**Numerical settings of the CLASS model**

***Atmospheric boundary layer:***

***Integrating chemistry and land interactions***

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We provide the numerical settings of the hands-on exercises proposed in the book ***Atmospheric boundary layer: Integrating chemistry and land interactions***. The exercises have been described in the book including all the information on initial and boundary conditions. As such, these numerical settings are only a repetition to the ones described in length (physical meaning, Tables) in the book.

There are a total of 67 numerical experiments and each experiment has additional ones to study the sensitivity of the experiment to changes in the initial and boundary conditions.

The chapters with hands-on exercises are:

* Chapter 4 (6 experiments)
* Chapter 5 (4 experiments)
* Chapter 6 (12 experiments)
* Chapter 7 (3 experiments)
* Chapter 8 (11 experiments)
* Chapter 10 (9 experiments)
* Chapter 12 (5 experiments)
* Chapter 13 (7 experiments)
* Chapter 14 (4 experiments)
* Chapter 15 (4 experiments)

By opening the folder, you will find the files (exX-Y-Z.mxl) corresponding to the specific experiment. For example, ex**4-2-1**.mxl contains all the numerical settings of the numerical exercise “From polar to desert conditions: sensitivity to the sensible heat flux” described in Section **4.2** (exercise **1**) at Chapter 4.

As described in Chapter 16 (section 16.1), you can *load* the file \*.mxl by clicking in File (upper left corner) and load the contents of the file. You will get automatically all the settings of the numerical experiments (names of the experiments *italic*). By clicking in *start simulation* the experiment is performed. If you want to save the numerical settings, you need to click in File and *save* the experiment.

Please report to Jordi Vilà ([jordi.vila@wur.nl](mailto:jordi.vila@wur.nl)) in case of bugs or potential suggestions to improve the exercises.