

Interactive comment on “Universal multifractal Martian topography” by F. Landais et al.

Anonymous Referee #2

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The paper is technically sound and the results are convincing. My main objection is instrumental. If MOLA samples are separated 300 m and the accuracy is 1.8 m (some authors say worse), appreciating the right scaling for differences at the scale of few kilometres sounds as challenging to me. How can we be sure that the effect below 10 Km is not merely an artifact (especially when the changes in slope do not seem so big in Figure 2)? One possible way to analyse this could be to rebin the series, for instance getting a series with half samples and each sample being the average of two adjacent original samples; this way the error is reduced by a factor square root of two, although the resolution is decreased by a factor of 2. If the crossover is not modified after this change this would imply that it is an actual geophysical limit; however, if it is decreased this would mean that the effect is an artifact. As this is an important point of the paper, I would like to see this question clarified prior to my acceptance of the paper, which is otherwise of great quality.

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