

## ***Interactive comment on “The 2009–2010 arctic stratospheric winter – general evolution, mountain waves and predictability of an operational weather forecast model” by A. Dörnbrack et al.***

### **Anonymous Referee #2**

Received and published: 24 January 2012

The article by Dörnbrack et al presents a description of stratospheric winter 2009/2010, including evaluation of operation forecast model performance, PSC observations, stratosphere-tropospheric coupling. The article is well written and presents a solid scientific analysis of different considered topics. The evaluation of ECMWF forecast model in the stratosphere is very valuable. Although the article somewhat misses a focus, it provides a good reference for researchers interesting in stratospheric evolution during winter 2009/2010. I suggest publishing the article with only minor technical corrections. These are listed below:

P32548 L1-3: ‘The upward propagation of the planetary waves into the stratosphere

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tends to be weakened by blocking highs over the Far East and western North Pacific but enhanced by blocking highs over the Euro-Atlantic sector.' A reference is needed for this statement.

P32548 L4-6: 'In other words, the Arctic stratosphere would have been developed even further if the Atlantic blocking had not formed simultaneously with the WP pattern; see Nishii et al. (2011)' I suggest rephrasing the sentence as: 'In other words, the Arctic stratosphere would have been cooled even stronger if the Atlantic blocking had not formed simultaneously with the WP pattern; see Nishii et al. (2011)'

In captions to figures 2,3,4,12,17,18 replace panel index (b) with (a) where appropriate.

In caption to figures 16 replace panel index (a) with (b) where appropriate.

Figure 8 shows heat flux timeseries for year 2008/2009. It is not discussed anywhere in the text and can be removed.

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 32535, 2011.

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