

This article showcases a practical application of wind turbine blade erosion detection using a combination of aero-elastic simulations and real-world SCADA data. To me the article definitely has the potential to meet the journal's scientific standards but in its current form the balance between application and scientific content leans too much towards the application and in some sections the language even tends to be a bit promotional

Hence a more complete description of the methodology is essential for a proper evaluation of the scientific merit of the article.

I agree to the comments of the first reviewer but in addition the following recommendations should be considered

- The current study can hardly be understood without knowing the previous reference presented in Malik and Bak (2024a). A brief summary of their key results would be beneficial for readers unfamiliar with that reference.
- While I understand the need for confidentiality regarding specific turbine and site details, some generic information, such as the turbine size class (e.g. multi-megawatt offshore) is essential to put the findings in context and understand the general validity of the approach. Perhaps the interpretation of the results differs significantly for a study involving kilowatt-scale turbines compared to multi-megawatt offshore installations? I now read between the lines in section 2.1.2 that the turbines are offshore and in the conclusions I read that they are Multi MW. Please disclose this information upfront. This is also needed to interpret the absolute numbers in section 2.1.1. (outer 9 m of the blade, roughness numbers etc).
Related to this: What is a typical Reynolds number? To me the aerodynamics of erosion depends heavily on the Reynolds number.
- The study relies on results from HAWC2 simulations. While HAWC is a well-validated aeroelastic modeling tool, a scientific sound approach requires an assessment of validity and possible limitations of the modelling approach for the current situation. Specifically, it would be helpful to understand whether any known inaccuracies identified in e.g. [Boorsma 2024 J. Phys. Conf. Ser. 2767 022006.pdf \(dtu.dk\)](#) might impact the findings. The same holds for the accuracy of the airfoil aerodynamic model used, particularly bearing in mind the potentially high Reynolds numbers (above 10 million) for which limited validation of modelling approaches for eroded airfoil are carried out
- Justify (or reframe from) unfounded statements to avoid a tendency of subjectivity. For example, line 53 states "this study leverages the turbines' own wind speed anemometers, which are often overlooked due to uncertainties". I think many people do see the value of turbine anemometers for various applications so please justify this statement or add a more objective phrasing e.g: "The importance of turbine anemometers, to support erosion detection has been demonstrated" or something like that.
- Check whether all concepts been introduced and put in context, e.g. what is Shell A and Shell B at line 116. Also the partial and complete coverage of 4.5 m is not placed in context.
- The text should be checked on clarity, completeness and readability. For instance, the vertical axis of Figure 9 currently lacks a label specifying the quantity. Additionally, the numerous abbreviations throughout the text are confusing. It would be helpful to include a list of all abbreviations with their definitions.

By addressing these points and the points of the other reviewer, the authors will deliver a strong practical contribution to erosion detection where at the same time the journal's scientific standards are met.

