Meeting Call

Third International Workshop on Space-based Snowfall Measurement (3rd IWSSM)

30 March-2 April 2011
Grainau, near Munich, Germany

Program Committee

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Workshop website:
http://cimss.ssec.wisc.edu/iwssm/2011

The program committee invites you to attend the 3rd International Workshop on Space-based Snowfall Measurement to be held in Grainau, Germany. The workshop is sponsored by the International Precipitation Working Group (IPWG), the GEWEX Radiation Panel (GRP), and by NASA's Precipitation Measurement Missions (PMM) Program on behalf of the Global Precipitation Measurement (GPM) Mission. The goal of the workshop is to bring together researchers focusing on the measurement of snowfall from space using active and passive microwave sensors for the purpose of assessing the state of the science and measurement technology and to recommend future directions in research and technology development. The topics of interest include instrument development, retrieval techniques, assimilation systems, modeling of microwave radiative transfer within snow particles and snowy air, modeling of microphysical processes and ground validation.

Workshop format

The workshop will focus around the five main topics identified in the outline below. A limited number of invited research presentations will set the stage for subsequent working group discussions where the state of the art will be discussed and future directions of research will be identified. Attendees will be asked to contribute to a workshop report that summarizes the findings of this workshop.

A tour of the Environmental Research Station "Schneefernerhaus" (http://www.schneefernerhaus.de/e-ufs.htm), located in 2650 m ASL at the close-by Mt. Zugspitze, will be conducted during the meeting. It will comprise a demonstration of the ground based snow,

water vapor, liquid water, temperature and aerosol measurement facilities, which are available for ground validation. Attendees are invited to demonstrate their own ground measurement systems where practical to transport or satellite–based measurements when overpasses are available. Assistance will be given to those interested in transporting their instruments up and back down the research station if they wish to participate.

The workshop will be convened the morning of Wednesday, March 30, 2011 and end on the afternoon of Saturday, April 2, 2011. A registration fee of $300 will be charged. The workshop will be held at the Hotel am Badersee in Grainau, where a set of 50 rooms has been blocked for the conference. Single rooms are available at Euro 82,- per night.

Outline of Topic Areas

1. Applications
    - Water Cycle Budget
        i. middle latitude mountain ranges
        ii. Polar latitudes
        iii. High latitudes
    - Hydrology
        i. Snowpack, storage
        ii. Snowmelt
    - Snowfall Forecasting
        i. NWP forecasts driven by satellite measurements
        ii. Nowcasting, Short Range Forecasting, Severe weather
        iii. Cloud microphysics modeling
2. Radiative properties of falling snow
    - Particle scattering properties
    - Refractive index of super-cooled liquid water
    - Forward modeling uncertainties
3. Quantitative snowfall measurements
    - Information content of remote sensors
    - Algorithm development
    - Active/passive sensor combination (e.g. CloudSat/AQUA)
    - Setting the stage for Data Assimilation
    - Ground based remote sensing
4. New technology
    - Potential of new sensors: GPM, EGPM, EarthCARE
    - ACE status, design
    - Microwave and sub-millimeter radiometers and radars
5. Validation
    - In-situ techniques
    - Validation requirements for global satellite retrievals
    - High latitude validation sites
    - Ground based remote sensing

- Field campaigns