

ROV Jason

Matt Heintz

WHOI

Deep Submergence Laboratory

History

Configurations

Capabilities

Jason 1 1988-2001 323 lowerings

Jason 2 2001- present 1562 lowerings



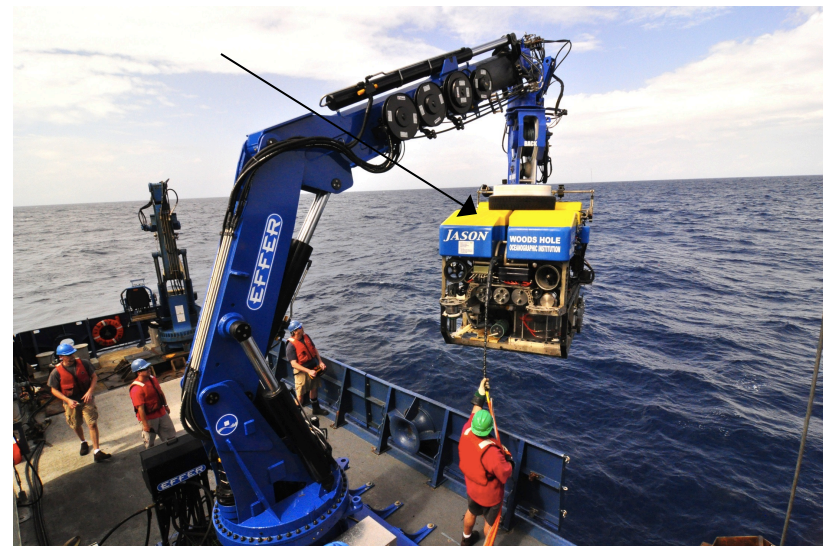
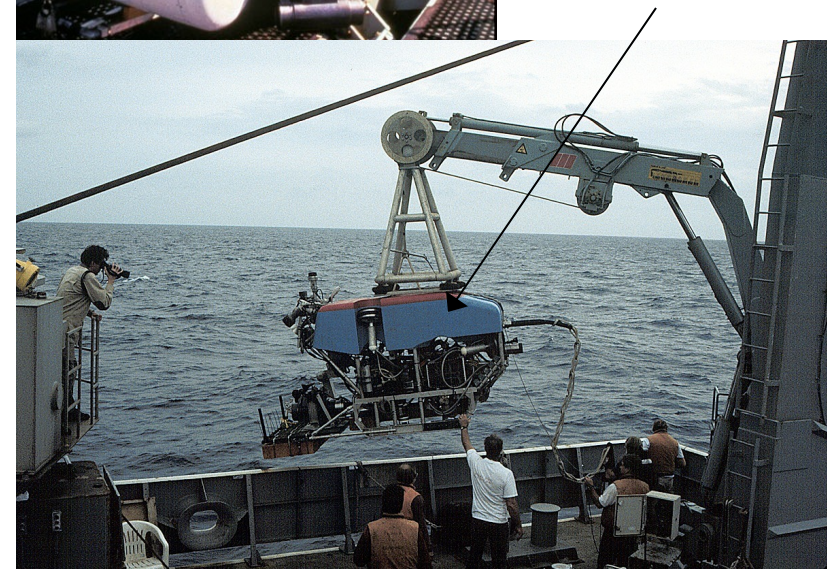
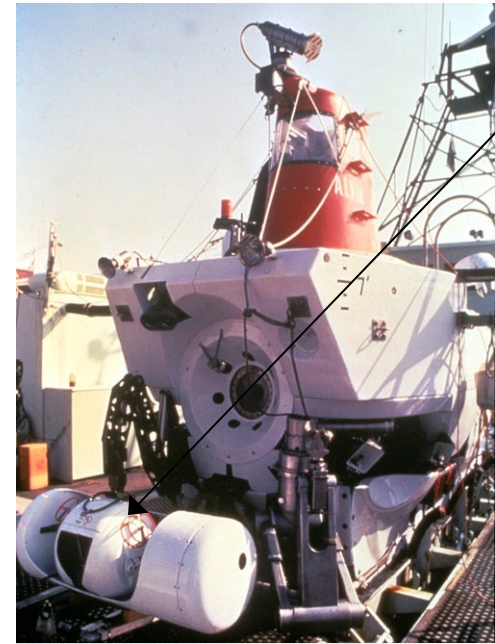
Decades of DSL ROVs

