Subject: Re: Using IDL to make a signal filter
Posted by Kenneth P. Bowman on Mon, 14 Jul 2008 15:06:45 GMT
View Forum Message <> Reply to Message

In article
<6961630e-ccbc-4e50-82c4-9124498ec7a0@s50g2000hsb.googlegroups.com>,
ICBM0926 <ICBM0926@gmail.com> wrote:

> I have an 1D vector data in IDL from an analytical laser formula which
> contains 2 laser frequencies. I wrote a program trying to filter my 1D
> vector and get the waveform of one of the frequencies. I used 1D FFT
> and a mask
> function(step function). I applied the mask function to the frequency
> domain data. I've covered both positive and negative frequencies. I
> did inverse 1d FFT to retrieve the signal. I found that
> the amplitude of the signal is only half as it should be. Could
> anybody tell me what went wrong?

It sounds like you are doing things right, but it is easy to
make mistakes using FFTs.

You might want to look at the chapter on FFTs in my book
(http://tinyurl.com/zavp9), or create an artificial input
data set where you know exactly what the answer is and
use that to test your software.

Ken Bowman