COVIS (Cabled Observatory Vent Imaging Sonar)

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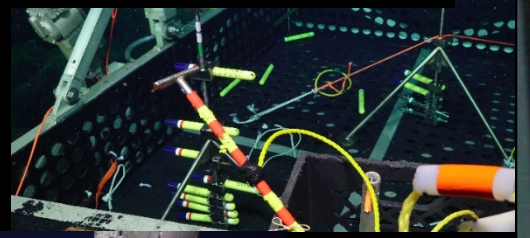
June - July 2019 – ROV Jason on R/V Atlantis

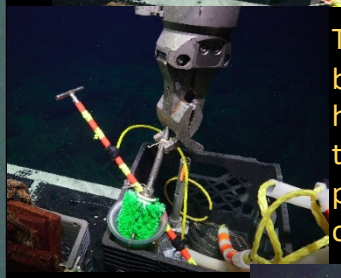
Field Operations

- Legs 2 - AT42-12 cruise – June 17
  - Recovery of COVIS with subsequent repair of frayed cable (J2-1156: 5.5 hours dive time)
    - **OOI, Jason & ship crew did a great job supporting the recovery. Thanks to all for patience with the procedure to determine COVIS orientation.**
  - Recovery of two 1 m tall, self-logging thermistor arrays during CamHD dive (J2_1155: 0.5 hours added dive time)
    - **THANKS to Ben Brand, OOI, and Jason crew for making the thermistor array recovery possible**
- Leg 4 - AT42-12 cruise – July 5 - 6
  - COVIS was (re-)deployed at ASHES vent field (J2-1195: 5.5 hours dive time)
    - **Again a great job from OOI, Jason, and ship crew.**
  - Supporting measurements (J2-1196 - 1197: 18.5 hours dive time)
    - Recovery of one 1 m tall, self-logging thermistor array
    - *In situ* temperature and flow rate measurements using a 2 m tall thermistor array, the JASON/NDSF high temperature probe, and a reference stick
      - **THANKS to Jason crew for extra efforts in recovery the thermistors that fell off the arrays during the initial attempt**
    - Deployed one 1 m tall thermistor array