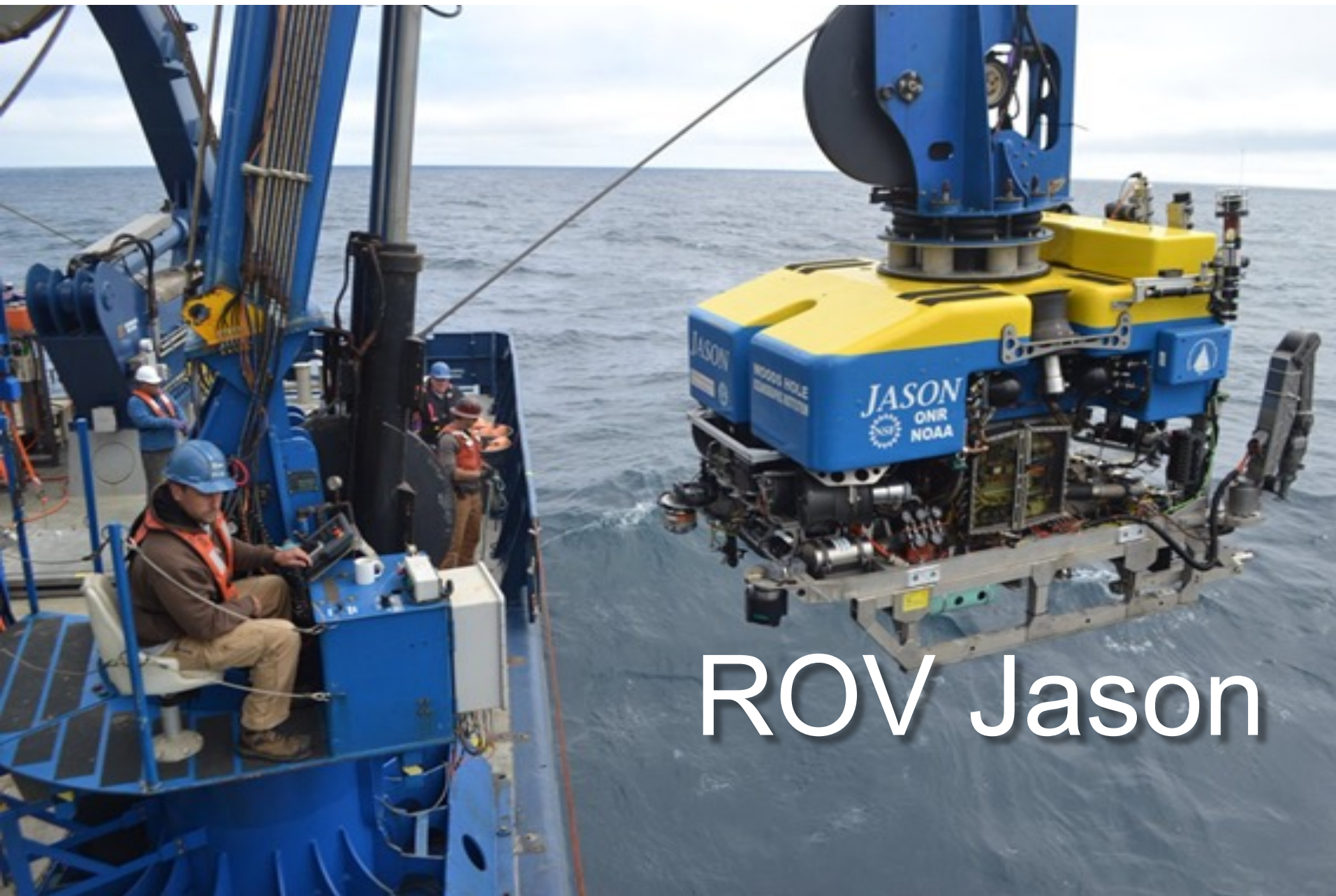
AMUS 1970's

Jason Jr. on
Titanic 1986

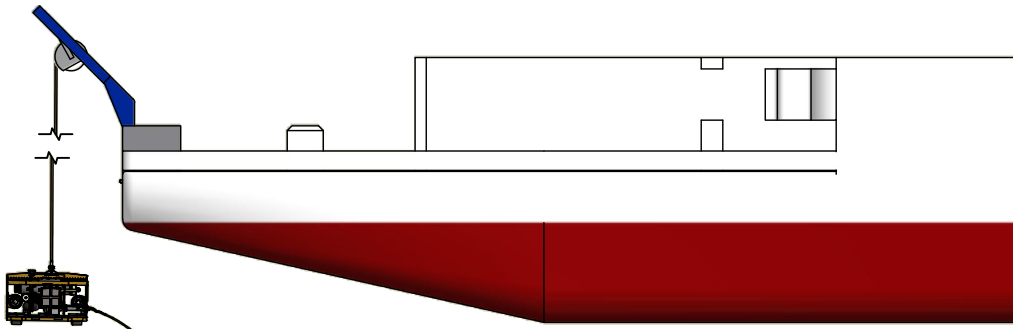
Jason I
1989-2001

Jason II
