

---

Subject: Re: how read a file of complex?  
Posted by [davidf](#) on Fri, 02 Jan 1998 08:00:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Nando Iavarone ([iavarone@axpba0.ba.infn.it](mailto:iavarone@axpba0.ba.infn.it)) provides the first interesting problem of the New Year when he writes:

> I have a data-file containing a matrix. Each element of matrix has the  
> form(real part, imaginary part)[1] with each one LONG.  
>  
> 1) How create a matrix with structure [1] to read in a single pass the  
> file?  
>  
> [Slow code clipped.]

For an m-by-n matrix of real-imaginary pairs of long integers,  
how about something like this:

```
FUNCTION Read_It, filename, m, n

    ; Read the data all at once.

    data = LonArr(m*n*2)
    OpenR, lun, filename, /Get_Lun
    ReadU, lun, data
    Free_Lun, data

    ; Reform to align real data in column next to imaginary data.

    colData = Reform(data, 2, m*n)

    ; Create vectors of real and imaginary values.

    real = Reform(colData[0,*])
    imag = Reform(colData[1,*])

    ; Make complex numbers out of real and imaginary parts.

    complexData = Complex(real, imag)

    ; Reformat the complex data into a matrix and return.

    RETURN, Reform(complexData, m, n)
END
```

Call this function like this:

```
myData = Read_It('mydata.dat', 300, 500)
```

I've taken more steps than necessary here (as someone is sure to point out), but I tried to give you the sense of how this might be done by taking advantage of IDL's array operations instead of loops.

Cheers,

David

---

David Fanning, Ph.D.  
Fanning Software Consulting  
E-Mail: [davidf@dfanning.com](mailto:davidf@dfanning.com)  
Phone: 970-221-0438  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

---

---

Subject: Re: how read a file of complex?  
Posted by [davidf](#) on Sat, 03 Jan 1998 08:00:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Nando Iavarone ([iavarone@axpba0.ba.infn.it](mailto:iavarone@axpba0.ba.infn.it)) writes:

> David Fanning ha scritto:  
>  
>> OpenR, lun, filename, /Get\_Lun  
>> ReadU, lun, data  
>> Free\_Lun, data  
> Free\_Lun, data ??  
> Free\_Lun, lun

I took a few days off to ski and try to forget that I had ever heard of IDL. I was apparently successful. :-)

Cheers,

David

---

David Fanning, Ph.D.  
Fanning Software Consulting  
E-Mail: [davidf@dfanning.com](mailto:davidf@dfanning.com)  
Phone: 970-221-0438  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

---

Subject: Re: how read a file of complex?

Posted by [Ferdinando Iavarone](#) on Sat, 03 Jan 1998 08:00:00 GMT

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

---

David Fanning ha scritto:

> OpenR, lun, filename, /Get\_Lun  
> ReadU, lun, data  
> Free\_Lun, data  
>

Thank's David.

Free\_Lun, data ??

Free\_Lun, lun

Cheers,

Nando

--

Nando Iavarone  
Laureando Gruppo Telerilevamento  
Dipartimento Interateneo di Fisica  
Via Amendola, 173  
70126 BARI  
ITALY  
Tel.: +39 80 5443166  
Fax.: +39 80 5443165  
e\_mail: iavarone@axpba0.ba.infn.it

---