In this second version of the paper "Numerical and Experimental Simulation of Extreme Operational Conditions for Horizontal Axis Wind Turbines Based on the IEC Standard", the authors worked on the presentation of the results and overall, the corrections improved the readability. However, I do feel that some of my remarks have not been addressed sufficiently scientifically - both in the paper and in the author's reply. In addition, there are some open questions.
Also, the paper needs language editing.
The following major corrections should be done and answers to these questions should be given:

1 Introduction

When bringing up the IEC 61400-1 standard, I have the impression that there is some confusion at the authors' side regarding the versions, see comments in the following:

- From my understanding, the EOG and the EWS are not thrown out in the 4th edition but the standard has been expanded. This should be clarified.
- The wind speed information you are giving in l. 74 is not accurate. If you are bringing up the specific values, you should explain what the values you are just citing here actually mean - not a normal inflow velocity of 50 m/s but the reference wind speed (for the definition, please look into IEC-61400-1 4th edition)
- While you are now citing the 3rd and 4th edition of the IEC 61400-1 standard, you are using the formulas of the 2nd version (at least, I suppose you do since you did not change the formulas). Change the formulas or the citation. Do not use wrong citations.

Also, the authors should point our why the gust slicing effect is a problem (recurring high loads while the turbine blade crosses the gust several times)

2 Methodology

2.1 WindEEE Dome

- in the text, both figure 2a and figure 2b are said to show "the closed-circuit 2D flow mode" while the caption says "render of test chamber and flow path" (a) and "side view schematic of the WindEEE Dome with flow path in closed-circuit straight flow mode" (b). Please clarify the description. Do I interpret the figures correctly when saying that the flow returns around the inner chamber (i.e. left, right, above)?
- l. 134: you are mentioning the repeatability of gusts and shear flows. I would like to know whether this has been shown somewhere and if a citation could be included.

2.2 Numerical Flow Analysis Setup and Tuning/Validation

In this part, you should be clear about using *one static* condition to validate the numerical setup while the numerical setup will afterwards be used dynamically to generate the gusts and the shear. This could also be used in the discussion of the deviation in the flow field due to the different performance in the upper fan rows (as you write, "By knowing these discrepancies, corrections can be applied to the fan inputs").

2.3 gust length and time scaling

- I could not find any reference of the 14s duration of the 50 year EOG in the IEC 61400-1 ed 3 and 4 standards, could you please give me the section where I can find this?
- l. 227 (question out of interest): with a TSR of 1.1 and an inflow velocity of 5 m/s, the rotational frequency of the turbine (R = 1.1m) would be less than 1Hz which appears very slow to me. Is there a mistake?
- ll. 235: It is not clear what you want to express here. Please rephrase this.

3 Results and discussion

3.1 Steady wind shear

- I would change the wording in line 263: you are talking about velocity deviations but the standard deviation gives you a measure of the fluctuations in the flow
- l. 279: it is not clear what the setting of 1.6 s is and what it implies. If the information is relevant, please be more specific
- ll. 311 I do not agree with the use of the term "intermittency" in this context because in turbulence, it is normally used for effects occurring in the flow *due* to the turbulence while here, in contrast, the short, strong dip in the velocity is not caused by turbulence but more likely due to the setup. I suggest rephrasing the explanation.
- A thought regarding the velocity "dip": When looking at the time series, it is obvious that the higher measurement positions have higher turbulence levels and in addition, probe H measures this "dip" - could this be explained by the upper fans having a less stable air supply than the lower fans who will suck more air from the sides and above? (due to the sharp angle between the upper row of the fans and the plenum, I would expect more air to flow from there to the lover fans) And could this dip be related (lack of air when suddenly increasing the velocity)?

4 Conclusion

- While you are talking about a "numerical and experimental study" both in your title and the discussion, I do not feel that this is an accurate description since you are describing how you build a numerical "setup-preparation chain" that you validate against previous ABL data sets, and this numerical setup is in the following used to set the vans. However, you are not showing the simulation results of the gusts and shears, and therefore it is not directly a numerical study in my opinion. What you compare are the experimental results and the expected results from the formulas. I therefore think it would aid if you would rephrase the first sentence of the conclusion.
  Is a numerical study with a simulation and experimental campaign for example with the turbine planned in the future?

- "The steady experiment runs corresponding to the peak of the shear cases show the fans act non-linearly and they have different individual efficiencies, especially the top and bottom rows despite our simplified assumptions for developing the CFD model." I would suggest rephrasing:
  "The steady experiment runs corresponding to the peak of the shear cases show THAT the fans act non-linearly and THAT they have different individual efficiencies, especially the top and bottom rows. This has not been taken into account in our simplified assumptions for developing the CFD model."

5 Author Comments

It would have been nice if specific information (for example the lines) on the changes that have been made in response to the reviewers' comments would have been added.

- When asking about a) the phase average of your gust and b) the repeatability, comment on fig. 12, I wanted to know whether you repeated the experiment several times and checked a) whether the gust events are similar and b) whether the plots are presenting an average over multiple gusts. I did understand that you use a filtering with a 0.2s moving average but this is not a phase average. Could you please clarify the above-mentioned points and add this in the paper?
  I could not find the information that the cobra probes show variations in the measurement of the mean velocity in the revised paper.