COVIS on the seafloor

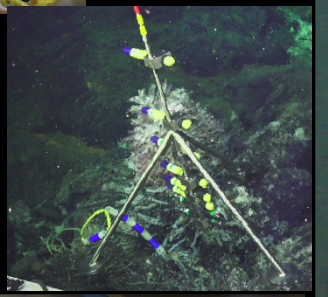
Thermistors falling out of array





Titanium “toilet brush” used to hold thermistors in probe socket on ascent

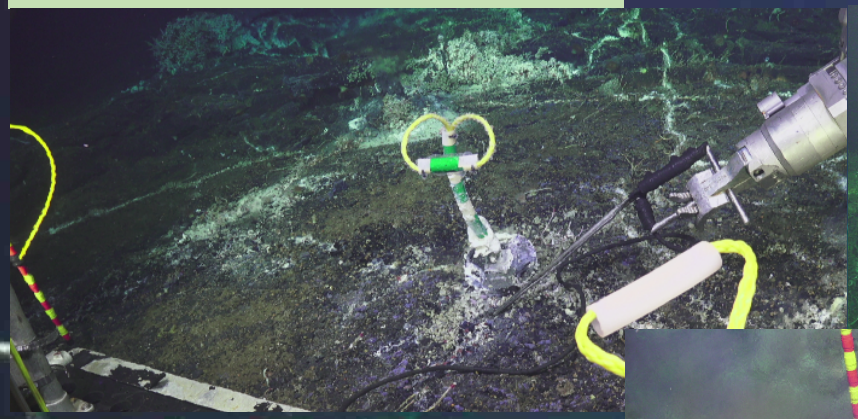
1-m thermistor array on station

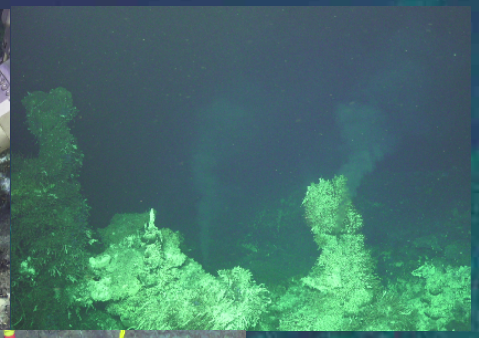


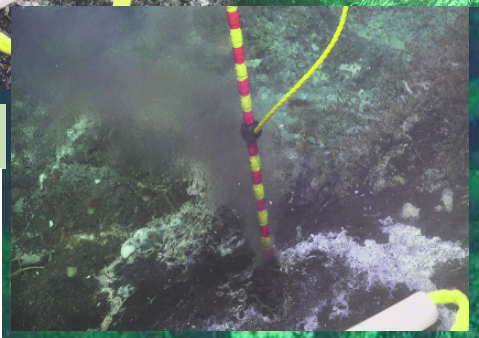
Mid-way during COVIS recovery

COVIS Operations June - July 2019
Temperature and Flow Measurements at ASHES

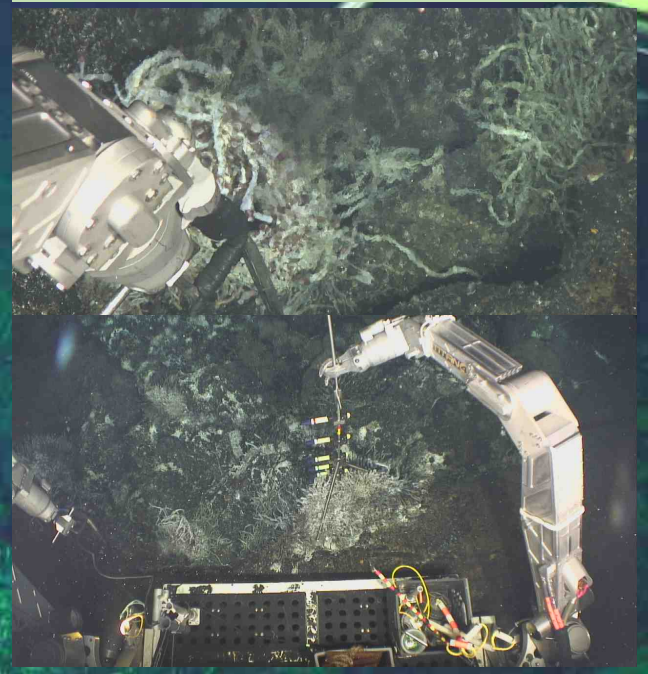
