

Scripps Institution of Oceanography ROV Trident 2013 year in review

Operations

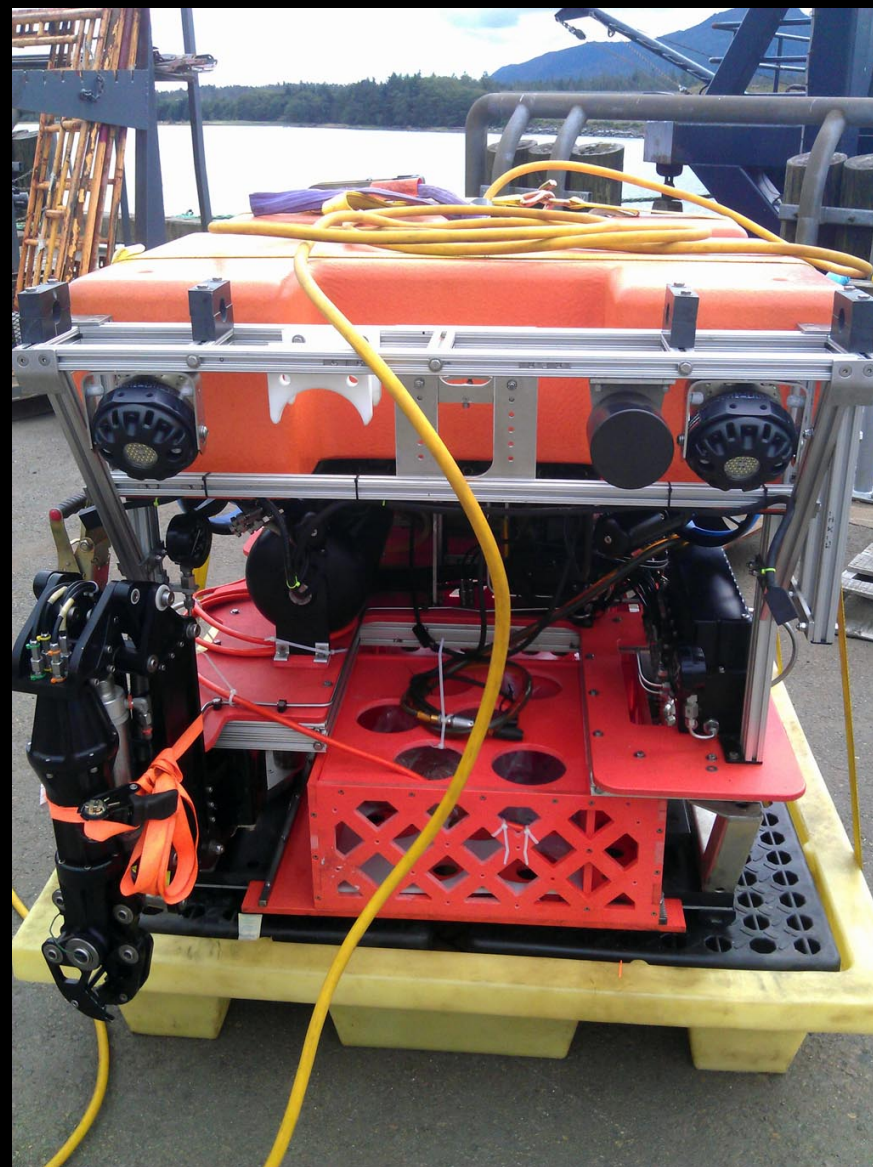
1. Gulf of Alaska

- NOAA PI Robert Stone
- Vessel of opportunity, Ketchikan to Sitka, 10 days at sea
- Successful survey/sampling of *primnoa Pacifica* on seamounts

2. NOAA cruise scheduled aboard Point Sur during government shutdown was cancelled

3. Student cruise (SIO PI Lisa Levin)

- Offshore San Diego 23 NOV
- HD video survey of benthic fauna



Major funding provided by the National Science Foundation and the Office of Naval Research



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Upgrades

1. Factory upgrades to 2000m for all components
 - Installation of new pressure housing for electrical system
2. Upgrade camera video resolution to HD
 - Sidus SS446 high definition video camera
 - Resolution 1920H x 1080V (see sample video clip)
3. Increase sampling payload capacity
 - A hydraulic sliding sample locker was installed in ROV base

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Status & Planned 2014 Improvements

1. All hydraulic functions operable; thrusters, manipulator arm, sample locker, and camera pan/tilt mechanism work
 - A 2013 manipulator failure was traced to valve control board failure. Board replaced and function restored.
2. Cable length is now 1000 meters
 - Researching armored and synthetic options for enough wire to reach ROV depth rating of 2000 m using existing winch
3. Navigation
 - TrackLink 5000 tracking works with HyPack software
 - Navigation being upgraded to be self-contained within control van with a Trimble SPS451
 - Will install Seatex MRU to improve ROV navigation

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Status & Planned 2014 Improvements (continued)

4. Video recording to be upgraded in control van with new commercially-available file-based HD/SD recorder
5. A new air-filled termination housing was installed to enable coax-to-fiber converter to upgrade the capability of ROV video feed
6. CWDM modules were added to the ROV and the control van to expand the fiber optic signal capacity
7. Will increase seating capacity in control van for additional scientist participants

ROV Trident

Portable system available
for use in 2014

For information contact

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