

Summer 2021

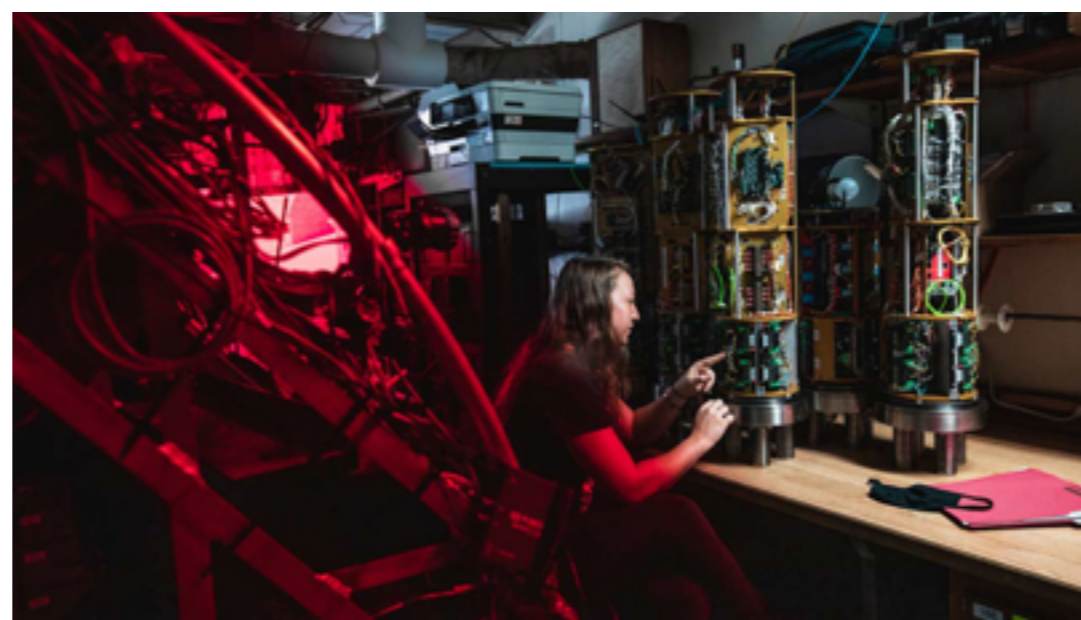
Hello! Welcome to the [National Deep Submergence Facility](#) newsletter. Each quarter we'll bring you updates about *Alvin*, *Jason*, and *Sentry*, the engineering and operations teams that support them, and good reads about science in the field. This is our first newsletter and we'd love to hear what you think.

Alvin reassembly begins



After stripping the sub down to its frame, the fabrication of new custom parts, and comprehensive maintenance on everything else, human-occupied vehicle *Alvin* is starting to take shape again. For a look at the upgrades that will come with the submersible's 6500-meter depth rating, [visit our overhaul page](#).

Around the facility



Meet the *Alvin* 6500 team: Rose Wall

A new engineer on learning the sub from the inside out



Going the distance

Ocean science at the extremes



ROV *Jason* at the East Pacific Rise

A live video from an April dive into a cornucopia of benthic life

Updates

Re-envisioning Data Management for the Facility

Tina Haskins (WHOI) and Vicki Ferrini (Lamont) are leading a data team to develop a holistic plan for NDSF vehicle data. This team will draw members from all vehicle groups and work to meet the needs of science users, operations teams, data managers, and those who want to use NDSF data. Initial goals include: standardizing the way data are structured and labeled, establishing standard metadata, and making sure that things that work for one vehicle are applied to the others. Both Tina and Vicki have extensive experience with NDSF vehicle operations and data, and are involved in disciplinary data curation with the Biological and Chemical Oceanography Data Management Office and Marine Geoscience Data System, both of which play a role in curating data from NDSF vehicles for the community. For more details on their vision for vehicle data, tune into their presentation next week at DeSSC.

New telemetry system for *Jason*

Over the winter, the *Jason* Team integrated an entirely new telemetry system into the vehicle and topside. They also tested a prototype thruster and completed comprehensive maintenance. These updates will give science users faster communication speeds while *Jason* is at the bottom and increase vehicle reliability by making the telemetry system compatible with available parts. *Jason* is presently at sea aboard the R/V *Thomas G. Thompson* for the [Seep Larval Dispersal](#) project.

New sidescan and custom cameras on *Sentry*

During the winter maintenance period, the *Sentry* team outfitted the AUV with a new sidescan sonar from Edgetech and a custom integration of high-resolution cameras for a spring cruise. The team is also rewriting mission control software to enable users to communicate with the vehicle and change course mid-mission and to allow the vehicle to complete surveys in more complex patterns. *Sentry* is also aboard the *Thompson*.