Focused Discharge: Phoenix, Site 3B



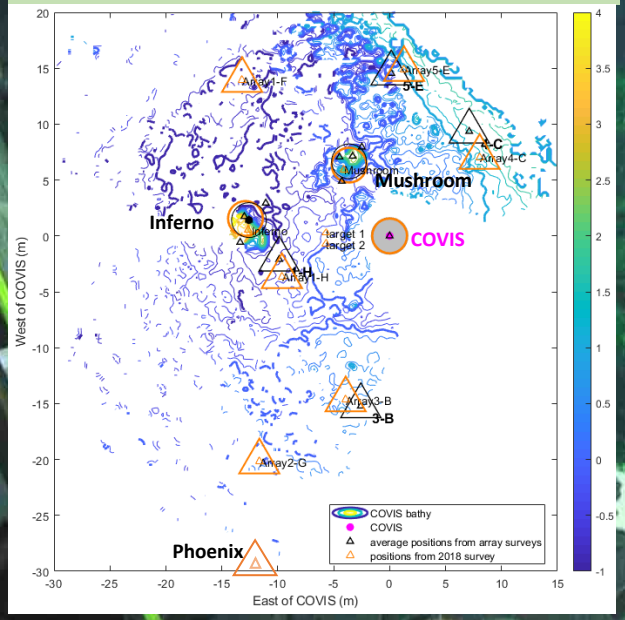




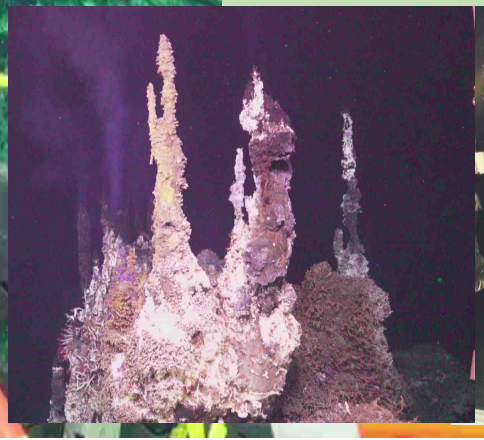
Diffuse Discharge

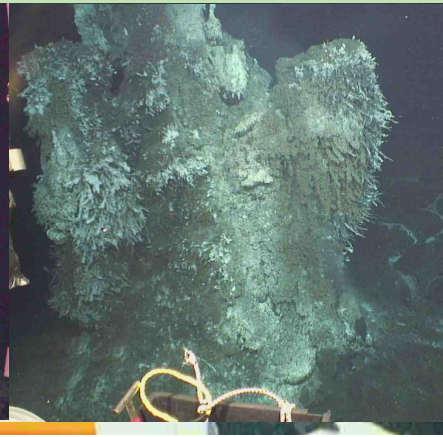


Site Map



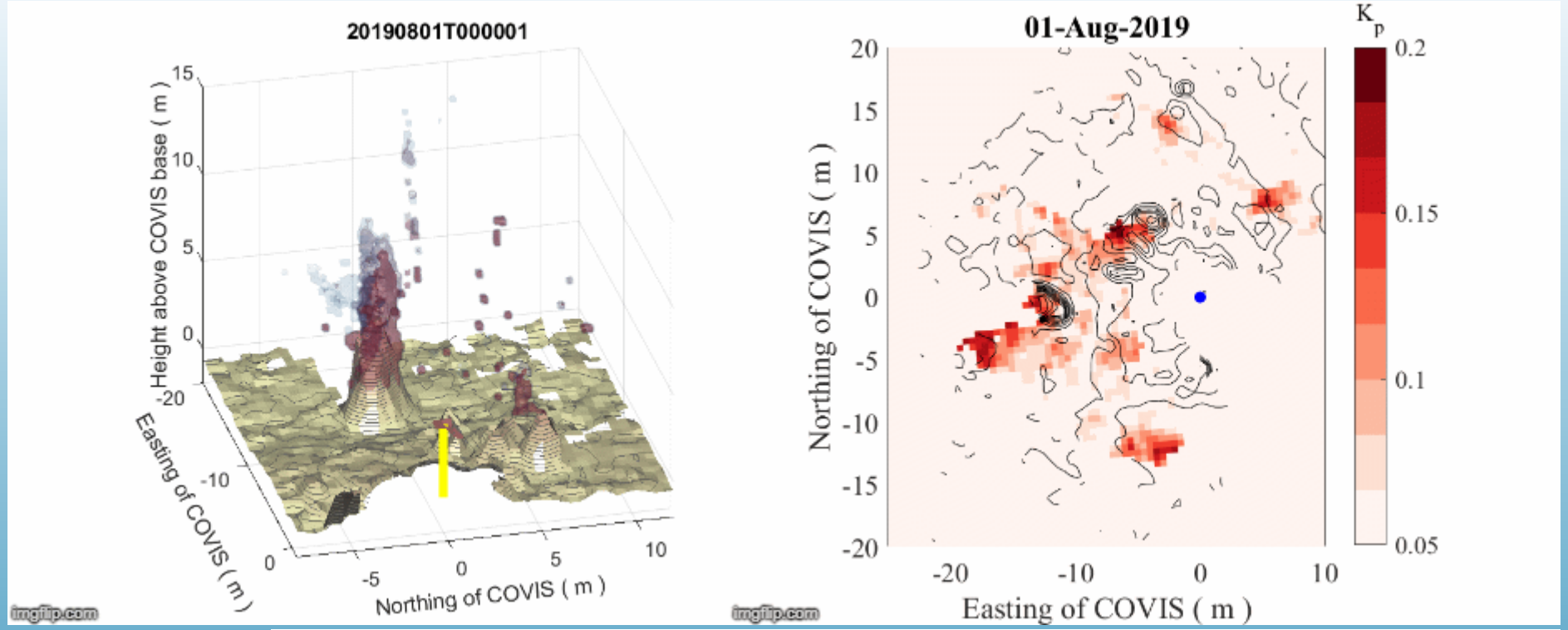
Inferno: spiky chimneys and shaggy mass





COVIS Data Products

Coming soon to a website near you



- Imaging Mode – grids, 3D images, near vent intensity variations
- Diffuse Mode – grids, maps, diffuse area coverage
- Animations!