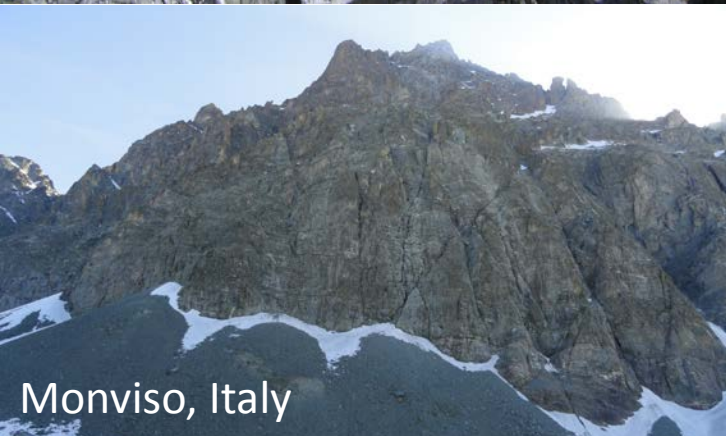
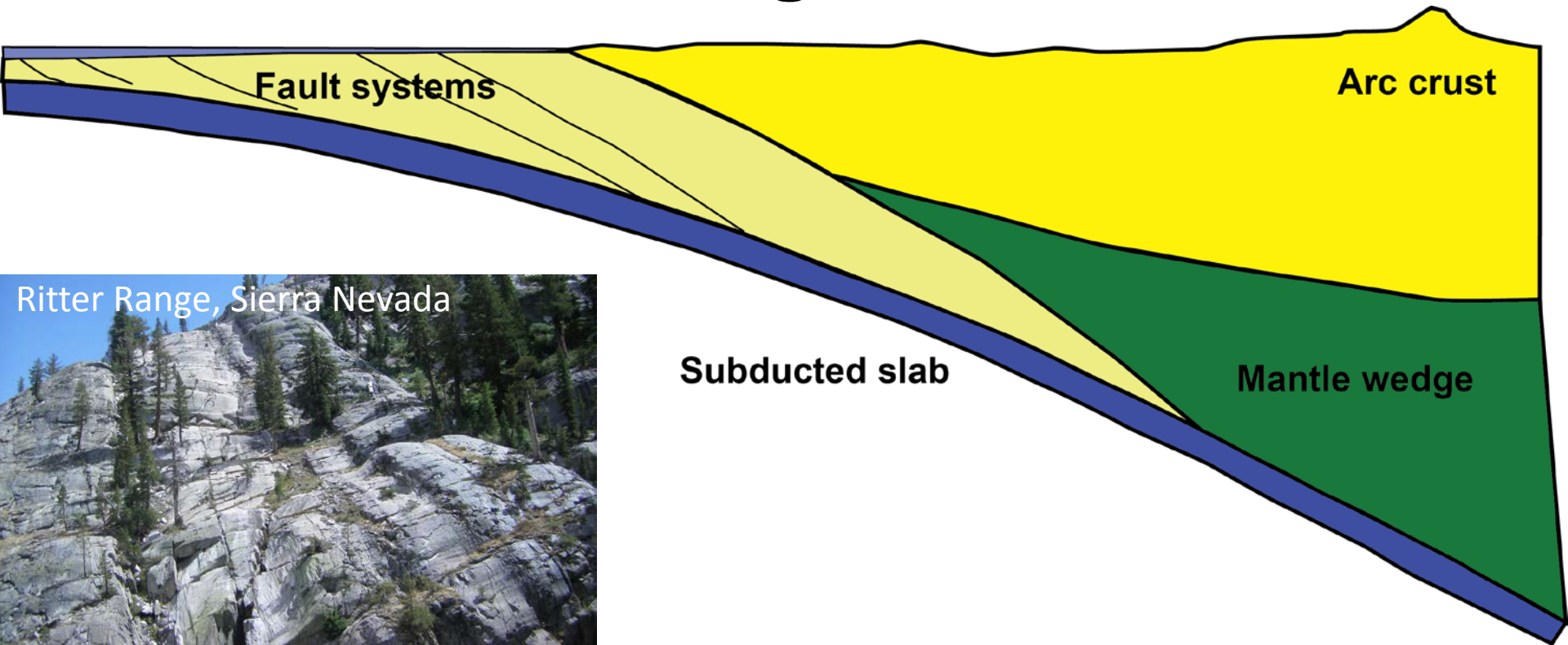


