Review of "Wake redirection at higher axial induction"
Author: Carlo Cossu

The manuscript performs series of large-eddy simulations of a two-row wind farm in order to investigate the effect of yaw and tilt controls on overall performance of the wind farm. The manuscript is well written. However, it lacks several necessary details about the simulations in Section 2. The manuscript also does not provide any significant discussion about impact of control on the flow physics. But, the main concern of the reviewer is that it has only considered two-row wind farm, and it is not clear how this work can be linked to larger wind farms with more rows.

The author is asked to address the following comments in the revised submission.

Specific comments:

1. The abstract mainly provides general introduction and the past research of the author. Please discuss the findings of the current research. You can quantify and further discuss the power gains due to tilted rotor and yaw control.

2. It is not clear why you have considered just two rows of turbines. I do not see any technical challenge in simulating for wind farms with more rows. But in case you think two-row wind farm simulation is sufficient, please discuss how you can link your findings to larger wind farms.

3. Line 81 to 83: Please add more explanation to clarify the relation between β and C'_T. You can use blade element momentum (BEM) theory in order to describe the relations between β, lift and drag coefficients and the thrust coefficient.

4. Line 84 to 91: Add LES and other relevant equations. Adding a schematic for the computation domain will be helpful too.

5. This may be beyond the scope of this manuscript, but how practical do you think it is to tilt blade by $\phi = -30°$? Higher tilt angle will significantly increase the flapwise bending and reduce the blade lifetime. You have mentioned about gravity load in line 137, but that is not very clear.

6. Line 116 to 122 and Figure 3 (a): I do not understand why increasing β (making it more negative) increases the power from the first turbine row. Wind turbines are usually optimized for the pitch angle around $0°$. If that is the case with your turbine too, power output should be lower for $\beta < 0°$. Increased thrust coefficients– for negative blade pitch angles–are simply caused by increased drag coefficients, and they will not necessarily translate into the higher power output.

7. You have not discussed how the tilt control and the yaw control influence the flow fields inside the wind farm. How do turbulence fields and shear stresses change as a result of those controls should be presented.

Minor comments and corrections:

1. Line 10: an high → a high.

2. Line 8: of the produced → of that produced

3. Line 110: Is it $\phi = -30°$? You can add a schematic describing positive and negative directions for yaw, tilt and pitch angles.