Synthesized measurements of reactive nitrogen fluxes onto a forest using gradient and relaxed eddy accumulation method

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Exchange fluxes of Nr

Relaxed eddy accumulation (REA) method

Gradient method

**Vertical profiles of Nr**

Aerosols (PM$_{2.5}$ & coarse)
- NO$_3^-$, NH$_4^+$, SO$_4^{2-}$

Gases
- HNO$_3$, NH$_3$, SO$_2$
Removal speed (Deposition velocity)

**Theoretical Expectations**

\[
\text{HNO}_3 > \text{SO}_2 > \text{NO}_3^- \text{ in coarse} > \text{NO}_3^- \text{ in PM}_{2.5} = \text{SO}_4^{2-} \text{ in PM}_{2.5}
\]

**Results measured by the synthesized measurement system**

\[
\text{HNO}_3 > \text{NO}_3^- \text{ in PM}_{2.5} > \text{SO}_2 > \text{NO}_3^- \text{ in coarse} > \text{SO}_4^{2-} \text{ in PM}_{2.5}
\]