



AEROSAT
International Satellite Aerosol Science Network
Third Meeting,
Frascati, October 8 / 9 2015

Thomas Popp (DLR), Ralph Kahn (NASA)

Introduction

AEROSAT goals (1)

- **make satellite aerosol data as useful as possible to customers, especially climate modelers (e.g., AeroCom)**
- **achieve open and active exchange of information**
 - retrievals and their strengths and limitations
 - match requirements of users to technical capabilities
 - benefit from the latest technological advances
 - standardization (data formats, data standards)
- **forum for satellite aerosol retrieval experts**
 - learn from each other
 - initiate new developments
 - discuss harmonization

AEROSAT goals (2)

- **promote the use of satellite data**
 - as **complementary** to other sources of information
 - to better understand the role of aerosols on climate, climate change, air quality and atmospheric processes
- **forum with satellite data users** (AEROCOM / CCMI models, ICAP forecasts) and data providers (AERONET reference, space agencies)
 - listen to their needs and limitations
 - motivate new activities
 - contribute to integration of all observations
- AEROSAT is an unfunded network (like AEROCOM)



AEROSAT2 (2014)

Key Areas for Sat-Model *Coordination*

Characterization (by satellite teams)
& *Application* (by modelers) of:

- Satellite *retrieval-result uncertainties*
- Satellite-derived *aerosol type*

Goals of the meeting

- 4 focus topics
 - interface between models and satellite retrievals
 - aerosol typing
 - pixel level uncertainties
 - long-term data records
 - focus on discussion (as successful last year)
 - each session starts with seed questions
 - presenters: broader view / stimulate discussion
 - strict time management of talks
 - possibility for adhoc working groups in room corners
- > assess + refine current concepts -> develop new ideas**

Issues from discussions at AEROCOM 2015

- Role of satellite datasets in MIPs?
- Simplicity vs. accuracy / detail
- Satellite simulators
 - beyond CALIPSO to column products
- New multi-model / multi-satellite AOD comparison
 - Global + regional?
 - Link to GEWEX aerosol satellite lv2 assessment
- Use of uncertainties
 - in assimilation no penalizing of high AOD
 - How complex uncertainty do users want / need?
- Linking aerosol types model – satellite
 - Combine complementary satellite retrievals (e.g. different parts of the spectrum, angular, ...)