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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Anthropogenic imprints on nitrogen and oxygen isotopic composition of precipitation nitrate in a nitrogen-polluted city in southern China" *by* Y. T. Fang et al.

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I'm wondering if the authors have to opportunity to compare their 15N ratio with the NO2/NOx ratio in their urban site. Freyer et al., (jgr, 98, 14791, 1993)proposed an analytical approach focusing on the nitrogen isotopic exchange between NOx, limited by the photochemistry. Even if this paper treated the NOx species, a comparison with nitrate might be useful.

Regarding their analytical method, I wonder if the difference in 18O of their rain water and the laboratory water used with their USGS standards can be the reason for their lower nitrate 18O. As writen, it appears to me than the oxygen exchange during incu-

bation is not properly treated by their calibration method if sample and standard water matrix are different.

Also a small technical error, page 21455, line 20: "systematically lower" and not "systemacally higher".

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 21439, 2010.