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Atmospheric Chemistry and Physics Discussions

Interactive comment on "

Dry deposition of reactive nitrogen to European ecosystems: a comparison of inferential models across the NitroEurope network" *by* C. R. Flechard et al.

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This paper reports the dry deposition of reactive nitrogen. The author mentions "The dry deposition of Nr, present in air in various inorganic species such as gaseous NH3, HNO3, HONO, NO, NO2 and aerosol NH4+ and NO3- , as well as in a range of organic molecules in both phases (e.g. gaseous peroxyacetyl nitrate (PAN) and other organic nitrates, amines) ...."

Although other organic nitrogen might be not important in this context, it may be better to mention some of them. Since i just finished a large piece of work on amines(which belongs to the Nr present in air), i would like to add something (I know it is probably not useful)

The most common amines(Methylamine, dimethylamine, trimethylamine, etc) typically have the similar sources as ammonia, but emission flux is 2-3 orders lower. They typically have higher vapor pressure, so they are not expected to be dominated by dry deposition (Ge et al., Atmospheric environmnet 45, 2011, 524-546). But amines may also contribute to the particle nitrate since most of them have a stronger ability than ammonia to partition into the particle phase (Ge et al., Atmospheric environment, 45, 2011, 561-567). They may contribute to the Nr deposition in some extent (of course, very little.)

X. Ge, A. S. Wexler, S. L. Clegg. Atmospheric Amines - Part I: A Review. Atmospheric Environment. 45,2011,524-546.

X. Ge, A. S. Wexler, S. L. Clegg. Atmospheric Amines - Part II: Thermodynamic properties and gas/particle partitioning. Atmospheric Environment.45,2011,561-577.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 29291, 2010.