IAA Study Group Status Report

Responsible Commission:
COMMISSION 1: Space Physical Science

Study Number and Title:
1.9 Satellite remote sensing of aerosols in the Earth atmosphere

Short Study Description (repeat from Study Group Proposal):

Overall Goal:
The polarymetry satellite remote sensing purpose and place in the investigation of
temporal and spatial distribution of physical parameters of troposphere and stratosphere
aerosol and cloud particles in the Earth atmosphere including evaluation their influence
on climate, ecology and weather.

Intermediate Goals:
1. Long-term satellite global monitoring and database creation of optical, micro- and
macrophysical and chemical characteristics of aerosol and cloud in the Earth atmosphere,
their spatial and temporal distribution.
2. Precise quantitative determination of aerosol input to the Earth climate system
energy balance.
3. Determination of anthropogeneous aerosol impact on Earth climate change and
ecology.

Methodology:
Forming an international study group, draft a detailed schedule of the study.
Agreement on a study report outline.
Assigning individual responsibility for parts of the study report.
Assigning editor to coordinate individual parts and compile a coherent study report.
Work to be conducted through on-line collaboration and study group meetings held in
the course of annual International Astronautical Congresses and the IAA Spring
meetings.

Time Line: 2 to 3 Years
Final Product: Report, publications
Target Community: Scientists, engineers, Governments at large, local authorities,
Space Agencies, UN, European Commission

Support Needed: TBD
Potential Sponsors:
National Academy of Sciences of Ukraine
State Space Agency of Ukraine (SSAU)
NASA
CNES
UN COPUOS
European Commission
Progress in past six months:

The methodology of the aerosol polarymetry satellite remote sensing mission and ground-based validation has been studied. The paper on ground-based aerosol data development and analysis has been published.

Website Study Information up to date? (Study Group Membership, Study Plan and Schedule):

Study Group Membership
Members of Study Team

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Study Plan and Schedule

Webpages for Study Group Membership, Study Plan and Schedule at Aerosol-UA Project website http://aerosol-ua.mao.kiev.ua/index.php/en/main still are under development. Few papers on Study Group theme have been published and are under preparing.

**Issues requiring resolution?** (recommend approach):

**Product Deliveries on Schedule?** (If modified explain rationale):

Report, publications

**Study Team Member Changes?** (List any Study Team Members that you wish to discontinue, and provide names plus contact coordinates of any Members you wish to add on the second page of this Study Update form.) Note: Complete contact information including email, tel. and fax must be provided for all additions. Only Members with complete contact information will be listed and receive formal appointment letters from the IAA Secretariat.)

No changes

**Name of person providing Study Group Status** (Study Group Chair or Co-Chair):  
Study Group Chair  
Dr Yaroslav Yatskiv  
E-mail: yatskiv@mao.kiev.ua

**Status Report Date:** March 3, 2014

**Study Team Membership Changes**

Effectivity Date: **March 3, 2014**  
**Discontinue:**