



LCLUC-related projects at Tartu Observatory

LCLUC Tartu meeting, August 25, 2010



Overview



- Tartu Observatory
 - located in Tõravere, 20 km south of Tartu
- Main areas of research
 - Astronomy
 - Cosmology
 - Remote sensing and Atmospheric physics
 - Actinometry, UV radiation, climatology, remote sensing of vegetation and water bodies: *theories, models, validation, instrument development*
 - (One of) the largest space-related research center



Staff and projects

- About 10 researchers working on remote sensing-related projects
 - Some part-time
- 6 PhD students
- Of 25 active projects, 15 related to remote sensing





Staff and projects

- Not all LC or LUC related
 - Remote sensing of water bodies
 - Atmospheric correction
 - Space-related activities
 - Funding sources
 - Estonian government directly or via Estonian Science foundation, Enterprise Estonia, EU FP7, other contracts

www.aai.ee, www.etis.ee



Fields of RS projects at TO

- Vegetation (**Forest**) reflectance
 - Theory
 - Models
 - Measurements
 - Scaling
 - Affecting factors (amount, structure, functioning)
- Instrument development, maintenance, calibration
- Land use monitoring (covered by Dr. Urmas Peterson)
- Atmospheric measurements & water RS



Forest reflectance modeling

- Models
 - FRT, various homogeneous codes
 - Model validation in RAMI
- Validation
 - Spectroscopic measurements
 - Structural data
 - Airborne & UAV measurements
 - Satellite measurements



Other projects

- Space technology
- Infrastructure projects
 - Improving research facilities
 - Human resources
 - Infrastructure for technology development
- Social impacts of RS & space research
 - Dissemination of results
 - Finding potential users



Scope of RS projects at TO

- Point measurements
 - Reflectance of samples (leaves to stands)
- Regional (a scene of a medium resolution sensor)
- National (Estonia and immediate surroundings)
- Universal (theoretical studies, physical basis of RS)



Thank you!

- Coffee is available in the lobby / foyer

