



## **Photolysis and kinetic isotope fractionation effects during NO<sub>x</sub> cycling**

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The photolytic cycling of NO<sub>x</sub> is the initiator of tropospheric chemistry and isotope effects may be a new way of understanding NO<sub>x</sub> removal by its oxidation to nitric acid. Mass independent isotope compositions are believed to be propagated in the NO<sub>x</sub> system by oxidation via ozone. However, our understanding of the role of nitrate radical formation, photolysis effects, and exchange reactions might play is limited. Here we present preliminary data of isotope effects occurring during the Leighton reactions and interpret the results using a photochemical kinetics model and discuss its relevance to tropospheric chemistry and  $\Delta^{17}\text{O}$  signals in atmospheric nitrate.