

## ***Interactive comment on “Wavelength dependence of isotope fractionation in N<sub>2</sub>O photolysis” by J. Kaiser et al.***

### **Anonymous Referee #1**

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Kaiser et al. present a new study of the positional isotope fractionation in N<sub>2</sub>O at both 185 nm (using a Hg pen ray lamp) and using broad band irradiation. In this study, the authors demonstrate a small, but significant depletion of heavy isotopes (15N; 18O), during photolysis at the peak of the N<sub>2</sub>O absorption band (185 nm). This finding helps test recent theoretical predictions of the fractionation due to variation in the potential energy surface.

This is a careful study and, together with its companion study on the temperature dependence of these effects, adds significantly to the discussion of N<sub>2</sub>O fractionation in the stratosphere. As a result of these studies, I believe sufficient effort has now been expended on this topic that it is time to do something else!

One small typo: Ln 18, Page 1741 ? N<sub>2</sub>O rather than NO<sub>2</sub> ?

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