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DeSSC - February, 2024

Stian Alesandrini

ROV SuBastian







ROV SuBastian 2022 Rebuild

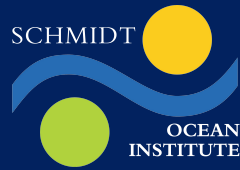
ROV Inspection, Repair & Maintenance (IRM)

- Mechanical, Hydraulic, Electrical & Electronic systems
- Thrusters
- Manipulators
- Valve packs and junction boxes
- Science equipment, tooling & sensors
- Sub motor rewind
- ROV hydraulic pump service

Upgrades

- New 6000m Umbilical
- 4K science camera upgrade to a Sulis Z71
- New ROV light junction boxes
- New manifolds & oil/water separator

ROV SuBastian Science Integrations



2023 Integrations

- Raman Spectrophotometer
- InSAS
- Hydrothermal Fluid Sampler
- Methane Spectrophotometer
- Magnetometer
- Solaris
- Heat Flow Probe
- In Situ Mass Spectrometer
- SUPR Suction Sampler
- Voyis Laser Scanner
- Stereo Cameras
- And many more...

ROV SuBastian Science Integrations

Q Type here to search

ALL CATEGORIES

Dataset

Image(s)

News

Research Publication o...

Technology

Video(s)

White Paper

SUBJECT AREA

Biodiversity

Green Technology

Ocean Sciences



Technology

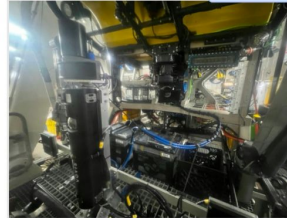
S5K NORBIT WBMS CABLE

Jason Williams

Schmidt Ocean Institute

Details

From Cruise FK230918. Drawn by "NB"



Technology

S5K Voyis Insight Cable

Jason Williams

Schmidt Ocean Institute

Details

From cruise Fkt230918



Technology

In situ mass spectrometer (ISMS)

Jason Williams

Schmidt Ocean Institute

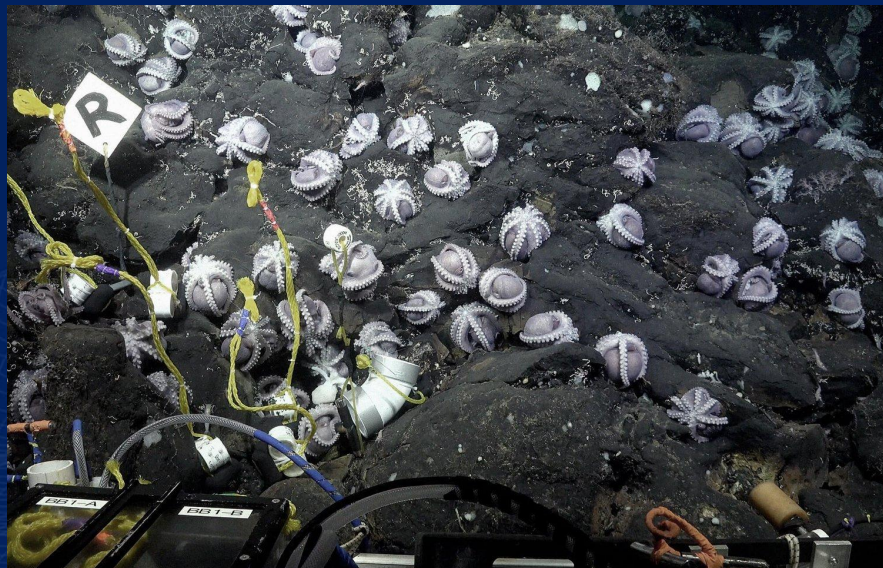
Details

Includes specification and integration of the mass spectrometer

Falkor (too) and SuBastian 2023

- Falkor (too) sea trials
- 9 expeditions with 223 days of science, starting in March
- Traveled 39,280 km
- Mapped 190,025 km²
- 143 dives with ROV SuBastian, totaling 2,053 hours
- 213 CTD casts
- Collected 2,826 samples and 269 TeraBytes of data
- 27 scientific publications and more than 4,000 articles

