Follow the fluids: Integrating multi-disciplinary observations of deep-sea hydrothermal systems
AGU session proposal ID: 8474

Dispersal (particles, microbes, ...)
Tidal forcing
Heat, Mass and chemical fluxes
Associated ecosystems:
- microorganisms
- metabolic processes
- larvae
Vent dynamics:
- fluid chemistry
- temperature
- velocity
Permeability structure
Faulting
Plumbing system
Fluid-Rock interactions
Phase separation
Deformation and changes in brittle-ductile zone
Magma chamber geometry and dynamics

Global ocean
Hydrothermal plume
Recharge
Reaction Zone
axial melt lens
Primary Circulation

Focused venting
HT outflow
Mixing with seawater
Diffuse venting
LT outflow
Leaking from HT pipe and mixing with seawater into porous matrix

Tidal Pressure
Tidal Currents

Hydrothermal mound system

>200°C
10-150°C
<10°C