



"Our environment is our future"

RESEARCH COLLOQUIUM SERIES

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Assessing global snow water equivalent estimates from space using satellite microwave-based observations: are we any closer to characterizing northern hemisphere seasonal snow accumulation?

For nearly 30 years, satellite passive microwave instruments have been used to observe the Earth's surface with an aim of gaining insight into the water mass and energy status of the planet. Snow accumulation is one of the most seasonally-dynamic hydrologic water stores and its accurate assessment is critical for effective water resource management and for assessing the nature of changes to water cycle dynamics. To address the fundamental question: "to what extent can we use passive microwave observations to estimate seasonal snow accumulation, particularly snow water equivalent?", two key elements need to be considered: first, what are the most promising passive microwave algorithm approaches for estimating global SWE, and second, what independent data are appropriate to test satellite passive microwave estimates? In this presentation the efficacy of selected global algorithms applied to Advanced Microwave Scanning Radiometer - EOS observations is assessed for northern hemisphere winter seasons and considers whether we are any closer to characterizing northern hemisphere SWE. Finally, the presentation describes new approaches to satellite-based observations and ground-based measurements that will help us to improve our estimation skill.

Friday

Sept 4, 2009

3:30 - 4:30

LECTURE THEATRE

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LIGHT REFRESHMENTS
SERVED AT 3:20 PM