Toward Standardization in Methods and Techniques for Measuring & Monitoring Snowcover Albedo

Christopher C. Landry – Center for Snow and Avalanche Studies
Thomas H. Painter – University of Utah, formerly at NSIDC
Andrew P. Barrett – National Snow and Ice Data Center
Maureen Cassidy – University of Colorado
Shadow array design courtesy ASRB Program, MeteoSwiss

80.6 mph peak gust to-date
IR temp mapped to $LW_{\text{out}}$

$SW_{\text{out}}$

$\text{NIR-SWIR}_{\text{out}}$
Slope & Aspect Correction to Albedo Measurement
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\[
\cos \theta_0 = \cos \theta_{sun} \cos S + \sin \theta_{sun} \sin S \cos (\phi_{sun} - E)
\]

\( S = \text{slope} \)

\( E = \text{aspect} \)
‘Event’ Bulk Sampling – 0.5 m²
Near-Surface Gravimetric Sampling – Mass at Depth

0.05 m\(^2\)

10 samples
3 cm thick
Radiative Forcing by Absorption at Depth
Challenges – Riming, Frost, New Snow
Challenges – Surface Roughness, Masts
Albedo Variations – Degrade/Refresh/Degrade

Dust Deposition Events (grey bars)
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