Subject: Re: CHISQR_CVF question.
Posted by R.G. Stockwell on Thu, 20 Aug 2009 15:21:51 GMT
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> "Craig Markwardt" <craig.markwardt@gmail.com> wrote in message
> news:cab41ca6-e1a4-4f73-851f->8b25ab0c1e58@k26g2000vbp.googlegroups.com...
> On Aug 19, 4:42 pm, "R.G. Stockwell" <noemai...@please.com> wrote:
>> "Paolo" <pgri...@gmail.com> wrote in message
>>
>> basically yes, abs(fft(ts))^2, and comparing it to chisquare from the
>> IDL functions.
>> I have worked on it, but I think the result is off by a factor of 2.
>> That is a factor of 2 too stringent.
>>
...
>> Perhaps you can check my understanding. If we have a 95% significance
>> level,
>> then if we make a spectrum with 1000 points, shouldnt 50 of them be above
>> that 95% line?

> Let's say we have a time series, defined like this,
> LC = time series values (array)
> ERR = measurement uncertainty (array) of each LC point.

> I define the power spectrum in the following way,
> POW = ABS(FFT(LC,+1))^2 * (2 / TOTAL(ERR^2))
> which is to say, it is normalized by the total variance of the time
> series, and a factor of 2. Assuming LC is real, then really only the
> first half of POW is independent.

Well, there you go. lol. I though I had a factor of 2 missing somewhere.
Although I need to examine that a bit more, since I do both the full + and -
spectrum, as well as just the +. It makes sense though.

thanks for the response,
cheers,
bob