

Review comments

The manuscript has been improved in several important aspects. The content of the original submission was already sufficient for publication; the main issues concerned the framing of the topic, the alignment between the results and the stated claims, and clarity in the wording. The revised version now presents a more accurate and focused study: the title, abstract, and narrative have been updated and are better aligned with the analysis and results.

In addition, the authors conducted new simulations that further support the revised research focus and lead to an interesting and important conclusion: Even when subgrid layout effects or TKE adjustments are included to mimic the horizontally averaged LES within turbine cells, the mesoscale-WFP simulations still exhibit slower wake recovery in downstream (where WFP are inactive) cells than the LES. This is a valuable finding with meaningful implications for the community relying on these parameterizations.

The authors have addressed my first round comments thoroughly, and I am satisfied with their responses. Below I provide a few very minor comments aimed purely at improving clarity. All line numbers refer to the *diff* L^AT_EX version provided.

Minor comments

1. **Line 208:** It would be helpful to explicitly state at this point that MAV does not include axial induction (you clarify this later, but it belongs here). **Lines 222–227:** Please restate that MAV is only tested for the aligned layout. Although line 212 notes that all NWP–WFP simulations use the aligned layout, I expected MAV to be tested also for the staggered layout since it can also perform the those layout and you have the LES of the case.
2. **Lines 293–298:** This passage is currently confusing and would benefit from rewording. 1) You are not presenting wake losses per se. 2) The Fitch WFP does not spatially average wind-speed deficits over grid cells; instead, it applies a momentum sink over the volume cell proportional to the rotor area, which acts as a “smearing” when applied into the tendencies. 3) Phrases such as “wind speed at wind-farm exit” refer to features the reader has not encountered yet; up to this point only power has been shown. 4) The same applies to references to “enhanced momentum” with “modulates the wind speed,” which are unclear in context. You latter described it.
3. **Line 344:** Please clarify the phrase “the momentum extraction by the turbines acts simultaneously with the wake recovery.” If this refers to LES, note that extraction occurs at the rotor while recovery occurs downstream. What is the intended meaning? Is it referring the mesoscale-WFP simulations?.
4. **Lines 354–355:** This appears to be a L^AT_EX compilation error and should be corrected.
5. **Line 452:** This sentence requires minor rewording. As written, it suggests that the LES attempts to match the mesoscale simulations, which is not the intended meaning.
6. **Figure1:** You forgot changing the word “decay” in panel (f)

7. **Abstract (optional suggestion):** Consider including the numerical differences between LES and mesoscale simulations in the far wake. Since the far-wake region is where mesoscale-WFP approaches are expected to perform best, these values may help highlight more the practical relevance of the results.