2002 - today

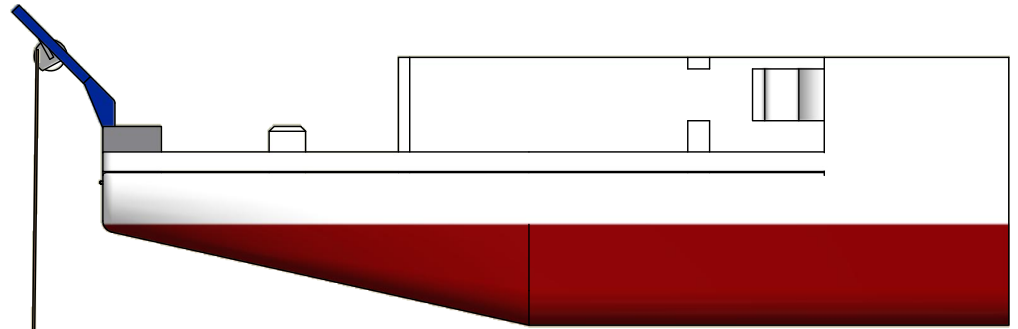




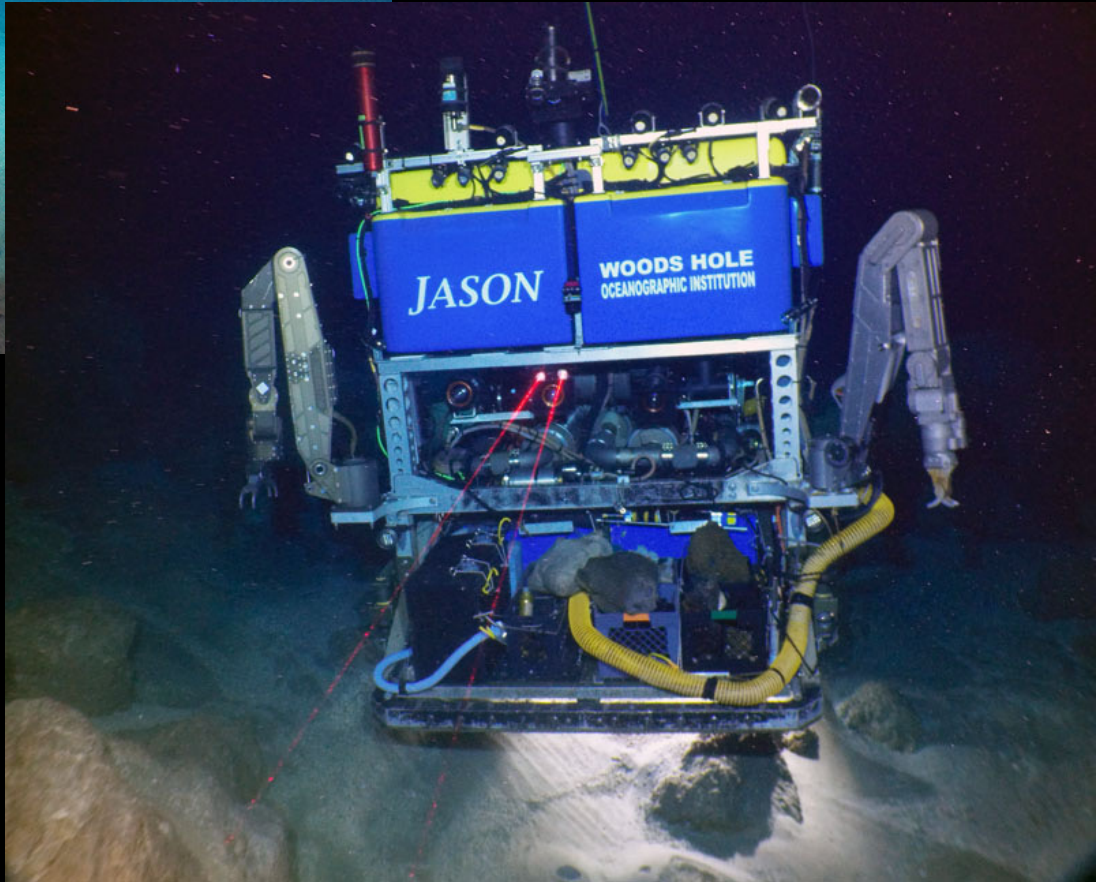
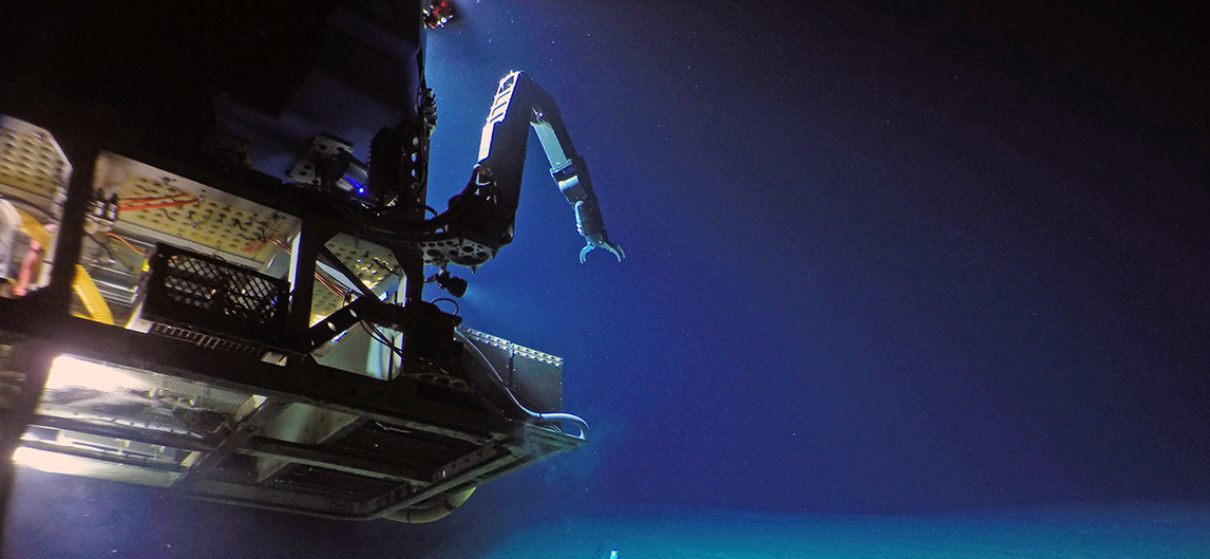
ROV Jason