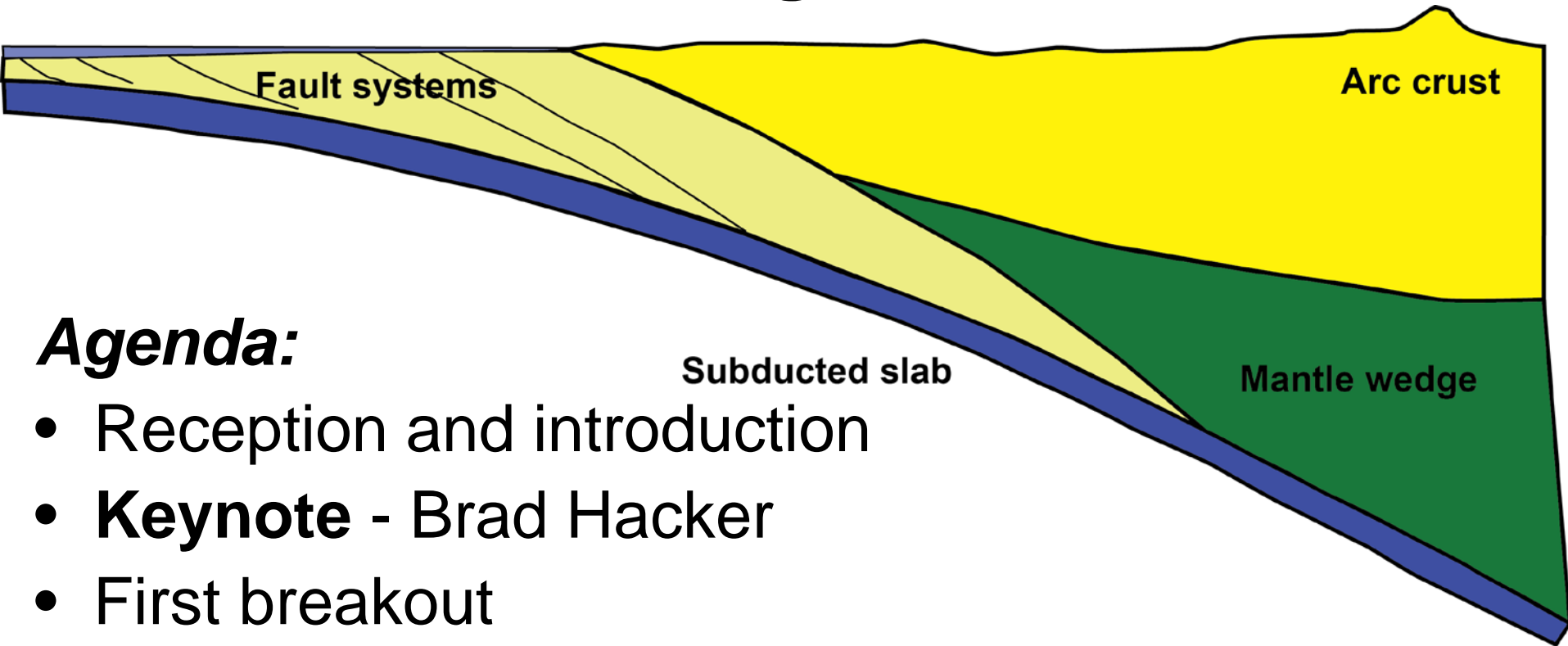
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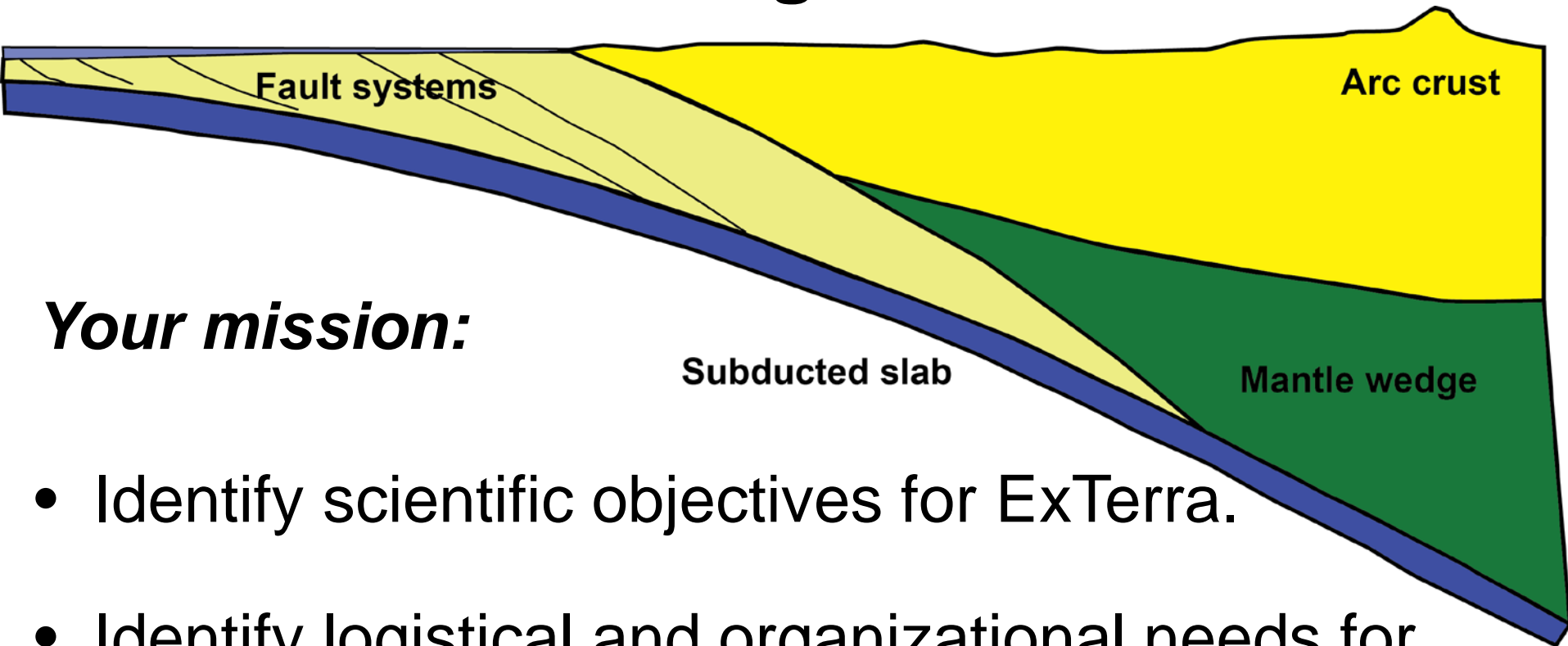


