

Interactive comment on “Formulation of and numerical studies with the Dutch Atmospheric Large-Eddy Simulation (DALES)” by T. Heus et al.

T. Heus et al.

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We thank the reviewer for his thorough commentary, and for the permission to use the annotated manuscript. Many changes in the revised manuscript, stylistic and contents wise have been made to reflect his annotations. This annotated copy has been the guideline for our revisions.

1 Title and abstract

We've used the title suggested by the reviewer, and tried to be more precise in the use of 'model', 'code' or 'simulation' throughout the manuscript. Sometimes, however,

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common use of language conflicts with correct phrasing.

1.1 Introduction

- Both cascade and spectrum imply larger-scale models that rely on the outcome of finer-scale models. We've changed to spectrum for clarity.
- We've mentioned DNS in the differences between LES, observations, and other types of models.
- We mean (and clarified accordingly) larger-scale models, such as regional or global models.
- We've checked for acronyms and expanded them where necessary, and avoided to start sentences with symbols.
- Greater consistency in terms of the residual terms has been achieved in the revised version. We do however prefer to group the global definitions together, since otherwise these definitions would be completely scattered over the paper, thus reducing clarity.
- The references to those papers are given in the previous paragraph; this is emphasized in the revised manuscript.

2 Section 2

- The pressure solver has been described in an additional subsection 2.6
- We've been more explicit in stating the meaning of the various symbols and believe that the sections should be much clearer in this respect

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- We've rewritten the SFS and boundary condition sections to reflect the reviewers comments.
- The Boussinesq reference state has been added to the manuscript.
- We agree that the slope flow section needed much clarification. The rewritten section should be improved, and answering all the reviewers comments.

3 Section 3

- The section has been modified to reflect the reviewers comment.
- The section has been modified, including some better phrasing of the TKE discussion.
- The name of the jet has been changed in the new manuscript.
- The boundary conditions have been included in the revised manuscript.

Interactive comment on Geosci. Model Dev. Discuss., 3, 99, 2010.

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