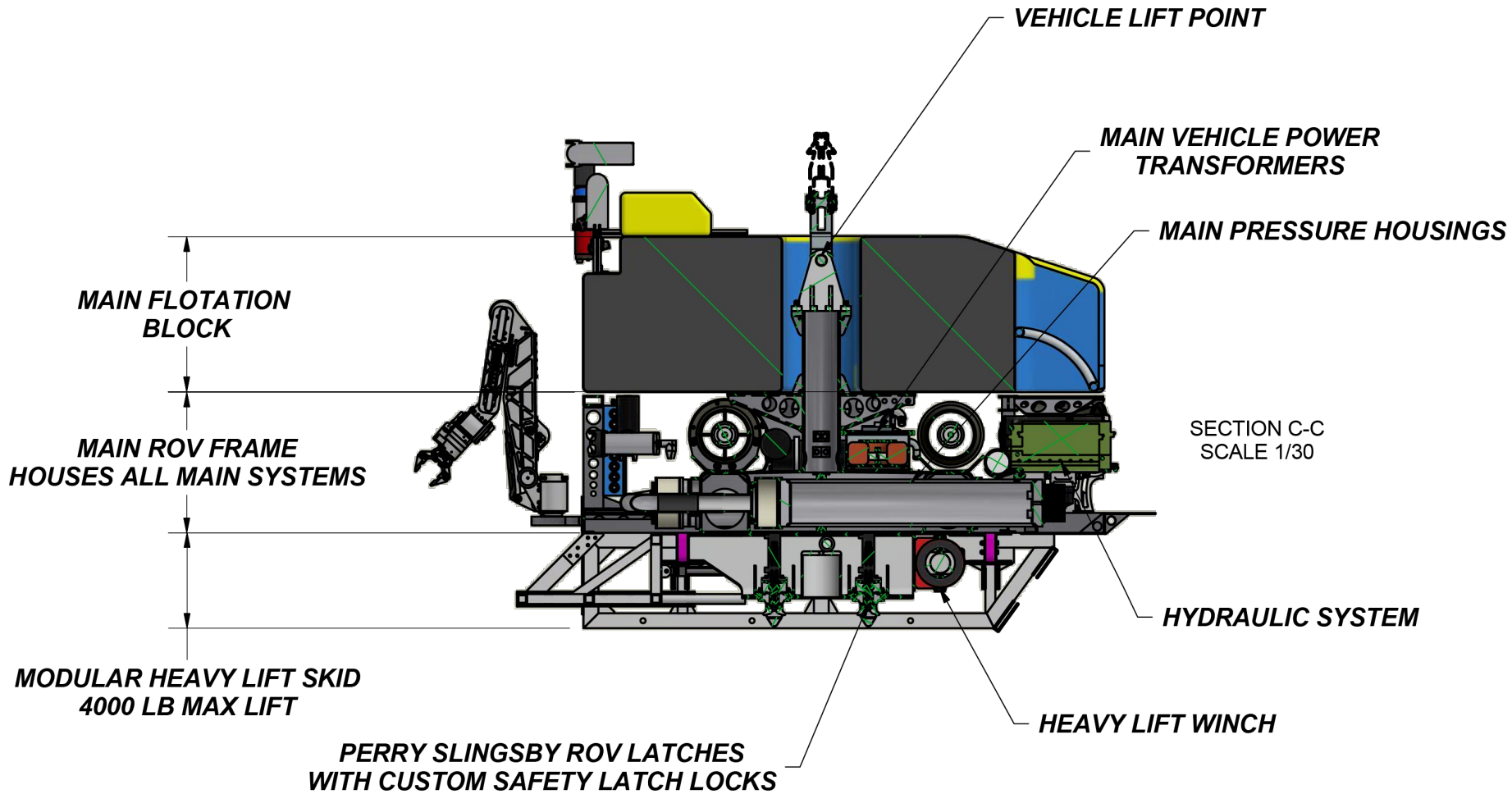


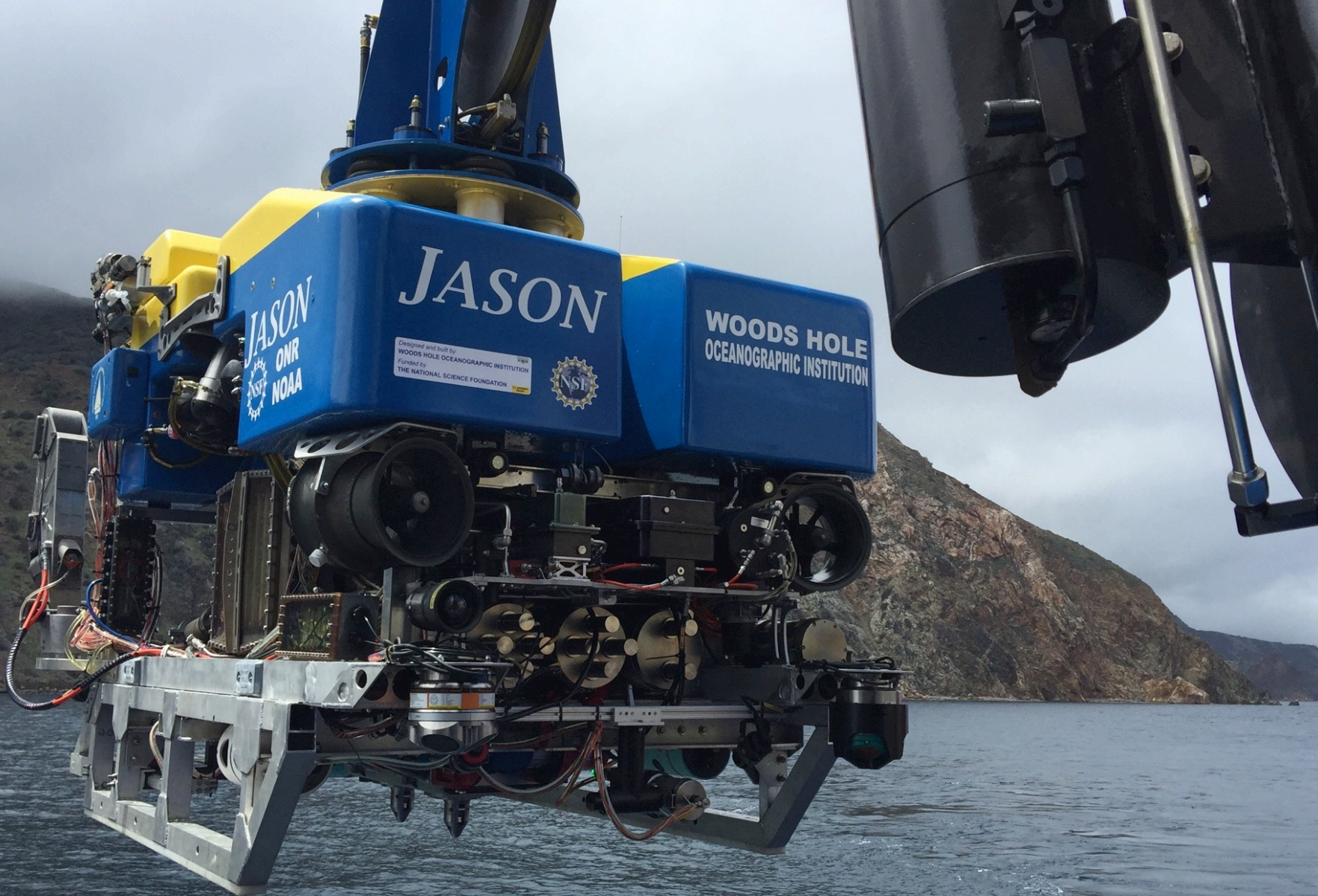
**Two Body
6500m**



**Single Body
4500m**