Agenda:

- Reception and introduction
- **Keynote** - Brad Hacker
- First breakout
- **Sample and data management** - Maureen Feineman
- Second breakout
- Synthesis

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Your mission:

- Identify scientific objectives for ExTerra.
- Identify logistical and organizational needs for ExTerra.
- Think about what you can do *with* others and *for* others.

GeoPRISMS

Draft Implementation Plan

5. Comparative and 7 **“Living Document”**

Theme 1: Identifying Controls on Fault Slip Behavior and Deformation History

Online discussion forum after the workshop for discussion and contributions to workshop white paper:

www.geoprisms.org

Stay tuned!

B. Metamorphism, melting and fluid/melt migration in the mantle wedge

C. Arc crustal architecture and evolution

Theme 5: Subduction Initiation

GeoPRISMS

Key Questions

- 1) *What governs the size, location and frequency of great subduction zone earthquakes and how is this related to the spatial and temporal variation of slip behaviors observed along subduction faults?*
- 2) *How does deformation across the subduction plate boundary evolve in space and time, through the seismic cycle and beyond?*
- 3) *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?*
- 4) *How are volatiles, fluids, and melts stored, transferred, and released through the subduction system?*
- 5) *What are the geochemical products of subduction zones and how do these influence the formation of new continental crust?*
- 6) *What are the physical and chemical conditions that control the initiation and development of subduction zones, including subduction initiation and the evolution of mature arc systems?*
- 7) *What are the feedbacks between surface processes and subduction zone mechanics and dynamics?*

What can studies of exhumed systems contribute to GeoPRISMS?

