

## ***Interactive comment on “Coupling of HO<sub>x</sub>, NO<sub>x</sub> and halogen chemistry in the Antarctic boundary layer” by W. J. Bloss et al.***

**R. Sander (Editor)**

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The interactive discussion has ended now and I recommend submission of a revised manuscript after taking into account the suggestions of the two reviewers. In addition, I have the following comments:

- The model considers iodine and bromine chemistry. However, chlorine chemistry is not included. Adding chlorine chemistry is probably beyond the scope of this paper. Nevertheless, I suggest that the authors briefly describe the expected effect of chlorine chemistry and if they think it could solve (or worsen) any of the discrepancies described in the manuscript. For example, Cl atoms react with hydrocarbons and produce radicals that will affect HO<sub>x</sub> chemistry.

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- The current text contains a mixture of “IONO<sub>2</sub>” and “INO<sub>3</sub>”. Since both refer to the same species, please use just one of them consistently. Same for Br.
- Please use either “OVOC” or “oVOC” consistently but don’t mix upper and lower case spelling.
- Section 6.4 is quite long. I suggest to divide it into subsections, e.g.:
  - 6.4.1 HO<sub>x</sub> sources
  - 6.4.2 Model Conditions & Chemistry
  - 6.4.3 Observations
- In Tab. 1, if you use the acronym “LOD”, please define it.

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Interactive comment on Atmos. Chem. Phys. Discuss., 10, 15109, 2010.