



Jason LARS Update



Goals:

- Improve safety
- Increase weather window
- Reduce number of people required to launch & recover
- Decrease turnaround time
- Retain heavy lift capability
- Remain reasonably sized for shipping
- Dampen motion and rotate *Jason* during LAR
- Eliminate people handling tether or vehicle → safer



Multi-Phase Project



1. Replace *Jason* crane
2. Add a docking head to the crane
3. Add a winch to *Medea* for tether handling
4. Design a new crane base
5. Integrate the crane and docking head
6. Add active heave compensation to the .681" FO cable
7. Add a mechanism for handling *Medea*



Phase 1: New Crane



- Effer 80000 knuckle crane
- 24,361 lb @ 23 feet
- Complies with Appendix A&B of RVSS
- 72% load rating increase and greater reach
- Radio control
- 1st use: Jan 2012 German Cruise





Phase 2: Dynacon Docking Head



- Delivery Dec 5
- SWL 10k lb @ 2G FOS 1.5
- Tested to 20,000 lbs
- Winch Line Pull: 12.5k lbs
- Brake Holding: 18k lbs
- Rotation Angles – Inboard: 53°/Overboard: 90°
- Slew Rotation: 270°
- Drum: 150 ft of 3/4" AmSteel Blue
- Requires 24 GPM @ 3,550 psi





Phase 3: *Medea* Winch



- Tested Oct 2011
- SWL 1,000 lb, FOS 5
- Line pull to 500 lb
- Render at 800 lb pull
- Stores 200m 84" dia. tether
- Level wind self reversing, diamond lead screw
- Hydraulic actuation deck only
- Subsea TMS at a later date
- Pressure compensated
- Weak link
- Will eliminate people handling high voltage tether → safer