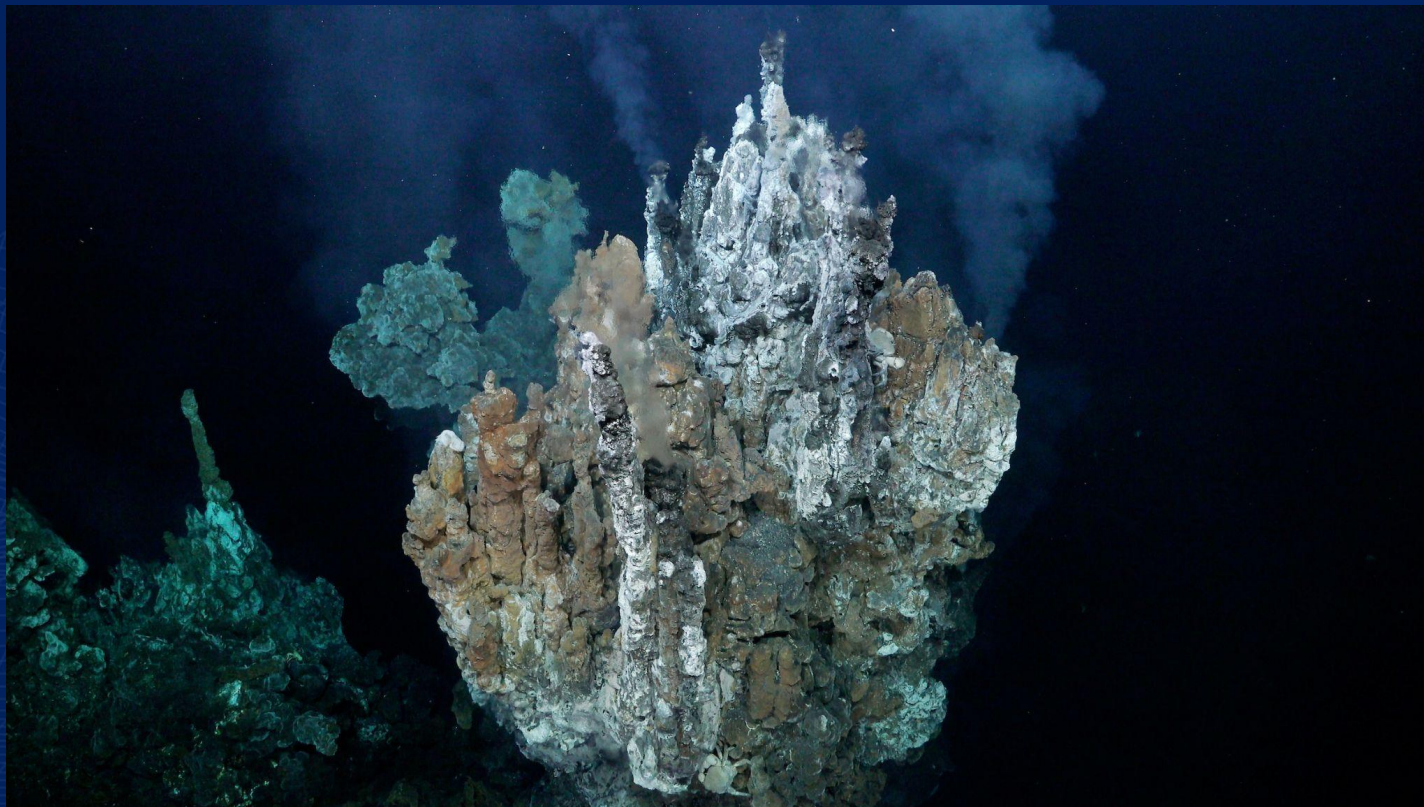
2023 Dives



2023 Dives



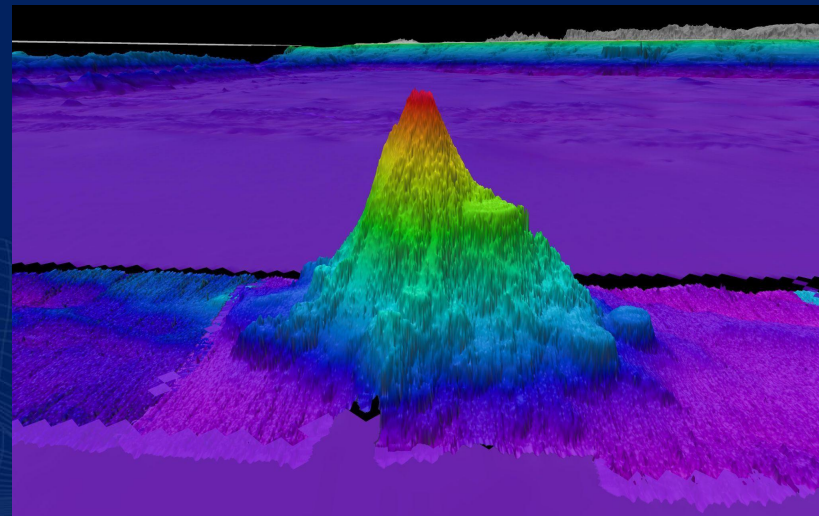
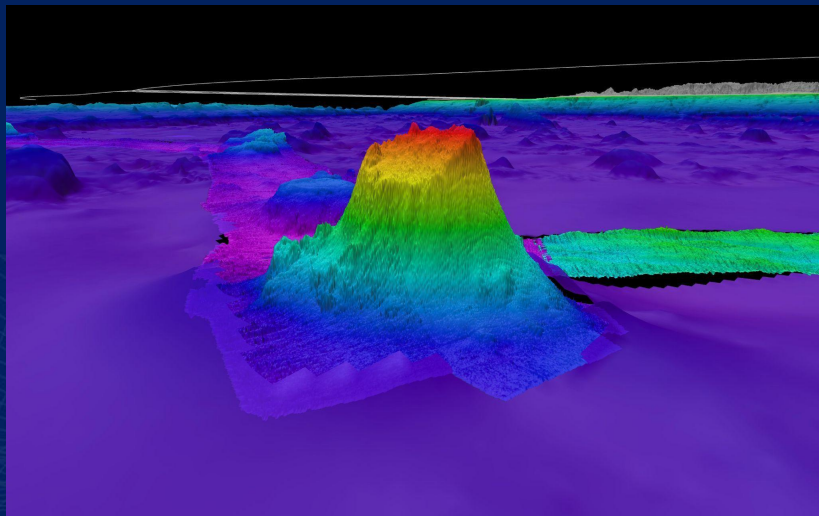
2023 Dives



2023 Dives



Other Deep-Sea Exploration



The Future

- Kongsberg M3 Sonar (Recently Added)
- Replace SuBastian Lights and Add Pan/Tilt
- Deep Sea Lander (In Development)
- SuBastian 6,000m Upgrade?
- AUV?



Thank you



FALKOR (12.8t)

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