Subject: Re: Is there a fast Complex ATAN in IDL 5.5?
Posted by Craig Markwardt on Fri, 16 Aug 2002 05:14:15 GMT
View Forum Message <> Reply to Message

MKatz843@onebox.com (M. Katz) writes:

> I've avoided switching to IDL 5.5 for some time now because I use
> ATAN() to produce the phase of complex data. In my simple tests with
> IDL 5.4,
>
> ATAN(x) runs over 30% faster than
> ATAN(imaginary(x),float(x)).

Not to mention that it uses twice as much memory.

>
> I use ATAN() a great deal, and in real-time feedback applications with
> 512x512 arrays where time is important.

In principle the imaginary part of ALOG() can serve the same purpose, and it does work. Unfortunately this is even slower than ATAN(imag, real).

I am really bummed too that RSI didn't provide a decent replacement function to compute the argument of a complex number when they changed the ATAN functionality. I relied on it as well. It was very nifty!

Your next best option seems to be writing a DLM. Thinking about it, 30% may not be *that* big a price to pay versus writing a DLM... I avoid DLMs at all costs.

Craig

--
---------- ----------
Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
---------- ----------