

Session Titel: Remote Sensing of Land surface

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Abstract:

Remote sensing plays today an important role for bio/geophysical environmental parameter estimation. For examples it is essential in daily/weekly weather forecasting and for routine products such as maps of vegetation status, ice coverage and surface temperature, as well as for creating digital maps and documenting environmental changes such as ozone depletion and the effects of climate change on landmass, oceans and the atmosphere. In addition, Earth observation is used to help protect the environment (e.g. by monitoring the long term and annual biomass changes for the modelling of the carbon cycle), to evaluate findings in the event of international crises and disasters and to provide support measures (e.g. in flood situations). Satellites today provide data for town planning, habitat maps and monitoring tasks in a variety of public, private and security-related areas, for example in optimising agricultural subsidies, expanding mobile phone networks or to support relief efforts in the event of international crises or disasters. Earth and environmental Sciences benefit in a specific way with the description of processes by the increasing number of remote sensing sensors, although in many cases the potentials have yet to be exhausted. In particular, these studies are subjects of this session.

This session calls for contribution from any remote sensing sensor used for the parameterization of different Earth spheres:

- biosphere (forest biomass, forest degradation, disturbance type, crop cultivation, ...),
- geosphere/lithosphere (landslides, geomorphological processes, volcanic eruptions, ...),
- hydrosphere (soil moisture, soil pattern and soil parameters, catchment description, ...),
- cryosphere (ice and snow cover/extend, ice mass balance, permafrost, ...),
- atmosphere (water and gas fluxes, precipitation distribution in time and space, ...),
- human activity and settlements (3D cities, digital elevation models, city extend, land use changes, ...).