NASA Applied Remote Sensing Training Program (ARSET)
Online Course Announcement
Snow Products for Water Resource Management
Instructors: Dr. Thomas H. Painter and Dr. Christian A. Mattmann

Week 1 *Foundations of Remote Sensing, Snow, and Snowmelt*
- Remote sensing sensors in spaceborne and airborne platforms
- Motivation for remote sensing to complement in situ measurements
- Interaction of sunlight with snow surfaces

- Physical controls on snowmelt and how they vary with increases in temperature and dust loading
- Sensitivity of runoff to increases in temperature and dust loading

- Shape of the spectral reflectance of snow
- How to leverage spectral information from the satellite and airborne platforms to derive snow properties.

Week 2 *Snow Products for Water Resources Management Applications:*
Daily Snow Covered Area, Grain Size, and Albedo
- MODSCAG snow covered area, grain size, albedo products
- Uncertainties in product and sensitivity to the satellite and sun geometry
- Product access: Near real-time delivery
- Applications of remotely sensed snow cover for water management

Week 3 *Snow Products for Water Resources Management Applications:*
Daily Dust Radiative Forcing in Snow
- MODDRFS dust radiative forcing in snow product
- Uncertainties in product and sensitivity to the satellite and sun geometry
- Near real-time delivery
- Applications of radiative forcing for water management

Week 4 *Access to NASA Snow products*
JPL Snow Server
- Interactive graphical display of snow products, energy balance, SNOTEL, snow courses
- Comparison of real time data with archived snow perimeters
Web_DAV:
- Access to NASA real time and archived snow products in GeoTIFF
- Access to energy balance data from Western Energy Balance of Snow network
Future NASA snow products for water management
- Continuity of current products for future operational use (MODIS into VIIRS, etc.)

ARSET Online Course: NASA Snow products for water resources management