

Review of the 2nd revision of the manuscript:

Khaled Yassin, Arne Helms, Daniela Moreno, Hassan Kassem, Leo Höning, and Laura J. Lukassen:

"Applying a Random Time Mapping to Mann modelled turbulence for the generation of intermittent wind fields"

I would like to thank the authors for the answers to my remarks and questions to the revised version of the manuscript, the addition of Appendix B and the modification of Fig. 10, in which the time lags considered have now been selected in such a way that heavy tails are also visible for the RootFlap moments! The authors have completed Table 3 with the information on the turbine model and it is now clear that a tilt angle and gravity effects have been considered in the model, each of which produces deterministic 1P load variations for each blade. However, this supplementary information and the updated result in Fig. 10 raises a new fundamental question for me. The adaptation of the considered time lags in Fig. 10a has led to a sudden appearance of heavy tails in the root-flap moments that were not visible in the results of the first two versions of the manuscript. In my opinion this means that the heavy tails now visible in Fig. 10a are obviously caused by the deterministic 1P loads and not by the intermittency of the wind field. Fig. B1 in Appendix confirms the prominent 1P peak as well as the higher harmonics in the spectrum of the root-flap moments. A further indication that the heavy tails visible in Fig. 10a may be caused by deterministic loads results from the fact that the heavy tails strongly decay for higher time lags, while they are still clearly visible for the wind field (Fig. 8). A comparable behavior of decaying heavy tails for larger time lags can be found in Fig. 10 for the other loads, so that also here it can be suspected that the visible heavy tails could be caused by deterministic 3P loads and not by the wind field.

If the heavy tails visible in the results for the time-mapping Mann model are caused by the deterministic loads, the question arises why the calculations with the original Mann model do not show heavy tails at all for any time lag (Fig. 10). Actually, I do not understand these results and would like to ask the authors to carefully check the calculations and the setups and provide more explanations. Are the turbine models really consistent? For the time being and with the available information and results, I cannot agree to the main conclusion of the manuscript (line 479ff), according to which the intermittency of the wind field generated by means of the time-mapped Mann model is transferred to the rotor loads. In order to demonstrate the influence of the intermittency of the wind field and to justify this conclusion, I strongly suggest to first consider a rotor without tilt and without gravity forces, i.e. without deterministic load variations, for both wind fields and I would be happy if my open questions and concerns could be solved.