Subject: Re: CHISQR_CVF question.
Posted by Craig Markwardt on Thu, 20 Aug 2009 16:14:25 GMT
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On Aug 20, 11:21 am, "R.G. Stockwell" <noemai...@please.com> wrote:
>> "Craig Markwardt" <craig.markwa...@gmail.com> wrote in message
>> news:cab41ca6-e1a4-4f73-851f->
8b25ab0c1__BEGIN_MASK_n#9g02mG7!__...__END_MASK_i?a63jfAD$z_
_@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.

Oh, I thought the factor was 10.9 something. OK good luck!

Craig