## SPARC Data Initiative - Climatology comparisons for O3, N2O, NOy, NOx, CIO, and BrO

Susann Tegtmeier<sup>†</sup>; Michaela Hegglin; John Anderson; Samuel Brohede; Lucien Froidevaux; John Gille; Bernd Funke; Ashley Jones; Yasuko Kasai; Erkki Kyrîla; Gretchen Lingenfelser; Jessica Neu; Ellis Remsberg; Alexei Rozanov; Lesley Smith; Matthew Toohey; Joachim Urban; Thomas von Clarmann; Kaley Walker; Ray Wang; Ryan Fuller

<sup>†</sup> IFM-GEOMAR, Germany

Leading author: <u>stegtmeier@ifm-geomar.de</u>

This poster contribution is part of the SPARC Data Initiative poster cluster, which presents atmospheric composition climatologies from the upper troposphere to the middle mesosphere from a multi-national suite of space-based instruments. 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 comparisons of the long lived trace gases O3, N2O, and NOy, as well as the shorter lived species CIO, BrO, and NOx. The evaluations will include zonal mean comparisons investigating the latitudinal and vertical structure of the various longer-lived and shorter-lived trace gases 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.