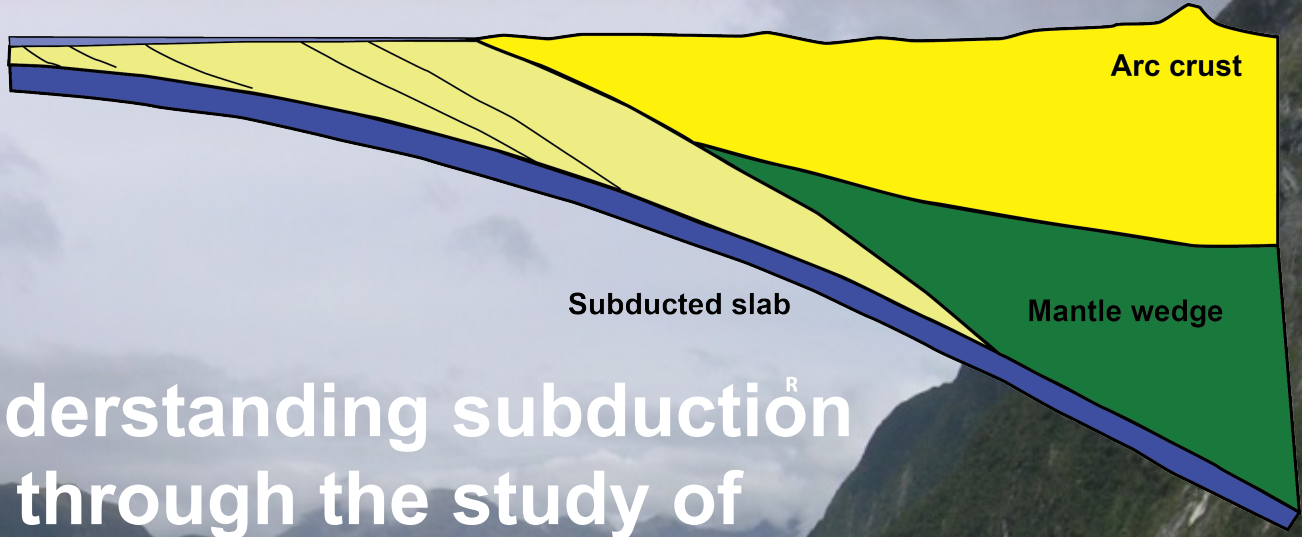
ExTerra



Understanding subduction through the study of exhumed terranes

ExTerra Field Institutes

- Collective research on exhumed rocks
- Targeted sample collection
- Sample sharing and management
- Explore key scientific questions
- Aim for diversity in participants: non-field geologists, early stage researchers

ExTerra and GeoPRISMS

- How does deformation across the subduction plate boundary evolve in space and time, through the seismic cycle and beyond?
- How do volatile release and transfer affect the rheology and dynamics of the plate interface, from the incoming plate and trench through to the arc and backarc?
- **How are volatiles, fluids, and melts stored, transferred, and released through the subduction system?**
- **What are the geochemical products of subduction zones, from mantle geochemical reservoirs to the architecture of arc lithosphere, and how do these influence the formation of new continental crust?**
- What are the physical and chemical conditions that control subduction zone initiation and the development of mature arc systems?

ExTerra Science Questions

- Arc crust
  - What are the products of subduction that influence the formation and evolution of the continental crust?
  - What are the major fluxes into and out of the continental crust over geologic time?
  - How is magma generated, stored, and transported within the crust?

******For more details see white paper******
http://geoprisms.org/exterra/