

- Section 2.2.1 General EKF setup: It is not inherently clear how the Extended Kalman Filter bridges the gap between the measurements and the calculated wake position. Please either provide a reference or explain the Extended Kalman Filter in more detail. In particular, equations (3) – (7) are not explained at all and the variables  $f$  and  $h$  are introduced in the text but not explained. How are the gradients for  $F_k$  and  $H_k$  computed? Maybe use another variable than  $f$  here, as this is used for the frequency throughout the rest of the paper.
- Section 2.2.2 Dynamic model: The sentence in line 147 ‘The meandering time scales are thus incorporated with a first-order expression’ is confusing. Please explain what exactly you mean by this and show an equation.
- Section 2.3.1 Coordinate System: The offset in equation (16) corresponds to the 2.7D the turbines are spaced from each other. This is however only mentioned in section 2.1. Please add a sentence here to explain where this offset is coming from.
- Section 2.3.3 Equation (19) is mathematically incorrect, as a vector cannot be squared. Is this meant in a computational sense, i.e. each component of the vector is supposed to be squared? Please specify.
- Section 3.2 Please explain the variable  $\Omega$  in Equation (22)
- There are question marks instead of citations in some places (Lines: 30, 64, 244)