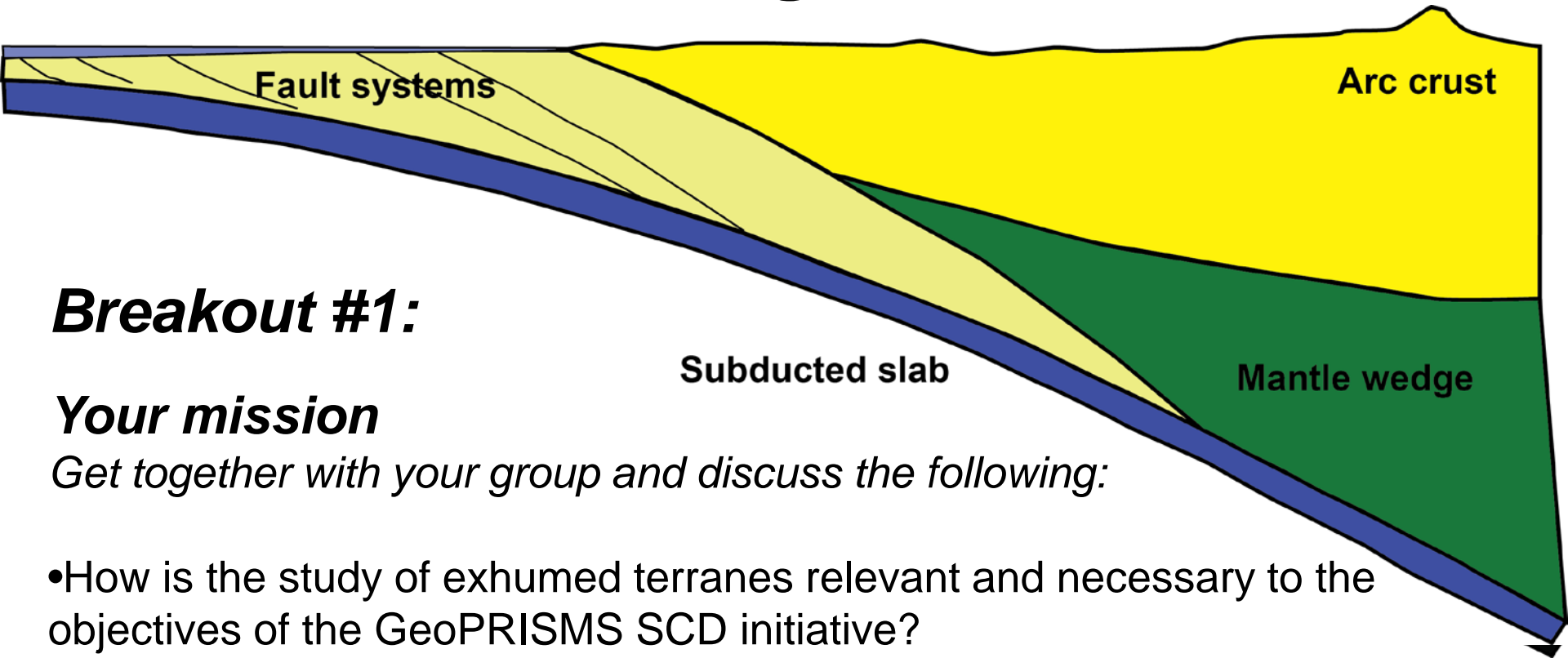
- Organizes individual efforts into major interdisciplinary objectives
 - the whole is greater than the sum of the individuals
- Integrating data from multiple sites allows coverage of a broad range of conditions not observable at a single site
- Links experiments and seismic observation to physical reality
 - Adds components of space and time
 - Do the measurements scale up? grain scale to outcrop scale, outcrop scale to seismically resolvable features, days to millions of years
- Enables coupled study of mechanical and chemical processes
- Allows sample and data collection to be tuned to serve the needs of other groups (geochemists helping seismologists, petrologists helping modelers, etc...)

