

UC SANTA BARBARA
Department of Earth Science

Speakers Club

WEBB 1100 • THURSDAY JAN 10th. • 2:00 PM

BACK IN
WEBB HALL
(Yay Shannon!)

Snow albedo

how it varies, how to measure,
and why you should care

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Like most processes at Earth's surface, absorbed solar radiation drives the energy balance of a snowpack. The absorption depends on the incident solar radiation, but also on the snow albedo, whose temporal and spatial variations are driven by grain growth and dark contaminants like dust or soot. The rate of snowmelt affects the duration of processes on the underlying material; for example, glaciers melt faster when the overlying snow disappears earlier in the summer. Remote sensing of the albedo of snow in the mountains, where the pixels are often only partially covered, is one of the two most important problems in mountain snow hydrology, along with the measurement of snow water equivalent.