

Interactive comment on “Nitric acid in the stratosphere based on Odin observations from 2001 to 2007 – Part 2: High-altitude polar enhancements” by Y. J. Orsolini et al.

Anonymous Referee #2

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Presented paper announces new results of HNO₃ observations based on SMR;Odin Sub-Millimetre Radiometre (SMR) instrument measurements, and we have for the first time the evolution of global structure of this specie during 2001-2007 including data at high-latitudes. It was shown, that HNO₃ strongly reduced during polar night over Antarctica. It looks, that this result is very important for our understanding of atmospheric chemistry including pivotal role of heterogeneous processes in presence of low temperatures.

The results, which illustrate HNO₃ vertical structure variability revealed regulate downward margins in Antarctica, which had different intensity. The most intensive of such

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band belongs to 2003 – the year of strong SPE. However, the correspondence between these events is not clear from presented Figure. Then it will be interesting to look at similar Figure for high-latitude Northern region (not presented).

Nevertheless, it should be repeated, that presented results are new, interesting and important, and paper may be published in present form.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 9591, 2008.

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