Scientific Questions

- What are the rates and fluxes associated with fluid and melt production as recorded by interaction with rocks?
- What are the mass transfer processes important for global evolution models as well as concentration of ore metals (societal relevance)?
- How are tremor and slip recorded in the rock record?
- What are the geophysical properties of natural rocks (velocity structure, anisotropy, fabrics) at a variety of scales?
- How is magma formed and stored in the crust, and how does the crust evolve in response?

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Breakout #1:

Your mission

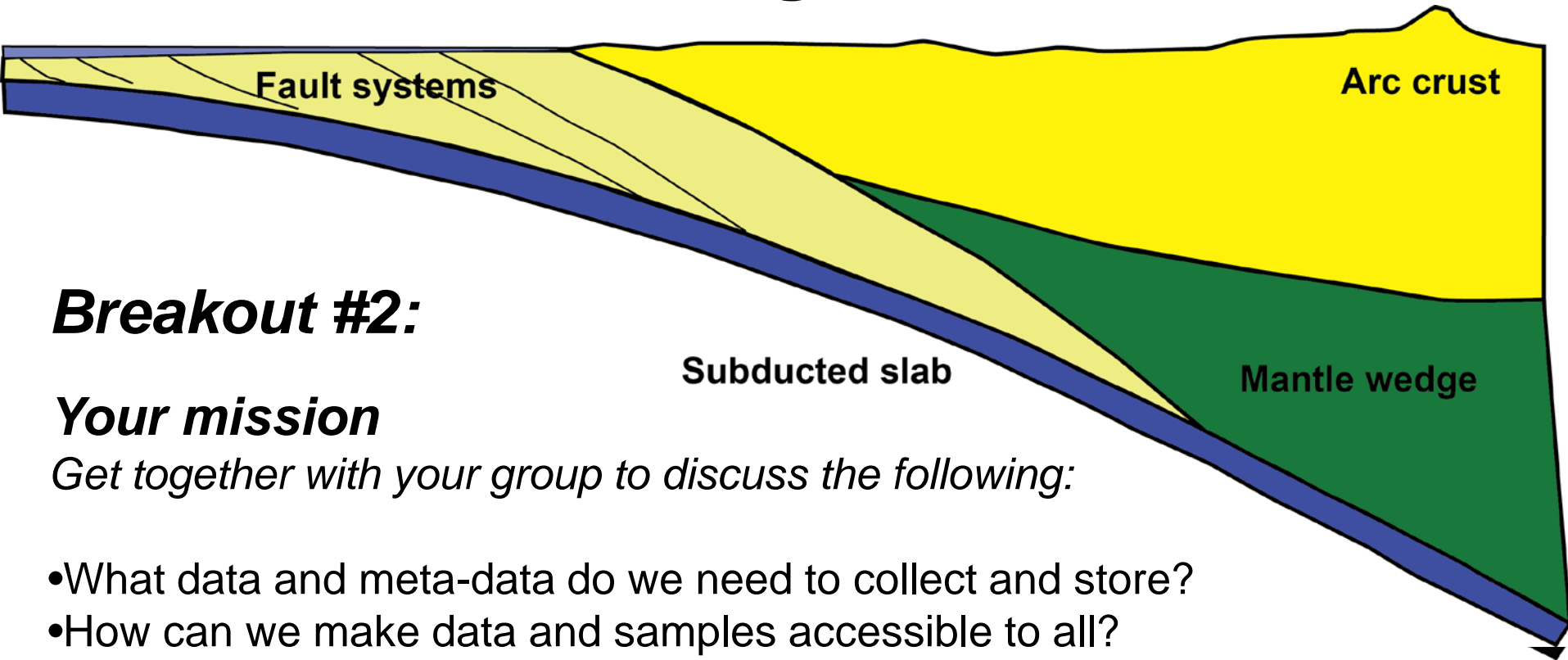
Get together with your group and discuss the following:

- How is the study of exhumed terranes relevant and necessary to the objectives of the GeoPRISMS SCD initiative?
- What critical scientific questions can we address using exhumed rocks/terranes?
- How can field geologists interface productively with experimentalists, seismologists, and modelers?

