Subject: Re: Going outside the interger limits
Posted by David Fanning on Tue, 21 Sep 2004 13:25:36 GMT
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Lloyd Watkin writes:

> Have been muddling about with this problem for the past weeek, and I'm
> hoping someone can help.
>
> I'm creating an atmospheric transmission model for the sub-mm/far
> infrared region. If I try to calculate the spectrum between 1 and 500
> wavenumbers (numbers are not important) and I set a high resolution,
> the end of the spectrum does not seem to have had spectral line data
> applied to it.
>
> Having looked at where this is happening (at about point number
> 32700), it lies at the point where an integer runs outside it's
> limits. Inside the code, if a spectral line value is negative then it
> gets ignored, hence why I'm assuming (well guessing really) that this
> is the problem.
>
> I have been through my code and converted as much as I can see into
> either a long or a float depending on what it needs to be.
>
> Still getting problems!
>
> I was wondering whether there is anyway to tell in IDL if an integer
> is trying to go outside it's limits? Such as !except = 2, or is there
> a compiler switch which would break the execution if this problem was
> encountered (the latter would be very handy).
>
> Thanks for any help,

I think I would put this inside the program module:

```
Compile_Opt defint32
```

Then, *all* your integers will be long enough to avoid overflow.

More commonly, we use:

```
Compile_Opt idl2
```

which sets long integers and enforces strict array subscripting,
another great idea. :-)

Cheers,

David
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David W. Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http:/www.dfanning.com/
Phone: 970-221-0438, IDL Book Orders: 1-888-461-0155