# *Interactive comment on* "Implementation of the Blade Element Momentum Model on a Polar Grid and its Aeroelastic Load Impact" *by* Helge Aagaard Madsen et al.

**Anonymous Referee #1**

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Excellent paper, so I have only minor remarks: - Abstract; since it is an abstract (i.e. not an introduction) also the main results and conclusions should be mentioned

Greek letters: omega is missing (and perhaps also others)

line 97: this should be reformulated; In order for a small rotor to have an 1P the turbulent vortices should also be smaller than the rotor.

line 113: The subject of sheared and turbulent inflow was ....

Figure 5 (right): the differences are not clearly visible; perhaps the % differences can be mentioned

line 361, "Soerensen and Munduate" is missing in the references

line 442: mention the type of desktop PC which has been used

Section 4: include a table with the main properties of the AVATAR rotor (diameter, V_rated, Omega_rated)

Algorithm 1: Include a remark if skipping the azimuthal loops will lead to an annular mean BEM (in case not, mention what else have to be changed)

Figure 15 Mention if the 1P, 2P, etc. are also so clear for the other points (as indicated in Fig. 14).

Figure 16: for clarity, the same y-scaling should be used for the Left and Right graph

Figure 24: the unit of the PSD should be divided by Hz

References: in case of more references of the same author, they should be ordered to year References: Stepniewski is not at the correct order

Typo's: line 197: this cases Eq (3) + (4): skip "A" (denominator) Eq (5): skip "dr" Eq (6): be consistent with symbols: V_r (U_rel) and Omega (omega) Figure 18 + 19: annular mean BEM (instead of annual)

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