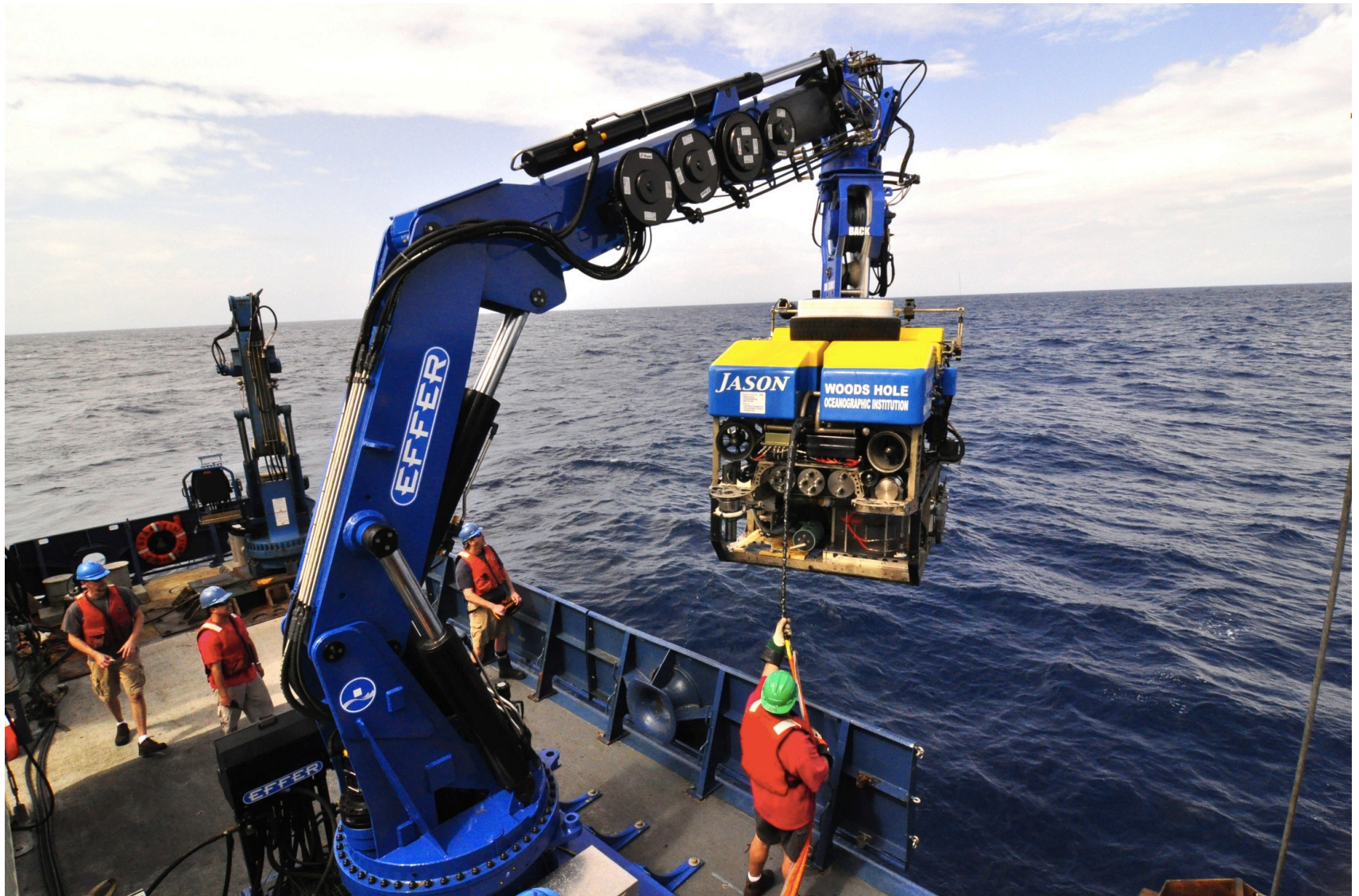




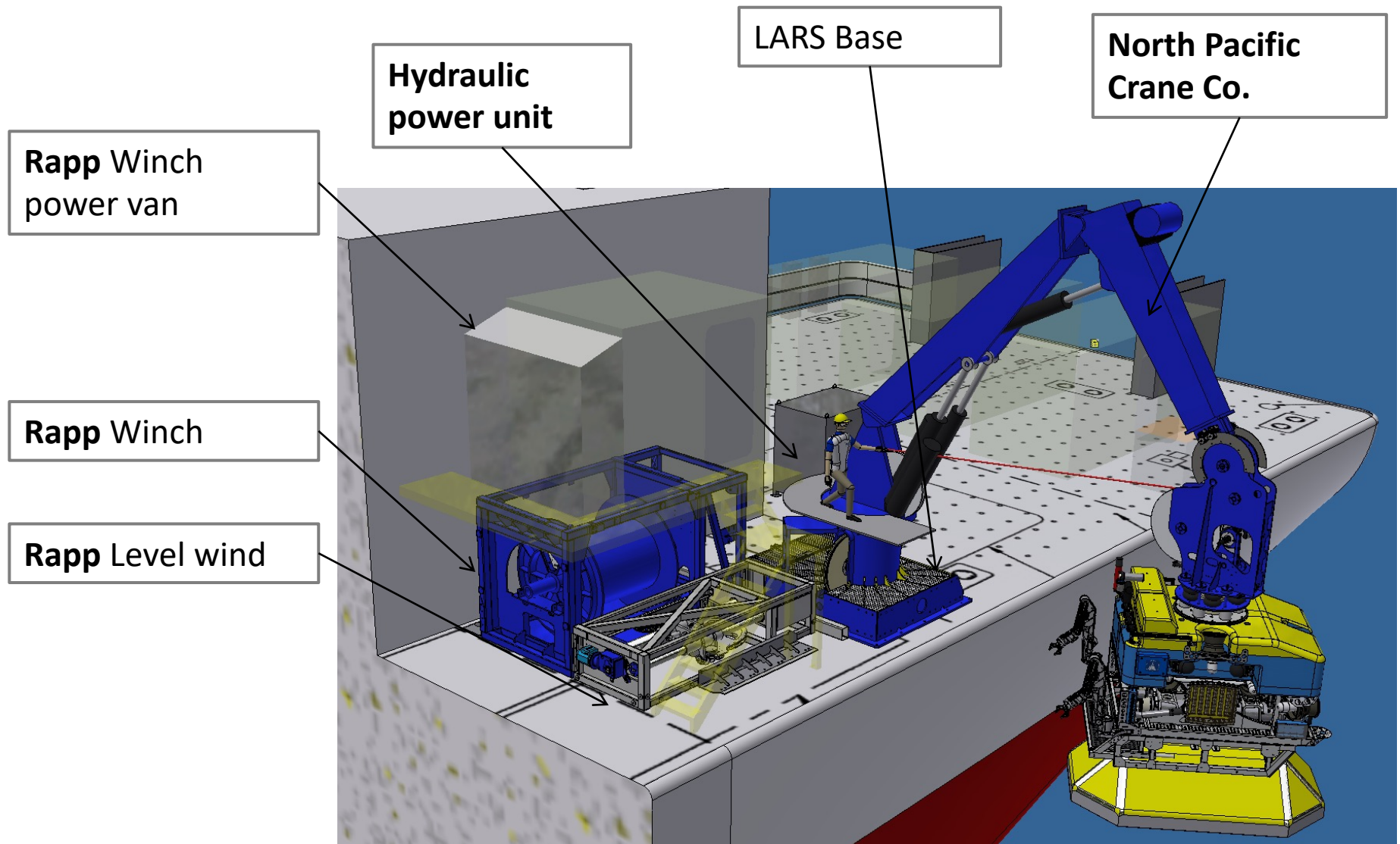


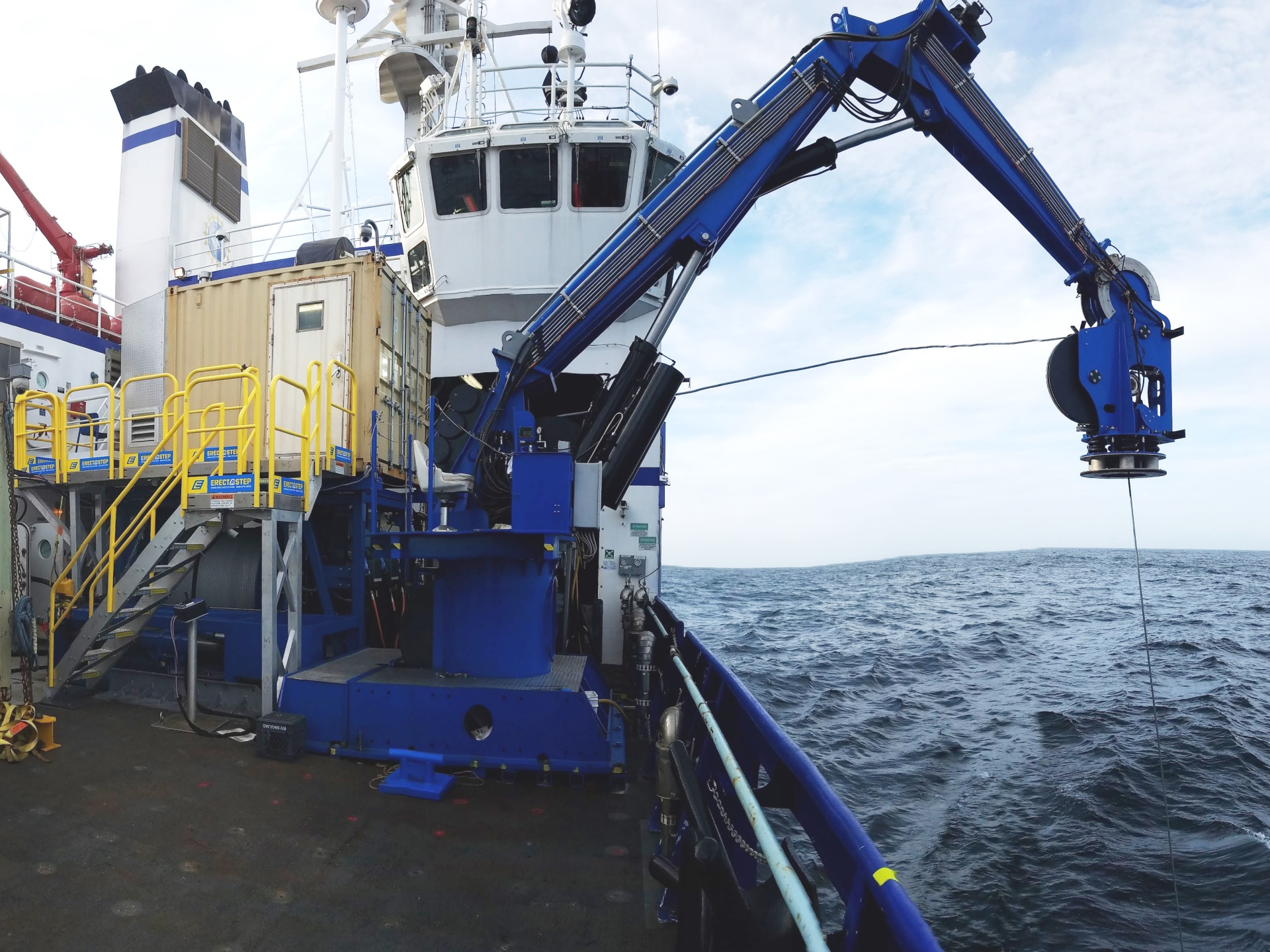
