R/V Thompson Mid-life Refit

UW Marine Operations
Timeline - Milestones

✓ Contract awarded 24 Aug 2015
✓ Thompson finished science 24 May 2016
✓ Entered shipyard 16 June 16
✓ First seismic compressor removed 28 June 16
✓ Drydocked 15 Aug 16
✓ First generator set removed 19 Aug 16
✓ First new generator set onboard 22 Sept 16
✓ Undocked 25 Oct 16
✓ First engine lite off 7 Sept 17
✓ Drydock for Bow Thruster Plating Repair complete – undocked 25 Oct 17
✓ Dock Trials complete
✓ Builders Sea Trials complete
✓ Shipyard Delivery to UW 19 Dec 2017
✓ Shakedown cruises late Dec 2017 & early Jan 2018
✓ Student cruise 13-15 Jan 2018
✓ NSF Inspection 23-25 Jan 2018
✓ Returned to science Feb 2018 starting with transit to New Zealand & first science cruise at Kermadec Trench
Completely updated Pilothouse

New propulsion plant
New Caterpillar diesel generator sets

Finishing up at Vigor Shipyards
Weight test of port crane

First CTD

Sea Trials – Day 1
Departure from Vigor – 19 Dec 2017
Summary

• 18 months in the shipyard
• ~$52M total project cost
• 44 major projects
• ~200 contract changes
• ~3 weeks to complete underway testing / grooming / sea trials
• Service life extended another 15-20 years
• Lots of lessons learned!!

4/11/18
Post Delivery Issues

• Diesel Engines
  – Front end drive gear failure – corrected - warranty
  – Fuel oil cooler leaks - corrected – warranty

• Generators
  – Cooling pump bearings – corrected - warranty

• Transformers
  – Cooling system leaks – corrected - warranty

• Power quality
  – Notching of output power impacts sensitive electrical / electronic gear.
  – Await final report & Shipyard/Vendor recommendations
  – Most likely need to add filters to certain circuits
  – Contractual status of the issue – to be determined
First Science Cruise
Brothers Volcano – Kermadec Trench

Thompson moored in Auckland

Aft working deck with JASON

New USBL Pole Set-Up
Many, many thanks to Congress, Office of Naval Research, National Science Foundation, Scripps, WHOI, & UW!!