly immediatedly after entering IDL, so no messing with the seed) that creates random numbers from the exponential distribution in batches of 1000000:

```
nobs=10000l
nper=1000000l
pymax_sim=fltarr(nobs)
;
for i=0l,nobs-1 do begin
    tmp=-alog(randomu(seed,nper))
    pymax=max(tmp)
    pymax_sim(i)=pymax
endfor
end
```

If I then have a look at the values of "pymax_sim" they appear to repeat with the period of 2148×1000000 ! Any ideas? I have used IDL since 1988 and obviously have never encountered this before (well, lucky I've never had a need for such long random number sequences before).

Cheers, Pasi Hakala, Research Scientist, Tuorla Observatory, Finland