Report back!

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Breakout #2:

Your mission

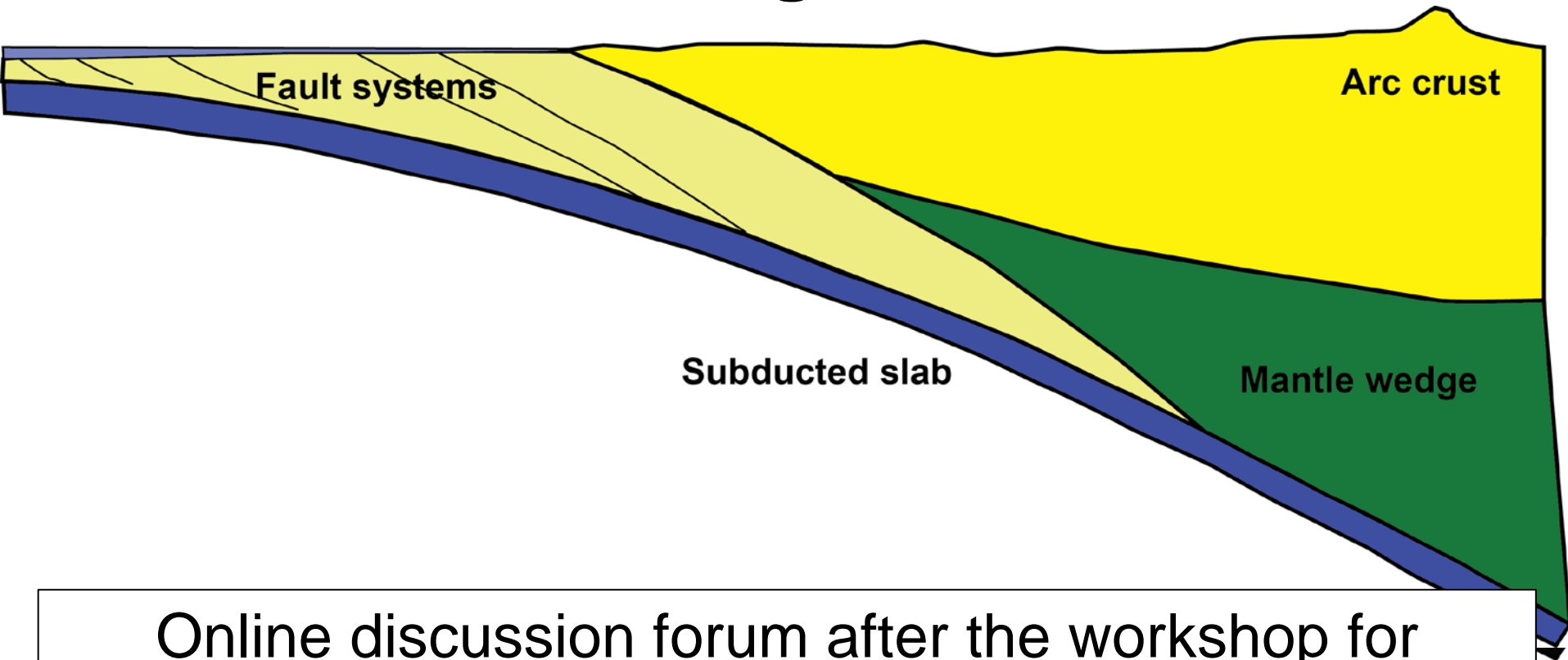
Get together with your group to discuss the following:

- What data and meta-data do we need to collect and store?
- How can we make data and samples accessible to all?
- Is there a need for a physical curated sample repository?
- Should we identify key sites for collaborative field efforts? If so, which ones?
- What other efforts (e.g. workshops, fieldtrips) would facilitate collaboration?

Report back!

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Stay tuned!