ROV SUBASTIAN
SCHMIDT OCEAN INSTITUTE’S
REMOTELY OPERATED VEHICLE (ROV)
2019 POST MAINTENANCE PERIOD UPDATE
**Introduction**

- **Errol Campbell – ROV Manager**
- **Schmidt Ocean Institute**
  - Not for Profit Organization
  - Goal to advance global marine research
  - Provide state of the art operational, technological and information support
  - Pioneering Ocean science and technology projects
  - Share what we discover
  - Help the world better understand our oceans

- **ROV Subastian**
  - 4500m depth rating
  - Development started in 2015
  - Integrated onto R/V Falkor in summer of 2016
  - Successfully completed 245 Dives to date
**Large array of calibrated sensors and tooling:**
- Water samplers 2.5 & 5 L
- Suction Sampler
- Temp-Heat Probe
- Bio-Boxes
- Scoops
- Rock Boxes
- Mini-Temp Recorders
- Push cores
- O2 Sensors
- CTD
- PH
- SV Probe
- Mini IPS
- Photomosiacing

- And the ability to integrate a vast array of other science sensors & samplers!
2019 R & M rebuild and upgrades

- **Rebuild and Inspections**
  - Complete strip down, inspection & repair
  - Structural inspection of frame & load path, thrusters, manipulators, all major components
  - Science, equipment, tooling & sensors

- **Upgrades**
  - HD “Gods Camera” system
  - New 5700m Umbilical
  - Replaced all ROV oil filled trunk cables
  - Rewired all ROV junction boxes & installed new PCB's
  - Installed Oil / Water Separator
  - Science tooling & topside integration upgrades
  - Rewired ROV Control Room
2019 Post R & M Sea Trials

- **Sea Trials**
  - Full system test dives & trials after rewiring the Top-Side Control Room, Replacing the main lift umbilical & replacing all ROV Subsea Trunk Wiring & PCB’s
  - Multiple Spin-out Dives of new 5700m Umbilical
  - Tested new HD “Gods” Camera
  - All Sensor calibration install & test
  - 3D Printing of parts
  - Test Low Latency ROV Remote Operation (VPN)
  - Test the Meteorite Recovery Tool
2019 ROV Science Missions

- Cordes – Cold Seeps – Costa Rica
- Joye - Hydrothermal Vents and Hydrocarbon Seeps - Manzanillo, Mexico
- ROV & Vessel Sea-Trials
- Fries – Meteorite Recovery – OR
- Ruppel – “CaMMeRA” Cascadia Margin Methane Research Action
- Watling - Emperor Seamount chain – Hawaii
- Baco-Taylor – Seamounts & deep-sea Octocorals – Honolulu
- Phillips – Engineering Cruise - MBARI DeepPIV system
THANK YOU!
www.schmidtocean.org

- www.schmidtocean.org
- Livestreaming ROV Dives
- Facebook
- YouTube