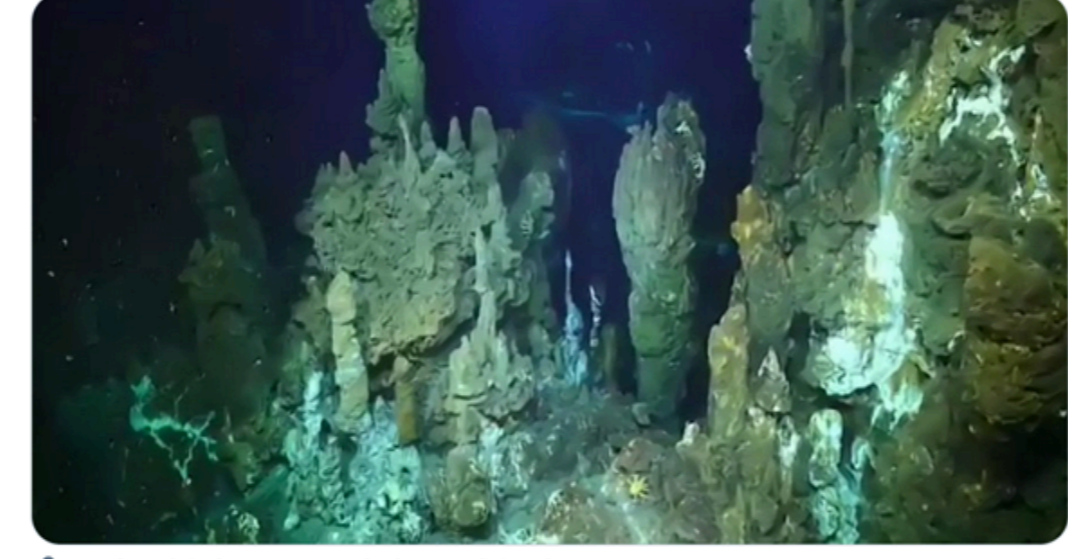
Diversity, Equity, and Inclusion at NDSF

NDSF is committed to diversity, equity, and inclusion. As a leader in building and operating deep submergence assets that benefit the entire oceanographic community, we recognize the opportunity to make a difference by intentionally building a more diverse generation of engineers and technicians at the facility. In response to goals set within the DeSSC community last fall, NDSF is working to make internal processes more equitable in hiring and recruitment, and providing training in every one of our groups. We are also developing outreach efforts to engage historically marginalized student populations. In cooperation with host institution WHOI, funding partners NSF, ONR, and NOAA, and partners such as the Ocean Exploration Cooperative Institute, NDSF is working towards structural changes across the facility to build a culture that invites and nurtures the potential of all the engineers and technicians who do this vital work.

Discovered by *Sentry*, explored with *Jason*

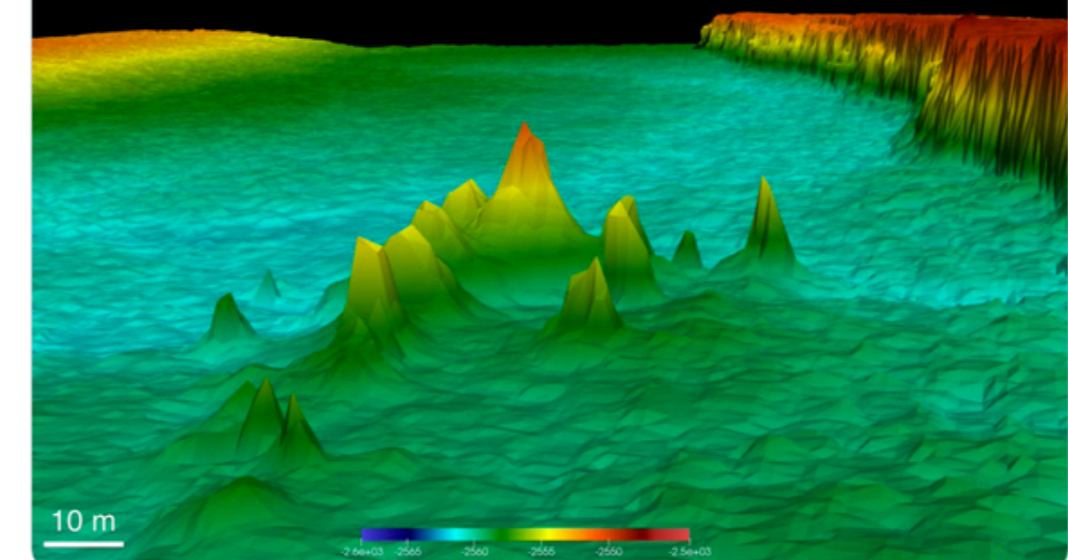


The team on @RVRogerRevelle have just discovered this intricate and active vent field w/ #ROVJason!



National Science Foundation and 3 others

Dr. Ross Parnell-Turner @Ross_PT · Apr 18
These mysterious 10-m high spires have never been seen by humans before...now YOU can be among the first, join the team on @RVRevelle w/#ROVJason to find out what they really look like, live now until 7am Pacific, Monday Apr 17: [youtube.com/watch?v=luHT20...](https://www.youtube.com/watch?v=luHT20...)



8:03 PM · Apr 18, 2021 · Twitter Web App

In the news

OCEAN ENCOUNTERS

[ALVIN: Ocean discovery at new depths](#)

NEW YORK TIMES

[25,000 Barrels Possibly Laced With DDT Are Found Off California Coast](#)

NPR SHORTWAVE PODCAST

[A Quick Dive Into How Submarines Work](#)

PHYSICS WORLD PODCAST

[Adam Soule on *Alvin*'s past and future](#)

WIRED

[The Oldest Crewed Deep Sea Submarine Just Got a Big Makeover](#)

Where are our vehicles now?