

NASA Cold Land Processes Mission Workshop

U.S. Army Cold Regions Research and Engineering Laboratory
Hanover, New Hampshire

June 3-4, 2002

AGENDA

MONDAY, JUNE 3

8:00 - 8:30 Sign-in and Registration
8:30 - 8:45 CRREL Welcome and Workshop Introductions

CLPX 2002: Ground Data Collection

8:45 - 9:00 Summary of Intensive Study Area (ISA) Measurements (*Kelly Elder; Rocky Mountain Research Station, USFS*)

9:00 - 9:15 Preliminary Analyses of Intensive Study Area (ISA) Snow Distribution: Spatial Characteristics and Temporal Differences (*Don Cline; National Operational Hydrologic Remote Sensing Center, National Weather Service, NOAA*)

9:15 - 9:30 Boundary Layer Measurements at the CLPX Potter Creek ISA (*Larry Mahrt, Oregon State University*)

9:30 - 9:40 Summary of Local-scale Observation Site (LSOS) Measurements (*Janet Hardy; US Army Cold Regions Research and Engineering Laboratory*)

9:40 - 9:55 Energetics and Spatial Variability of Snowmelt in Sub-alpine Forests: Preliminary Results from the CLPX LSOS (*Aled Rowlands, John Pomeroy; University of Wales*)

9:55 - 10:10 Measurement of Sub-canopy Insolation (*Janet Hardy; US Army Cold Regions Research and Engineering Laboratory*)

10:10 - 10:25 Break

10:25 - 10:40 In situ Biophysical Measurements of Trees at the CLPX LSOS (*Kyle McDonald; NASA Jet Propulsion Laboratory*)

10:40 - 10:55 Relevance of CLPX LSOS Measurements to Forest Canopy Modeling (*Geoff Koenig; US Army Cold Regions Research and Engineering Laboratory*)

10:55 - 11:10 Measurement of Radiometric Signatures of Snow Cover Using the NASDA GMBR-7 Passive Microwave Radiometer (*Richard Armstrong; National Snow and Ice Data Center*)

11:10- 11:25 FMCW Radar Measurement of Dry and Wet Snow Cover at the CLPX LSOS (*Gary Koh; US Army Cold Regions Research and Engineering Laboratory*)

CLPX 2002: Airborne Remote Sensing Data Collection

11:25 - 11:40 Summary of Meso-cell Study Area (MSA) Measurements (*Don Cline; National Operational Hydrologic Remote Sensing Center, National Weather Service, NOAA*)

11:40 - 12:00 Observations of Snow Cover during CLPX 2002 using Airborne Polarimetric Radar (POL SAR) and Interferometric Radar (TOPSAR) (*Yung Ling Lou; NASA Jet Propulsion Laboratory*)

12:00 - 1:00 Lunch (On-site)

CLPX 2002: Airborne Remote Sensing Data Collection, cont.

1:00 - 1:15 Observations of Snow Cover during CLPX 2002 from the Airborne Ku-band Polarimetric Scatterometer (POLSCAT) (*Simon Yueh; NASA Jet Propulsion Laboratory*)

1:15 - 1:30 Observations of Snow Cover during CLPX 2002 with the Polarimetric Scanning Radiometer (PSR) (*Marion Klein; NOAA Environmental Technology Laboratory*)

1:30 - 1:45 Observations of Snow Pack Liquid Water using Airborne GPS (*Steve Katzberg; NASA Langley*)

1:45 - 2:00 Airborne Measurement of Snow Water Equivalent using Low Altitude Gamma Radiation Detection (GAMMA) (*Don Cline; National Operational Hydrologic Remote Sensing Center, National Weather Service, NOAA*)

CLPX 2002: Satellite Remote Sensing Data Collection

2:00 - 2:10 Summary of Satellite Measurements Collected in CLPX 2002 (*Bert Davis; US Army Cold Regions Research and Engineering Laboratory*)