Jason single body mode

Jason 2-body LARS crane

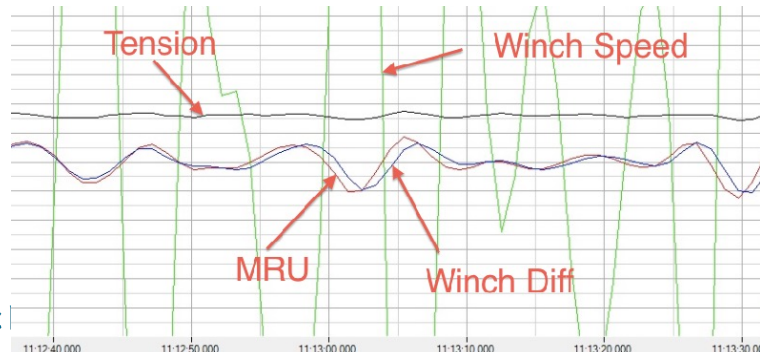
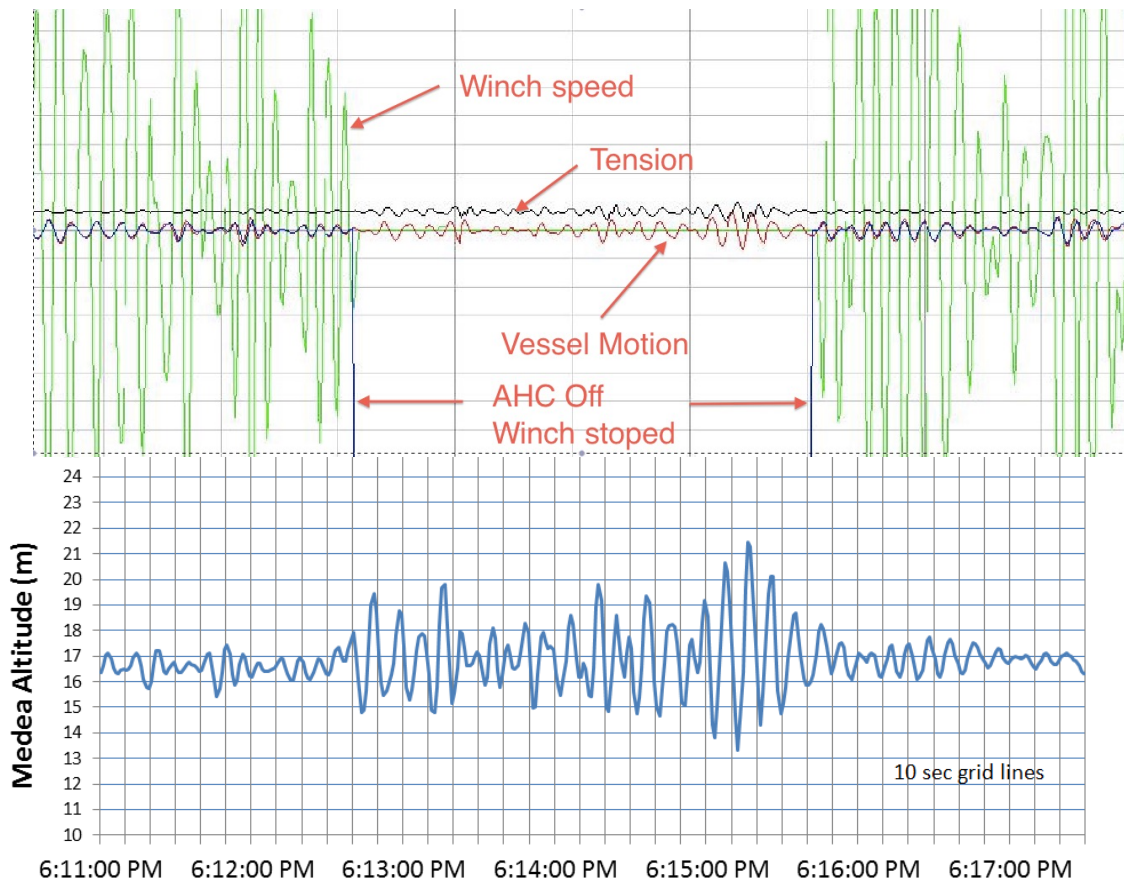