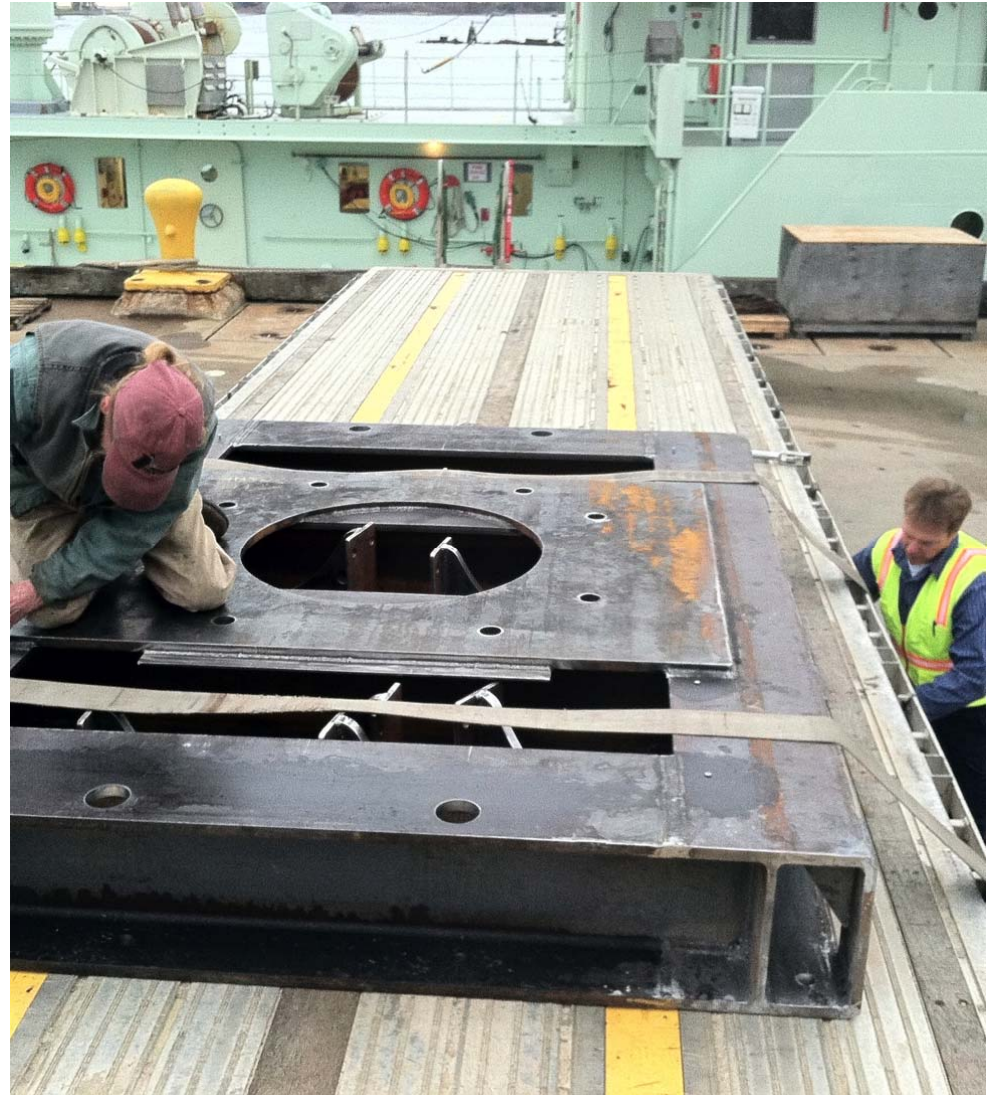




Phase 4: Crane Base



- WHOI-designed base complete
- Oversight from Glosten Associates
- *Atlantis* reinforced deck location will be utilized
- Outriggers on other vessels

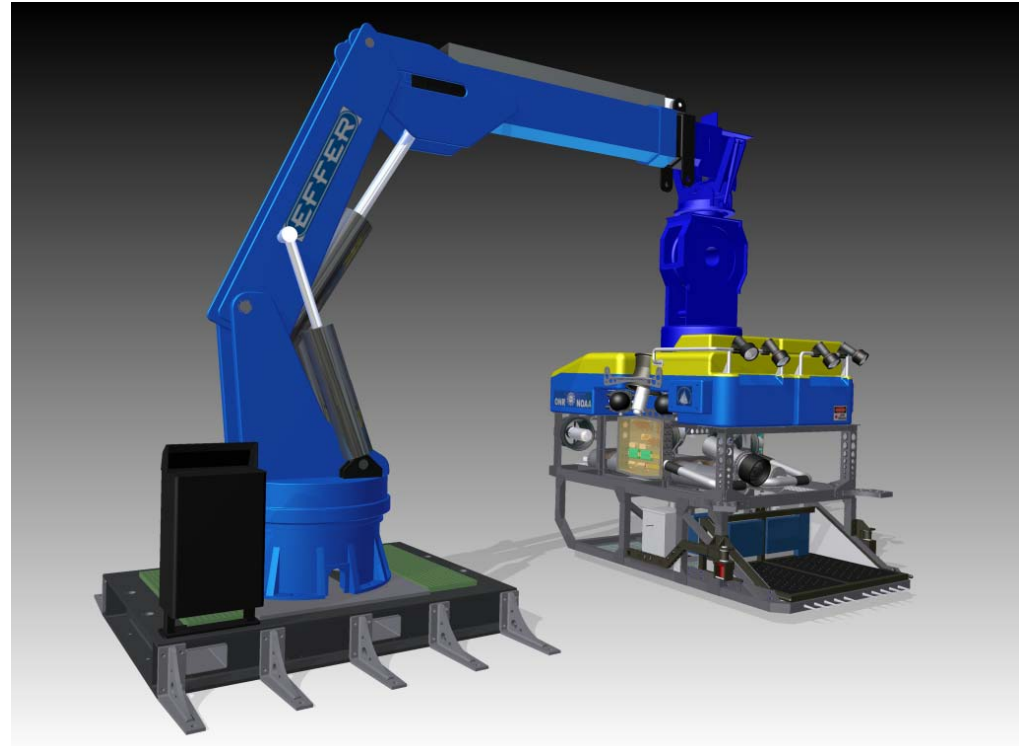




Phase 5: Integration



- Base, crane and docking head integration: December 2011
- Acceptance tests, Effer crane and Dynacon docking head: 15 December 2011 at WHOI





Phase 6: Active Heave Compensation



- AHC to 6.5 km with 0.681” FO cable is ship power prohibitive
- Developing AHC system for shorter lengths of 0.681” FO cable **AND** 3X19 wire
- System will be able to AHC 5,000m of 0.681” FO cable or 6,000m of 3X19
- Optimized for 3 km, performance decays with depth
- Provides AHC ops with *Medea* when shipboard cable is not available **AND** AHC of packages on separate system operated in tandem with *Medea/Jason* when ship cable **IS** available
- Will also be able to operate with 7 km of .681” FO cable but unable to AHC when this much cable is on drum



Phase 7: *Medea* Handling



- Still a work in progress
- Addition of teleleg is counter to our desire to downsize
- Researching alternatives

