
Subject: Re: Error in reading large Fortran unformatted files
Posted by [Nigel Wade](#) on Thu, 17 Feb 2011 16:16:14 GMT
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On 17/02/11 15:02, Kenneth P. Bowman wrote:

```
> In article
> <45a7d29c-1223-4e0e-8390-5a549f91cd02@s11g2000yqh.googlegroups.com>,
> OM <metukio@gmail.com> wrote:
>
>> The output is now:
>> nb1=2147483657
>> nb2=995288272
>>
>> I still have no idea what this means.
>
> nb1 is the largest possible positive 32-bit signed integer
>
> IDL> print, 2L^31 - 1
> 2147483647
>
```

The value quoted is 2147483657, which is 10 more than that. Assuming OM cut'n'pasted the output, so it's not just a typo, it's a number which has no immediate significance that I can think of.

I do, however, agree that the problem is almost certainly due to trying to write 4GB of data as a single FORTRAN unformatted record. I doubt that when the FORTRAN unformatted format was devised it was never envisioned that someone would try to output that much data in a single write statement. The record length is a 32bit quantity. I don't see that that can be altered based on platform, the format must be the same for 32bit and 64bit platforms, and applications. I think the max. you can possibly write in a single record is 2GB-1. To write 4GB will require at least 3 records.

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Nigel Wade