Overboard Handling System

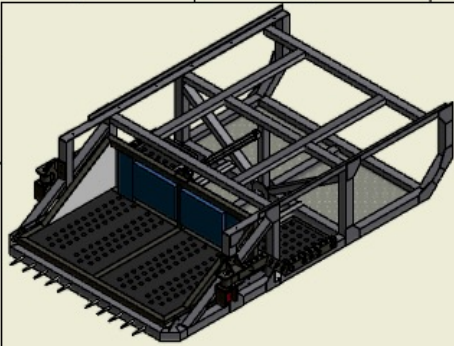




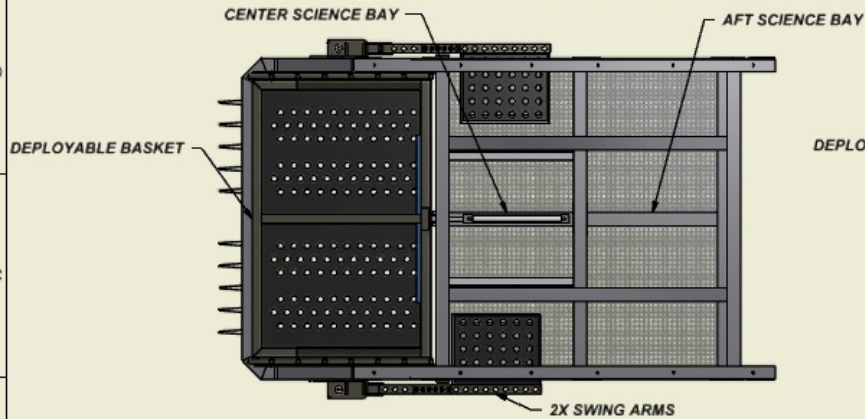
AHC Performance



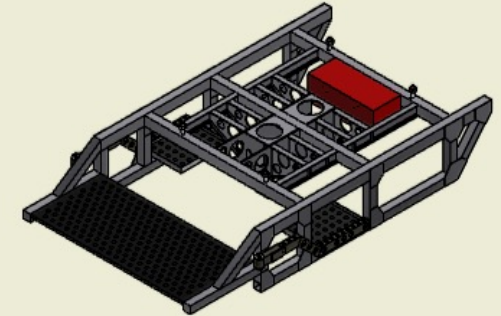
TOOLS KID OPTIONS



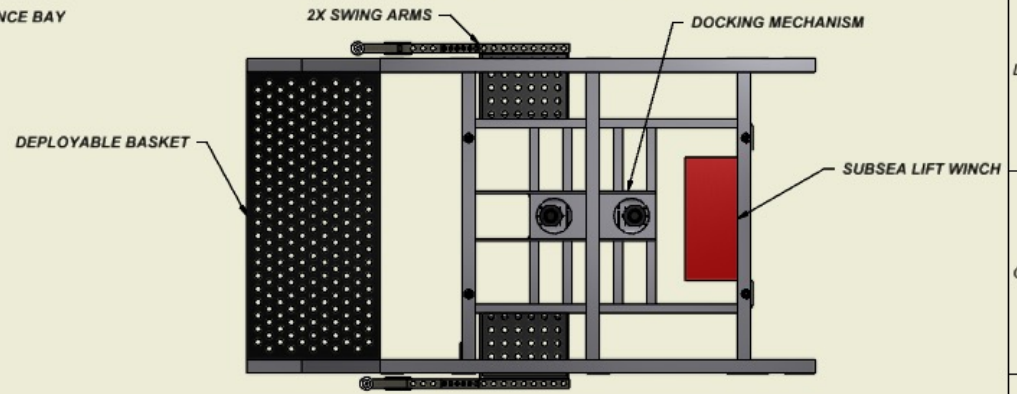
STANDARD JASON



SPECIFICATIONS:
 Deployable Basket Dimensions (L"xW"xH"): 36x58x23
 Center Science Bay: 28x43x25
 Aft Science Bay: 32x72x25
 Two Swing Arms : 20x16x21.5



OOI HEAVY LIFT

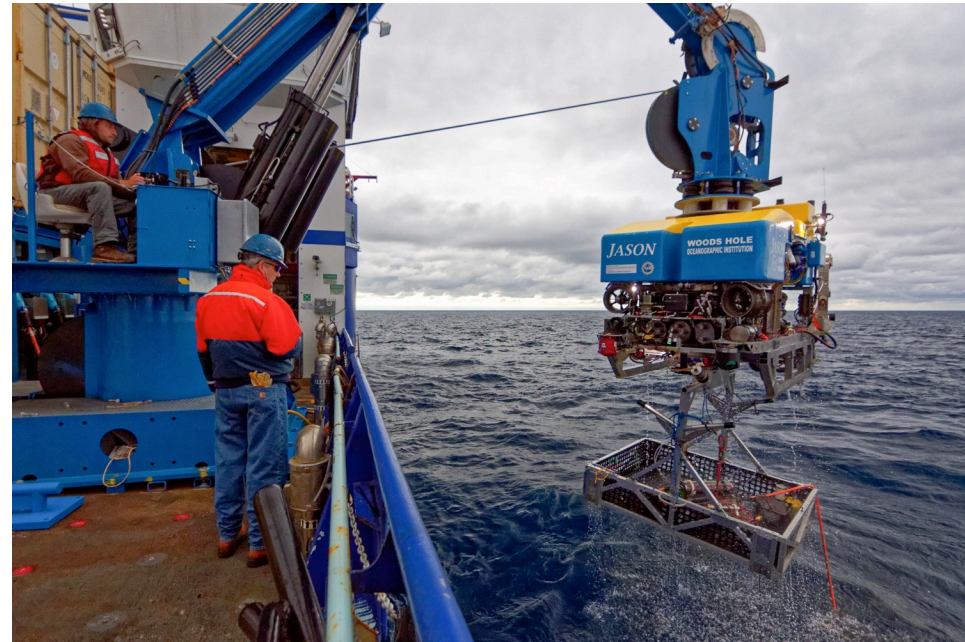
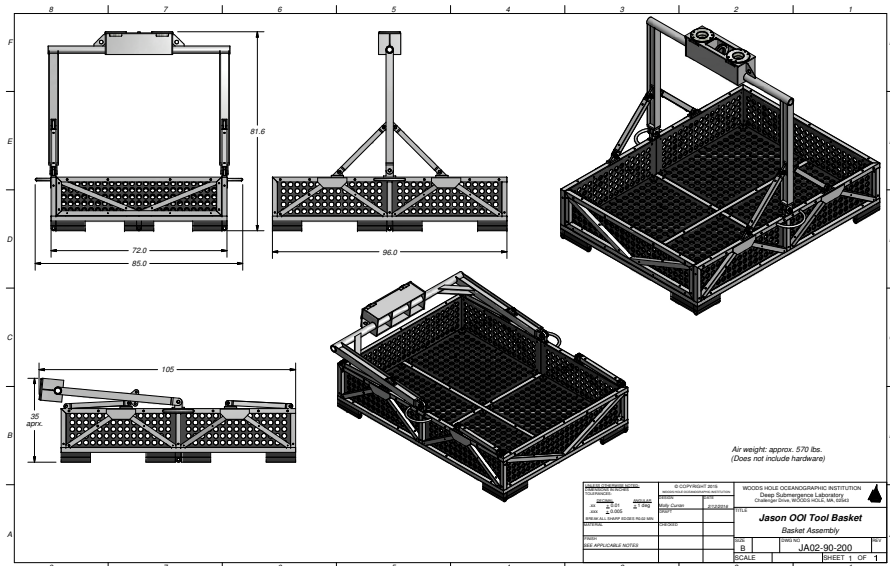


