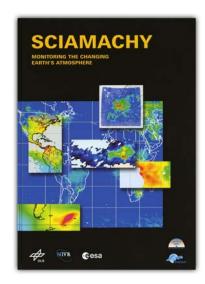
## Manfred Gottwald, Heinrich Bovensmann (Editors)

SCIAMACHY – Monitoring the Changing Earth's Atmosphere. 2006, 167 p, published by DLR, Hardcover

This book gives a comprehensive overview of the atmospheric instrument SCIAMACHY as part of the payload of the European Earth Observation mission ENVISAT, launched on 1 March 2002. SCIAMACHY observes absorption spectra of molecules from the UV to the short-wave infrared wavelength range and derives the atmospheric composition – trace gases, aerosols, clouds – from these measurements.

SCIAMACHY is one of the major Earth Observation missions of Germany, The Netherlands and Belgium, accomplished in cooperation with the European Space Agency (ESA). Many scientific groups at various institutes in Europe and abroad were and are actively involved in the analysis of the data.

The book describes the entire SCIAMACHY mission – from the very first ideas to the results after 4 years of in-orbit mission lifetime. The targeted readership is not only the existing and



potentially new SCIAMACHY data users from undergraduate student level up to researchers new in the fields of atmospheric chemistry and remote sensing, but anyone who is keen to learn about SCIAMACHY's efforts to study the atmosphere and its responses to both, natural phenomena and anthropogenic effects.

## **Table of Contents**

- 1) SCIAMACHY The Need for Atmospheric Research from Space
- 2) ENVISAT SCIAMACHY's Host
- 3) The Instrument
- 4) Instrument Operations
- 5) Calibration and Monitoring
- 6) SCIAMACHY in Orbit The First Years
- 7) From Radiation Fields to Atmospheric Concentrations Retrieval of Geophysical Parameters
- 8) Data Procesing and Products
- 9) Validation
- 10) SCIAMACH's View of the Earth's Atmosphere

**Appendix**