Subject: Re: need help reading binary FORTRAN data
Posted by Laura on Tue, 20 Oct 2009 18:13:33 GMT
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Hi, Andy, thanks for the help.

It seems the "swap_endian" finally worked (I don't know what happened in my last several tries). Now I only need to manually disregard the padding before and after each record since /f77_unformated keyword still does not work. I'll see if I can find some place to upload the file.

Cheers,

Laura

On Oct 20, 1:38 pm, Andy Heaps <a.j.he...@reading.ac.uk> wrote:
> Hi Laura,
> as you say this sounds a little strange. Do you know what type of
> machine the file was written out on? Was it Linux, 32/64bit and was it
> written as a FORTRAN unformatted file?
>
> I would have thought that:
> openr, ilun, filename, /get_lun, /f77_unformatted
> model = '1111'
> header = intarr(7)
> readu, ilun, model, header
>
> Would have read the file headers from what you've said.
>
> Could you put the file somewhere on a web server so that we could have a
> look? If not, is there a web site you could point to where you got this
> sort of file from?
>
> Cheers
> Andy
>
> Laura wrote:
>> Hi, I'm trying to read a binary data file (seems FORTRAN oriented)
>> into IDL, but got strange result. Maybe someone can help me to figure
>> it out here.
>
>> The file description is like this:
>
>> Record #1
>
>> * CHAR*4 Meteorological MODEL Identification
>> * INT*4 Meteorological file starting time (YEAR, MONTH, DAY, HOUR,

>> FORECAST-HOUR)
>> * INT*4 NUMBER of starting locations
>> * INT*4 Concentration packing flag (0=no 1=yes)
>
>> Record #2
>> .....
>
>> However, when I tried using following IDL code,
>
>> openr, ilun, filename, /get_lun
>> model = '1111'
>> header = lonarr(7)
>> readu, ilun, model, header
>
>> I get empty string in model, and weird long integer values in header.
>
>> Then I looked at the binary file myself and found the first 4 bytes
>> are "00 00 00 20', which seems indicating the length of "Record #1",
>> the second four bytes are "4E 41 4D 53", seems to be the model string.
>> So I use the following code
>
>> openr, ilun, filename, /get_lun
>> junk = 1L
>> model = '1111'
>> header = lonarr(7)
>> readu, ilun, junk, model, header
>
>> This time I got the string in "model" right, but the value in "junk"
>> is still strange, not the "32" as I expected. If I use a bytarr(4)
>> array to read each intr*4 value, the value I got matched what I saw in
>> the binary file (e.g., I got "0 0 0 32" for the "00 00 00 20").
>
>> Is there something between the FORTRAN int*4 and the IDL LONG needs
>> special treatment?
>
>> BTW, I also tried to open the file with a /F77_UNFORMATTED keyword,
>> but IDL complained it's a corrupted f77 unformatted file. SWAP_ENDIAN
>> doesn't work either.
>
>> Any thoughts?
>
>> Thanks,
>
>> Laura
