Monitoring Hydrothermal Discharge at ASHES Vent Field, Axial Seamount using an Acoustic Imaging Sonar

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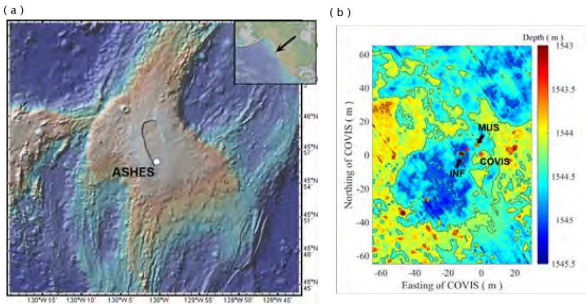
Cabled Observatory Vent Imaging Sonar (COVIS)

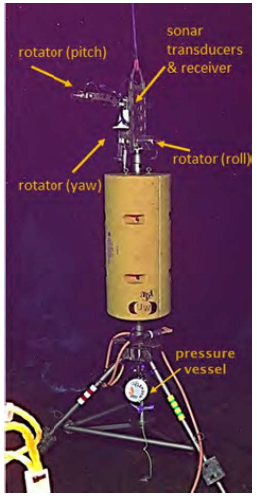


Study Site:

- ASHES vent field in the summit caldera of Axial Seamount in the Northeast Pacific.

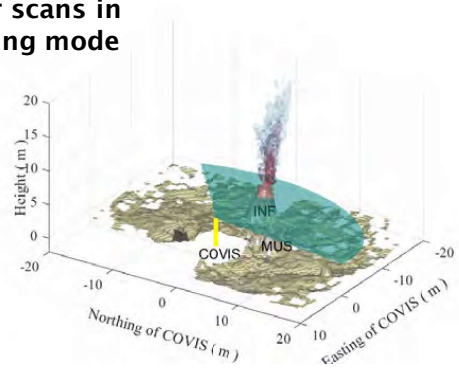
Deployment:

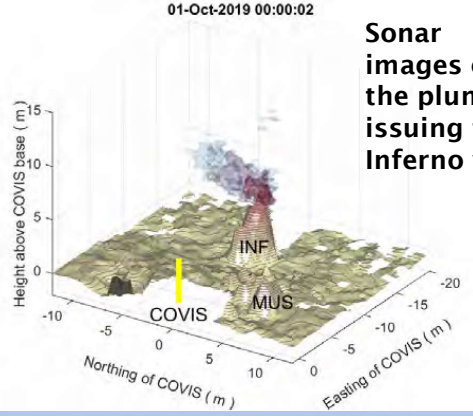
- Installed on the OOI-RCA observatory on Jul 29th, 2018.
- Recovered in Jun 2019 to fix a broken instrument cable.
- Redeployed in Jul 2019 and operating till present.



3-D Imaging of Hydrothermal Plumes

Sonar scans in Imaging mode

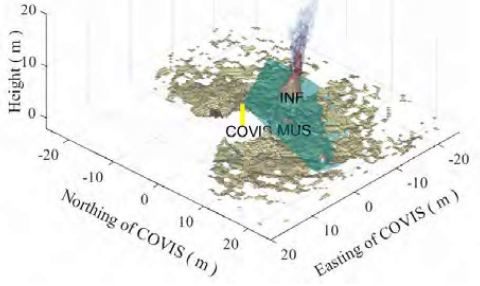


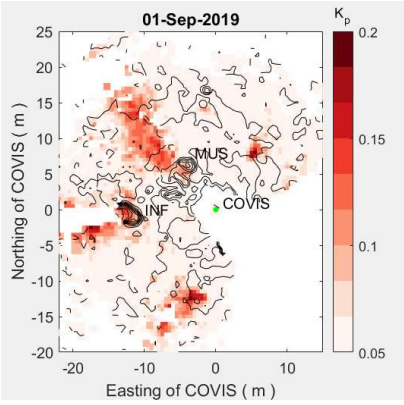


Sonar images of the plume issuing from Inferno vent

2-D Mapping of Vent-source Distribution

Sonar scans in Diffuse-flow mode





Acoustic maps of near-bottom hydrothermal anomalies.

Instrument Website: https://oceanobservatories.org/pi-instrument/cabled-array-vent-imaging-sonar-covis/
AGU iPoster: https://agu2020fallmeeting-agu.ipostersessions.com/?s=1E-55-7F-A0-6E-B0-14-BD-4C-17-92-39-AA-C1-09-8C