Subject: Re: double precision complex #s
Posted by thompson on Mon, 17 Apr 1995 07:00:00 GMT
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agraps@netcom.com (Amara Graps) writes:

> psharer@eos.arc.nasa.gov (Peter J. Sharer) writes:

>> I am using the complex declaration for an array of complex numbers,
>> but am running into a problem with floating point overflows in a
>> polynomial calculation. Does anyone know of a way to create a complex
>> variable with double precision?

>> Thanks for your help,

>> Peter Sharer

> Peter,

> Try handling the real and imaginary parts this way (it's
> convoluted, but it works :))

> IDL> a = [1,2,3]
> IDL> b = [4,5,6]
> IDL> c = complex(a,b)
> IDL> print, c
> (1.00000,   4.00000)(2.00000,   5.00000)(3.00000,
> 6.00000)

> To get double precision reals, use some of the rules of complex algebra,

> IDL> print, double(abs((c+conj(c))/2.0))
>   1.0000000   2.0000000   3.0000000

> To get double precision imaginary, use idl's imaginary function,

> IDL> print, double(imaginary(c))
>   4.0000000   5.0000000   6.0000000

> (There are more zeros than what's being printed here, but you get the
> idea.)

Uhhh, sorry to disappoint you, but simply taking a single precision number and converting it to double precision does not mean that it has double precision accuracy.

Fear not, IDL v4.0 will have a DCOMPLEX data type.