

## **Recent highlights of atmospheric remote sensing in Finland**

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During the last decade satellite measurements have contributed greatly to the atmospheric research, including air quality, climate change and middle atmosphere research, by providing data to be used in model development, assimilation, forecasting and in trend studies. ESA's Envisat (launched 2002) and NASA's EOS-Aura (launched 2004) satellites provide large amounts of data of the composition of the atmosphere from the troposphere through the stratosphere and up to the mesosphere with global coverage from pole to pole. At the same time remote sensing has become more and more operational technique for monitoring the composition and chemistry of the atmosphere using eg. NASA's EOS-Aura (launched 2004) and EUMETSAT's METOP-A satellites. In addition, there is an increasing need for also (near) real time data products needed by novel applications utilizing satellite observations of the atmospheric composition. One good example is the monitoring ash and sulfur dioxide (SO<sub>2</sub>) originating from volcanic eruptions.

In this presentation we review the recent highlights of Envisat/GOMOS and EOS-Aura/OMI data and research results including the exceptional Arctic ozone depletion in Spring 2011 and the recent volcanic eruptions in Iceland in. Also future trends in atmospheric remote sensing will be discussed.