

### **SPARC Data Initiative - Long lived and short lived tracer evaluations**

Michaela Hegglin<sup>†</sup>; Susann Tegtmeier; John Anderson; Samuel Brohede; Lucien Froidevaux; Ryan Fuller; Nathaniel Livesey; Bernd Funke; Ashley Jones; Kaley Walker; Erkki Kyrola; Gretchen Lingenfelter; Ellis Remsberg; Alexei Rozanov; Joachim Urban; Thomas v. Clarmann

<sup>†</sup> University of Toronto, Canada

Leading author: [michaela@atmosp.physics.utoronto.ca](mailto:michaela@atmosp.physics.utoronto.ca)

This poster contribution is part of the SPARC Data Initiative poster cluster, which performs an international multi-instrument intercomparison of existing stratospheric tracer climatologies. The main objective of the initiative is to write a SPARC report on a comprehensive comparison of vertically resolved climatologies of chemical tracers, age of air, and aerosols from all available satellite measurements. Here we present the SPARC Data Initiative evaluations on the long-lived trace gases water vapour, methane, CO, CFC-11, CFC-12, and SF<sub>6</sub>, and shorter-lived species such as HO<sub>2</sub>, OH, and CH<sub>2</sub>O. The evaluations will include zonal mean comparisons investigating the latitudinal and vertical structure of these chemical trace gases. Analysis of the seasonal cycle and interannual variability will be based on comparisons of trace gas time series. The initiative will assess the quality of the available chemical data sets and highlight differences between the observational data sets taking full account of sampling limitations and biases. Where possible, an expert judgment on the source of those differences will be provided.