

Permafrost Dynamics Observatory (PDO)

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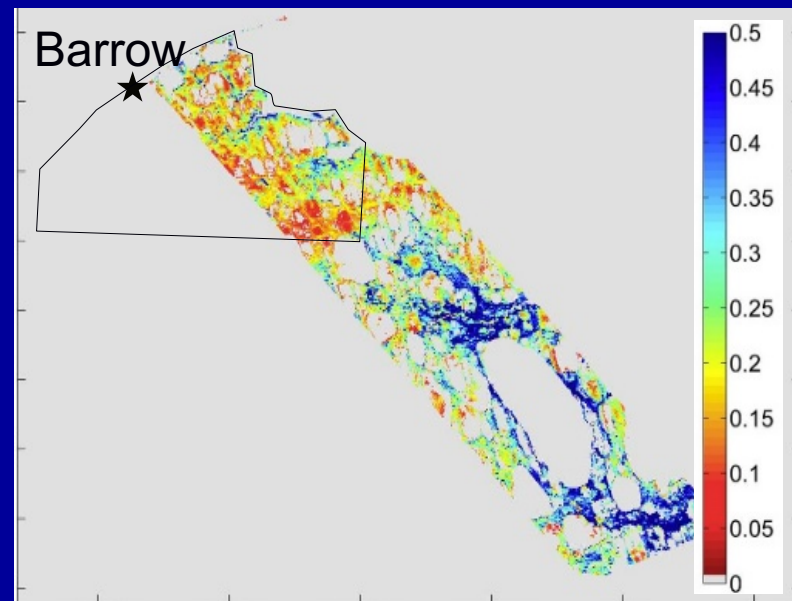
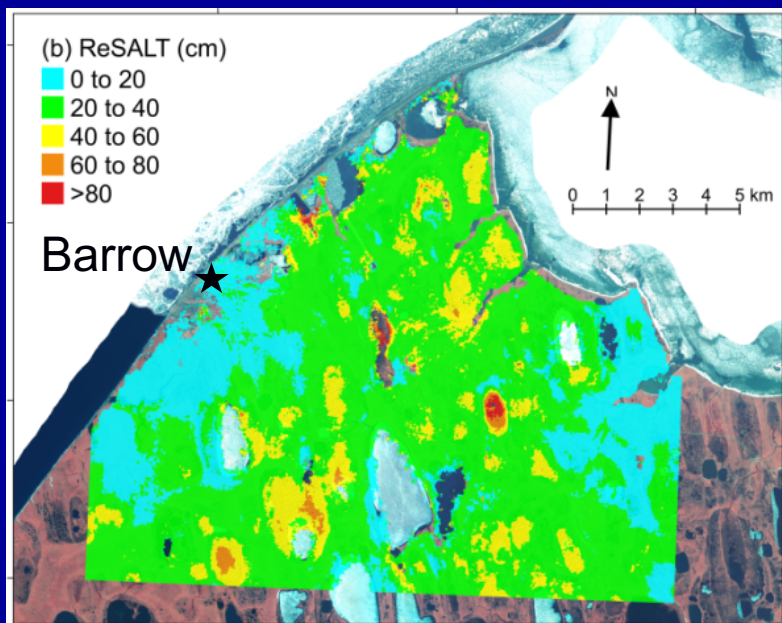
Objective 1

- Combine InSAR and backscatter to measure soil moisture and ALT

ReSALT: ALT from InSAR



AirMOSS: Soil Moisture



Objective 2

- Validate ALT and soil moisture using Ground Penetrating Radar (GPR) and Probing
 - Road-intercept Strategy
 - 4 sites in Alaska, 4 in Canada

GPR Equipment



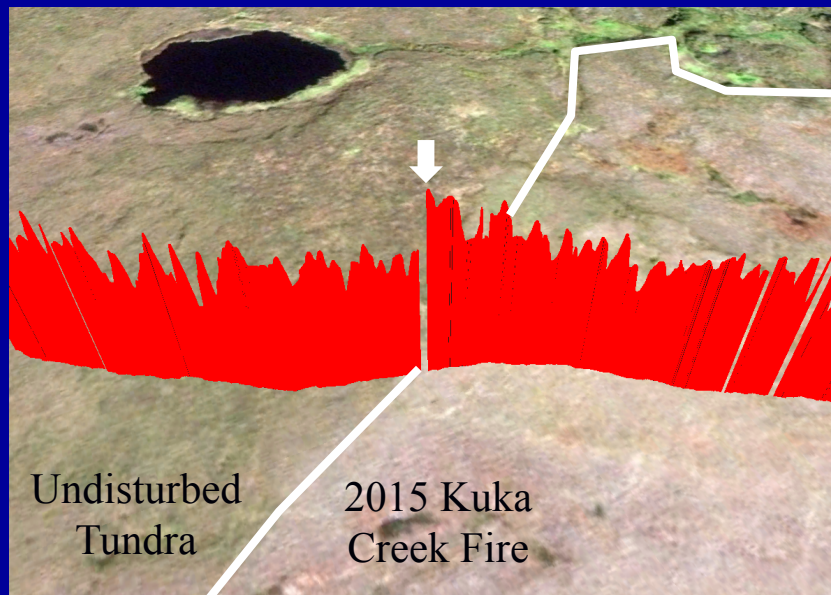
GPR Survey (YK Delta)



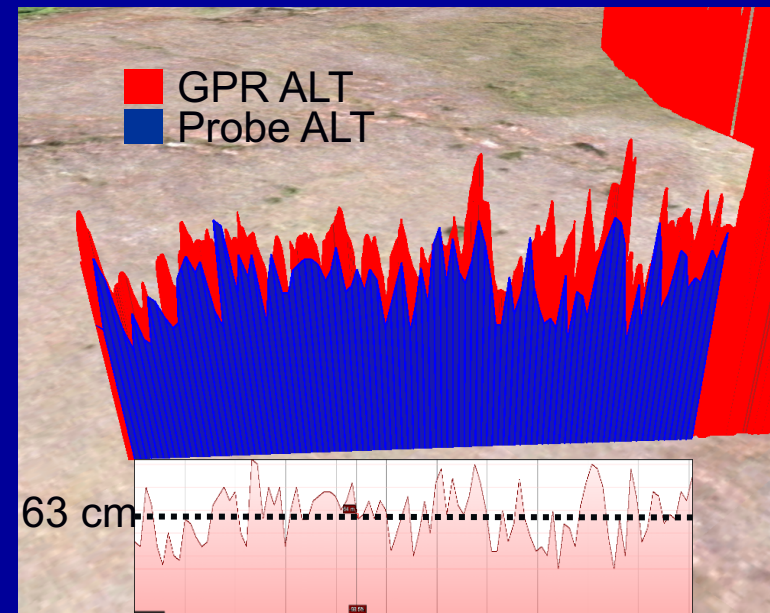
Ground Penetrating Radar (GPR)

- 2-3 km GPR per site; 10% probe soil moisture

GPR Survey (YK Delta)



Probe Survey (YK Delta)



Requirements

- Airborne
 - North-South and East-West transects
 - Fly over Fire zones
 - Fly over sites with validation data
- GPR Validation
 - Share data
 - Share transportation
- Data
 - UAVSAR, AirMOSS, LVIS
 - ALOS, RadarSat, Sentinel