



## **Polar ozone distributions in winters/springs 2002 to 2004 as measured by the three atmospheric ENVISAT satellite instruments GOMOS, MIPAS, and SCIAMACHY**

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GOMOS (Global Ozone Monitoring by Occultation of Stars), MIPAS (Michelson Interferometer for Passive Atmospheric Sounding) and SCIAMACHY (Scanning Imaging Spectrometer for Atmospheric Chartography) are atmospheric chemistry instruments aboard ESA's ENVISAT launched in March 2002. All three instruments are measuring stratospheric ozone profiles. MIPAS measures during day- and night time while SCIAMACHY and GOMOS measure only during day and night (twilight), respectively. In this study, measurements are taken from the University Bremen SCIAMACHY ozone profile retrieval by C. von Savigny; GOMOS ozone profiles are from the ACRI prototype processor, and MIPAS ozone profiles from the operational ESA processor. Antarctic and Arctic ozone distributions from winters/springs 2002 to 2004 from all three instruments are compared and estimates on accumulated ozone loss within the polar vortex using ENVISAT ozone data are provided taking into account diabatic descent inside the polar vortex from calculated heating rates.