

---

Subject: FFT example. Help!

Posted by [Peter Brooker](#) on Mon, 01 May 2000 07:00:00 GMT

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

---

I am trying to understand the FFT routine IDL uses. Part of my problem is that though I am familiar with Fourier transforms, I am somewhat unfamiliar with the fast Fourier transform.

Has anybody written a program that works through a known transform using the FFT procedure? In particular, I want to be able to plot out  $F(u)$  vs  $u$  and have it "make sense".

An example of a known transform is

For

$$f(x) = \begin{cases} 1 & \text{for } -1/2 < x < 1/2 \\ 0 & \text{else} \end{cases}$$

the Fourier transform  $F(u)$  is given by

$$F(u) = \int f(x) \exp(-j 2 \pi u x) dx \\ = [\sin(\pi u)] / \pi u$$

thanks-Peter Brooker

---