The authors characterize the small-scale fluctuations in wind power production using data from an operational wind farm at 70 Pays d'Othe, 110 km southeast of Paris, France, and Universal Multifractals framework. The main objective of this article is to highlight some biases found during multifractal analysis and their influence on the direct statistical analysis of turbine power. Then, with numerical simulations and analytical expressions based on the UM framework, the authors support the influence of a higher threshold in the power available on the biases found.

Major issues

1. The summary of the article is too long, around 33 lines. The authors should be more concise in the summary because several of their ideas would be better in the introduction.
2. Eq. 8 presents the multifractal behavior for a non-conservative field with parameter H. Also, it is known that other important measures in multifractality are the Renyi entropy or the generalized fractal dimension (see https://doi.org/10.1088/1361-6633/ab42fb). Therefore, there remain two important points to be addressed in this direction and that should be mentioned in the article to establish future work directions of this article: A) What is the relationship of the parameter H with other multifractal measures such as the Hurst exponent generalized or the generalized fractal dimension? B) What relationship exists between the trace moment (TM) or double trace moment (DTM) method with other methods with which multifractal exponents are estimated, for example multifractal detrended fluctuation analysis (MF-DFA), total triangle areas (TTA), generalized Hurst exponent (GHE), among others (see for a review https://doi.org/10.1016/j.physa.2021.126288)?
3. Section 3.2 establishes a way to understand the effect of a higher threshold in the Universal Multifractals framework. The authors could highlight the difference of this method with others where the bias introduced in the estimation of multifractal exponents is considered (see for example https://doi.org/10.1016/S0378-4371(96)00165-3 and https://doi.org/10.1103/PhysRevE.95.042311).

Minor issues

1. Eq. (4), (5), (6), (7) and (8), do not have explicit references from which they were taken before being placed as was done for Eq. (3). The above, although it is a minor change, is suggested so that those readers who do not know much about the Universal Multifractals approach can inquire about it, and therefore, for the article to have a greater scope.

2. In equation (7) the restriction of $1/\alpha + 1/\alpha^{'}=1$ is not clear, it is suggested to clarify this restriction and what $\alpha^{'}$ represents in said equation.

3. In the title of Figure 5, panel (c), it is not clear the upper threshold condition placed on the power available, the authors could revise this part or clarify this condition in words (*"values>rated power = rated power"*).

4. Section 3.2, which explains the effect of a higher threshold in the Universal Multifractals framework, should go as one more subsection of section 2. The above, to give greater cohesion to the article since at this time the manuscript remains disconnected between the results obtained with the empirical data of the wind farm and the numerical simulations.

Furthermore, it seems to me to be a new part of the article and one that deserves to be highlighted.

5. In section 3.3 it is not entirely clear how each simulation of the discrete cascades was generated. Thus, it is necessary to establish in greater detail how each of these ensemble simulations were achieved.