2:10 - 2:25 Examples of MODIS Data for the CLPX 2002 Large-scale Study Region (*Bert Davis; US Army Cold Regions Research and Engineering Laboratory*)

2:25 - 2:45 Airborne and Spaceborne Optical Hyperspectral Remote Sensing of the CLPX Study Areas (*Tom Painter; University of Colorado*)

2:45 - 3:00 QuikSCAT Observations of the CLPX Study Region (*Kyle McDonald; NASA Jet Propulsion Laboratory*)

3:00 - 3:15 Break

Space-based Measurement of Cold Land Processes: Current and Planned

3:15 - 3:30 Expectations for Snow Measurement from the Recently Launched Advanced Microwave Scanning Radiometer (AMSR-E) (*Al Chang; NASA Goddard Space Flight Center*)

3:30 - 3:45 Plans for the NPOESS Conical Microwave Imager/Sounder (CMIS) (*Narinder Chauhan; NPOESS Integrated Program Office*)

3:45 - 4:00 Status of Proposed ESA Ku-band SAR for Snow Studies (*J.C. Shi, University of California*)

4:00 - 4:15 Proposed NASA Hydrospheric States Mission (HYDROS) (*Kyle McDonald; NASA Jet Propulsion Laboratory*)

4:15 - 4:35 U.S. Synthetic Aperture Radar (SAR) Activities and Issues (*Craig Dobson; NASA Headquarters*)

4:35 - 4:50 Cold Land Processes Mission Concepts and Planning Schedule (*Don Cline; National Operational Hydrologic Remote Sensing Center, National Weather Service, NOAA*)

4:50 - 5:00 Questions/Discussion

5:00 Adjourn for the Day

TUESDAY, JUNE 4

8:00 - 8:30 Sign-in and Registration

8:30 - 8:40 Workshop Introduction

CLPX Data Management

8:40 - 9:10 CLPX 2002 Data Sets: Status, Availability and Access Options (*Mark Parsons, National Snow and Ice Data Center*)

9:10 - 9:25 Discussion: Concepts for Web Access to CLPX Data

Education and Outreach

9:25 - 9:45 Education and Outreach Possibilities for the Cold Land Processes Mission (*Blanche Meeson, NASA Headquarters*)

Review of Plans for CLPX 2003

9:45 - 10:00 ISA Ground Data Collection Plans (*Kelly Elder; Rocky Mountain Research Station, USFS*)

10:00 - 10:15 LSOS Data Collection Plans (*Janet Hardy; US Army Cold Regions Research and Engineering Laboratory*)

10:15 - 10:30 Break

10:30 - 10:45 Micrometeorological Data Collection Plans (*Paul Houser; NASA Goddard Space Flight Center*)

10:45 - 11:00 Considerations for Measurement of Snowfall in Mountainous Regions (*Danny Marks, USDA Agricultural Research Service*)

11:00 - 11:15 Airborne Data Collection Plans (*Don Cline; National Operational Hydrologic Remote Sensing Center, National Weather Service, NOAA*)

11:15 - 11:30 Satellite Data Collection Plans (*Bert Davis, US Army Cold Regions Research and Engineering Laboratory*)

11:30 - 11:45 Discussion: 2003 Data Collection Gaps, Augmentation Issues; New Science Starts

11:45 - 12:00 Instructions for Afternoon Technical Workshop

12:00 - 1:00 Lunch

Technical Meeting Agenda, 1:00 - 5:00

Strategic Plan for Improving Understanding and Prediction of Cold Land Processes

CLPX Data Management

Education and Outreach

Science Status/Research Needs

Technology Development Requirements

Applications Development

Socioeconomic Benefit Analysis

Bridging - Polar and Sea Ice Communities

Partnership Development - Domestic and International

CLPX 2003 Issues

Future Cold Land Processes Experiments

Future Working Group Workshops and Meetings