Maritime Snow
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• Important questions:
  • How does heterogeneity affect satellite observations
  • What are the characteristics of maritime snowpack cycles of accumulation and melt?
  • How does a high wind / high temperature / high precipitation environments effect the range of snow densities found in maritime snow?
Lake Effect – Maritime Snow in Western NY

• Location:
  • Lake effect snow within 50 mi
  • Flat elevation and low forest cover
  • Avoid compounding effects
  • Less urban

• Existing infrastructure
  • Mesonet snow network (University of Albany)
  • SUNY Geneseo
  • University of Buffalo
Methodology

• **Sampling strategy:**
  • Emphasize high temporal sampling due to constant evolution of snowpack
    • Weekly measurements for an entire season to capture snowpack evolution
  • UAV (allows more frequent measurements)
    • Structure from motion/LiDAR – Snow Dept
    • Hyperspectral – Broadband Albedo

• **Snow pits:**
  • For structure (ice layers, grain size)
  • Density

• Satellite possibility : C-Band on Sentinel