Snow Radar Tools Applicable for Sea Ice and SUMup Update

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Land Ice Pick Algorithm

Land Ice Algorithm Characteristics:
• Surface pick is 4 times air noise (>Mean 1000 bins *4)
• Band pass filter is used to determine peaks (5x5 low pass 50x5 high pass)
• ¼ of the peak width is used as pick and connected using leading edge
• ~50 m along track resolution

Sea Ice Applications:
• Matlab GUI interface is a powerful tool for visually/mannually adjusting picks
• Preprocessing Code can be adjusted to Nathan’s algorithm if GUI interface is useful

Contact Lora Koenig if you are interested in Matlab Code including GUI. It will be posted in final version ~June 2014.
GUI and Picks over Sea Ice

The Good
The Bad
The Bad, Close up
The Intermittent
SUMup Snow on Sea Ice and Density Dataset

Over 0.8M points in SOSI dataset which includes:
- Finnish Meteorological Institute, Sea Ice Observers data 1991-2012, Provided by Eero Rinne
- IceBridge Dataset- Kurtz et al. 2012.
- IceBridge Dataset- Panzer is Coming Soon.

~110 Density measurements over sea ice (SIMBA)

Under Events from NASA Cryospheric Science Laboratory Page
Example of SOSI data

Please submit any relevant SOSI or Density data you have. Data templates are on-line.

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