Fire group, gaps-1

• Spatial or ecotypic gaps:
  • YK Delta Fires (Sue Natali)
  • Yukon and Rockies lodgepole forests—poised to expand north
  • Canadian tundra—shubby!
  • Latitudinal treeline in Canada (Dempster)
  • Post-fire successional dynamics in NWT (northern) forests, including
    taiga plains and shield

• Historic data on fire regime (Paleon, Higuera); provides
  regional context for understanding regime change

• Consistent mapping of vegetation across boarders, including
  above-ground fuels

• Consistent mapping of organic soil layers across boarders,
  including soil fuels
Fire group, gaps-2

• Linking fire patterns and animals (caribou-lichen, moose-forage)

• Smoke and its myriad of effects on climate, aircraft, people, yellow-cheeked voles

• Effects of fire on ecosystem carbon balance and permafrost carbon vulnerability to decomposition

• Mapping long-term fire effects on permafrost (Climate-protected versus ecosystem protected permafrost).

• Post-fire successional trajectories, especially in Canada (grass?)

• Fuel management and biofuel harvest effects on permafrost integrity and successional trajectories

• Organic soil moisture data data connected to fuel moisture and scaled to the ABoVE region, indices used for decision making
Airborne Hopes and Dreams

- We will draw our polygons for field sites onto map
  - Focus on our current field sites
- Radar, LiDAR, hyperspectral, various permafrost and active layer indices
- GiLITE second pass on Denali tundra and early post-fire sites
- Best target region for post-fire forest successional dynamics: Northwest Territories taiga plains and shield
  - Rationale: we know very little about post-fire vegetation and C dynamics
  - Lots of field data on dynamics in Interior Alaska forests, Boreas sites further south
- Noatak and Seward Region are also a good tundra fire target: rich history of field data, many ages and repeat burns