

## ***Interactive comment on “Overview of the PALM model system 6.0” by Björn Maronga et al.***

### **Anonymous Referee #1**

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Summary: This paper gives an overview of the PALM6.0 model, with a focus on the new advances made since PALM4.0. While I'm not an expert to judge every single aspect of the model development, my overall impressions are 1) the new modeling capabilities are very much needed by the scientific community and the authors should get all the credit for making a better model for the community, and 2) the paper is well written and has just enough details but not too much. I think the paper should be basically published as it is as a documentation and also an introductory reading. The only major suggestion I have is to create a table for all the acronyms as there are many of them. There are also a few minor issues from my reading, as follows:

1, I think dropping the overbar (or tilde which is used by the LES community) in some places but not others creates more confusion than the advantage it provides. I would recommend to follow the convention.

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2, After equation 20, Pr can be adjusted. How?

3, The calculations of  $u^*$ ,  $u''w''$ , and  $v''w''$ . Are you sure they are internally consistent? If you use the horizontal wind velocity to compute  $u^*$  with Eq. 28 as your line 25 (page 8) states, and use Eq. 32 to compute  $u''w''$  and  $v''w''$ , do the results satisfy Eq.31? It does not appear to me this is the case.

4, line 15 page 27: have you defined BSM already? I couldn't find it before this line.

5, line 7 page 42: stratification is considered vertical does not explain why you don't do this for downward surface. It's also vertical.

6, line 15 page 45: is out should be are outputs

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