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**
- Antenna
- Controller
- Computer

**GPR Survey (YK Delta)**
- ‘Horse’
- ‘Driver’
- ‘Mule’
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