ISSI aerosol retrieval workshop

September 1-5, 2014

Bern, Switzerland

September 1

10:00-13:00 **Polarimetric instrumentation**

Olga Kalashnikova Airborne Multi-angle SpectroPolarimeter Imager (AirMSPI): instrument overview, polarization calibration and recent data collections

Otto Hasekamp Spectro-poalrimetry with SPEX: calibration and ground based retrievals

Minzeng Duan The directional polarization camera (DPC): an airborne instrument for polarization measurements in China

Rudiger Lang Measuring the Earth polarization from space with GOME-2 on Metop until 2020th

Alexander Kokhanovsky The 3MI on the EUMETSAT polar system-second-generation (SPS-SG)

Discussions

13:00-14:30 Lunch

14:30-16:30 **Aerosol retrievals-1**

Oleg Dubovik An update on GRASP open source algorithm development

Otto Hasekamp Aerosol retrieval from POLDER measurements

Discussions

September 2

10:30-13:00 **Aerosol retrievals-2**

Olga Kalashnikova AirMSPI spectro-polarimetric aerosol retrievals: algorithm concepts and applications to field campaign data

Itaru Sano The S-GLI aerosol retrieval algorithm: update

Discussions

13:00-14:30 Lunch

14:30-16:30

Zhe Jiang Retrieving the fine mode aerosol optical depth and size distribution simultaneously with both the radiance and polarization measurements over East China

Vijay Natraj Use of the Oxygen A-band to retrieve aerosol vertical profiles

Discussions

September 3

10:30-13:00 **Aerosol retrievals-3**

Antonio di Noia Towards the extension of neural network aerosol retrievals to downlooking geometries: first experiments and open issues

Yaroslav Ilyushin Retrievals of the microphysical properties of the aerosol in 3D inhomogeneous scenes: computer simulations

Anton Lapatsin Combination of passive and active observations in aerosol retrievals: accounting for polarimetric observations

Discussions

13:00-17:00 Excursion

September 4

10:30-13:00 **3-D effects and clouds in aerosol remote sensing problems**

Arjen Stap Influence of 3D effects on 1D aerosol retrievals in synthetic, partially clouded scenes

William Martin Adjoint methods for adjusting three-dimensional atmosphere and surface properties to fit multi-angle/multi-pixel polarimetric measurements

Anthony Davis Unmixing aerosols and 3D clouds in APS-like fottprint

13:00-14:30 Lunch

14:30-16:30

Discussions

September 5

10:30-13:00 **Radiative transfer**

Anthony Davis Forward 1D vector radiative transfer models for multi-angle spectro-polarimetric aerosol remote sensing: accuracy, efficiency, and fidelity

Discussions

Closure of the meeting