#### CANADIAN SCIENTIFIC SUBMERSIBLE FACILITY

# SCIENCE FRST.

A global leader in remotely operated submersible systems.

#### SCIENCE DRIVEN.

Our world-class ROV is designed for science-based research missions and piloted by the most experienced technicians available.

#### SCIENCE READY.

Our ROV is designed and equipped with leading edge technology, premium HD video cameras and instrumentation.

#### SCIENCE NOW.

With our technology and tools, fewer ship days are required and multiple experiments can be conducted at one time. Deployment is also fast and efficient.

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## Expedition on RV Tangaroa

#### **Expedition Overview**

- International collaboration
- Hikurangi Subduction Zone, NZ
- Study of slow-slip events and large earthquakes
- GNS New Zealand provided the ship (*NIWA RV Tangaroa*)
- NSF/UW supplied the ROV system (CSSF ROPOS)
- Recovery of instrument systems, downloading of data from CORKS/BPRs, exploration







### Expedition on RV Tangaroa





#### **Expedition Statistics**

- 18 Operational Days
- 23 ROV Dives
- 176 Hours in the water
- 17 Osmotic Samplers recovered
- 8 Years of CORK/BPR Data downloaded
- 20 Push Cores collected
- 2 Gas Tight Samples taken
- 27 Geological Samples collected
- 54+ Biological Samples collected





#### **Operations on Tangaroa**



### Autonomous Temperature Acquisition Probe (ATAP)





- Six high temperature sensors along the 60cm. probe stab, from which a temperature signature can be observed.
- The optical link will be able to Start/Stop logging, upload a data file and allow the user to setup for each thermistor channel.
- The file from the ATAP logger will be compatible with the ROV logging system and can be uploaded post-dive or interrogated real-time after optical upload. It can then be reviewed like any other part of the logging system.

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# **Upcoming Events**

- 1. Operations in the Indian Ocean October 2021 to January 2022 with a couple of clients.
- 2. <u>Hot Vent Fluid Sampler development 7 discrete samples.</u>
- 3. <u>ROCS in Action coring the seafloor in December 2021!</u>
- 4. <u>4K Camera developing a workflow and conducting a market study.</u>
- 5. <u>Pilot Camera new in-house development of an HD-SDI low-light wide-angle camera.</u>
- 6. <u>Smart Gas Tight Sampler development elec. trigger, wireless comms, temperature.</u>
- 7. <u>New Fibre Optic system moving away from Focal 903.</u>
- 8. <u>Subsea Geiger Counter in development.</u>
- 9. <u>Autonomous operations winch, tracking ROV depth.</u>

Please give us a call to call to discuss all your benthic science requirements

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