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Subject: Re: FFT phase?

Posted by [xqinshan](#) on Fri, 25 Jan 2013 06:49:00 GMT

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Thanks. I have known the reason. What I use is like  $x = 2 * !dpi * 2 * \text{dindgen}(25) / 16$ , so the amplitude and phase are not so accurate.

> On Thursday, January 24, 2013 12:28:02 PM UTC-5, [xqin...@gmail.com](mailto:xqin...@gmail.com) wrote:

>

>> Hi,

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>> just use `FFT(y)`. For example,  $y = A \cos(x + B)$ ,  $C = \text{fft}(y)$ . I think  $\text{atan}(C/\text{phase})$  should equal to  $B$ , but the return result is not. How to obtain  $A$  and  $B$  from complex  $C$ ?

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>

> It is correct. Example:

>

> `x = 2 * !dpi * 2 * \text{dindgen}(16) / 16` ;; Angle in radians

>

> `y = 0.7 * \cos(x + 1.6000)`

>

> `c = \text{fft}(y, -1)`

>

> `print, \text{atan}(c[2] / \text{phase})`

>

> ==> 1.6000

>

>

> Craig

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