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Response to S. Nadarajah & S. Kotz's *Comments on A new model for statistical error analysis in XAS: about the distribution function of the absorption coefficient by E. Curis & S. Bénazeth (2001). J. Synchrotron Rad. 8, 264–266*

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We have read with interest your comments about our paper of which the complete title is 'A new model for statistical error analysis in XAS: about the distribution function of the absorption coefficient' (Curis & Bénazeth, 2001). As it is precised in the introduction and underlined in the title, the essential aim of this paper is to verify the hypothesis of a normal distribution of the absorption coefficient.

As a preamble we had to establish the exact law of the ratio of two independent Gaussian variables and then to justify, both theoretically and experimentally, its Gaussian approximation. We chose to demonstrate this law by the use of formal computation softwares, today easily disposable. Moreover, we thought that the resulting expression, which is in fact the one given by Hinkley (1969) in the special case $\rho = 0$, was too 'quite long and complex' to be presented in this paper published in a special issue of the *Journal of Synchrotron Radiation* from the XAS XI congress and that it would not interest the readers.

Because of the simplicity of the computation with these softwares, we did not accompany our calculation step by a reference bibliographic research and so our paper presents a lack of citations; we deeply apologize about that. However, an incomplete list of references can never be called a 'mistake'.

We remain honoured by your serious reading of our paper and we hope that this exchange will open interesting discussions about the complexity of statistical analysis in XAS experiments.

References

Curis, E. & Bénazeth, S. (2001). *J. Synchrotron Rad.* **8**, 264–266.
Hinkley, D. V. (1969). *Biometrika*, **56**, 635–639.