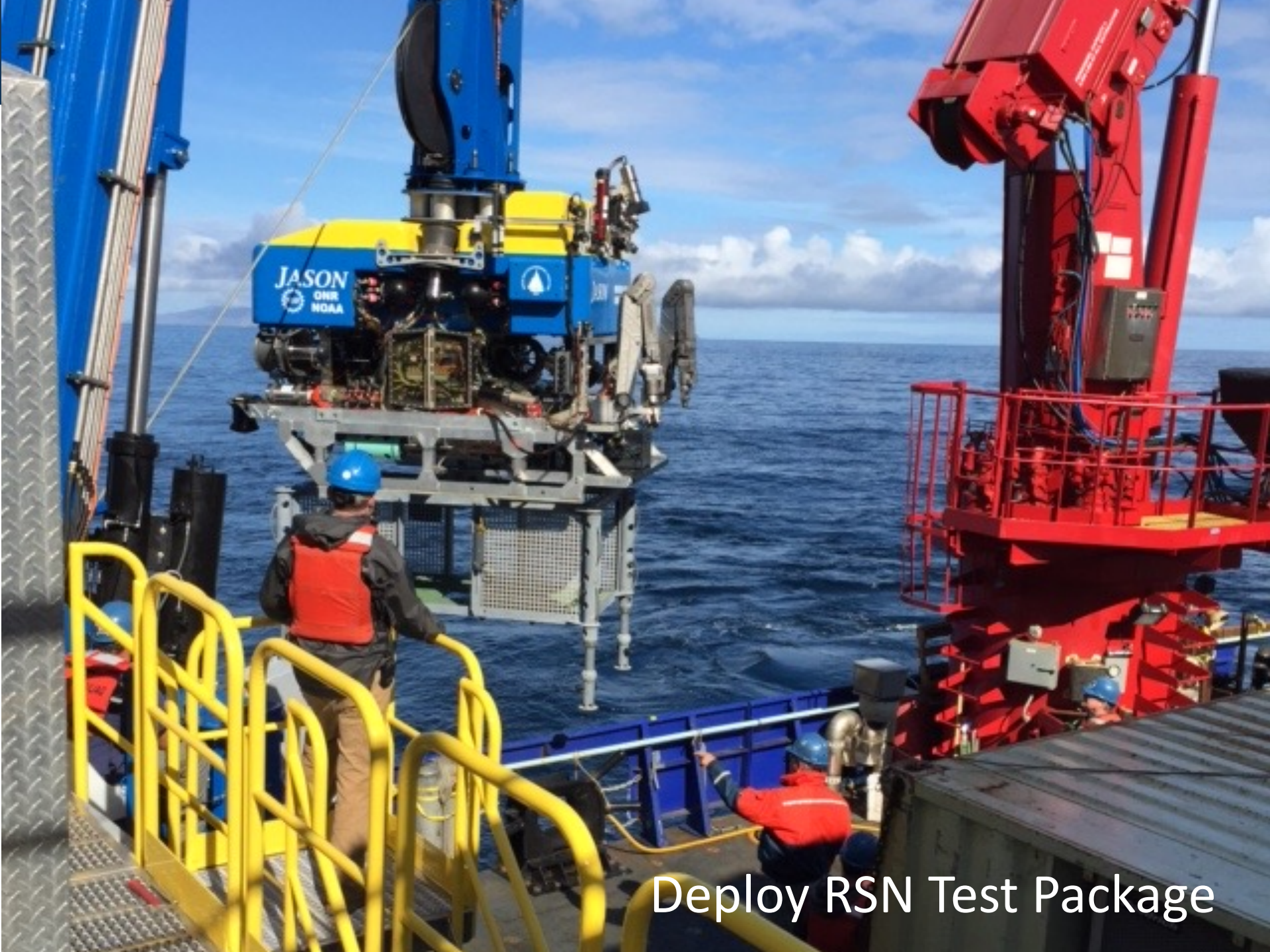
SPECIFICATIONS:
 Deployable Basket Dimensions (L"xW"xH"): 30x65x16;
 Two Swing Arms: 20x16x12.375;
 Subsea Lift Winch - 4000 lb Lift Capacity
 Docking Latch Mechanism - 4000 lb Lift Capacity

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DIMENSIONS IN INCHES		WOODS HOLE OCEANOGRAPHIC INSTITUTION		Deep Submergence Laboratory	
TOLERANCES:		DATE		Chalenger Drive, WOODS HOLE, MA, 02543	
DIMENAL	ANGULAR	FINISH	DATE	TITLE	
.XX ± 0.01	± 1 deg	Turn	8/8/2015	SIZE	
.XXX ± 0.005		CRAFT		DWG NO	
BREAK ALL SHARP EDGES R0.02 MIN		CHECKED		REV	
MATERIAL				SCALE	
FINISH				OOI TOOL SKID	
SEE APPLICABLE NOTES				SHEET 2 OF 2	

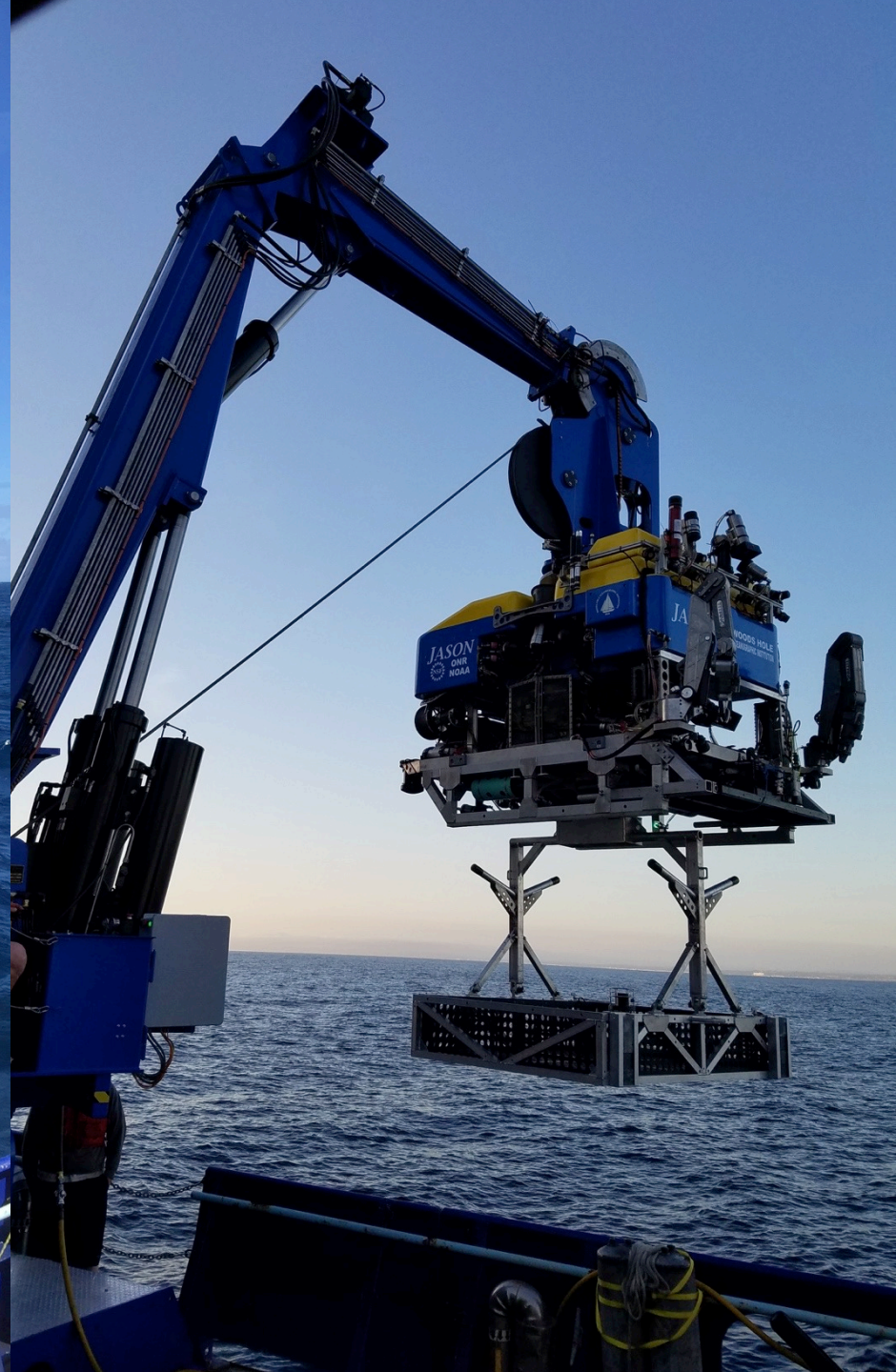
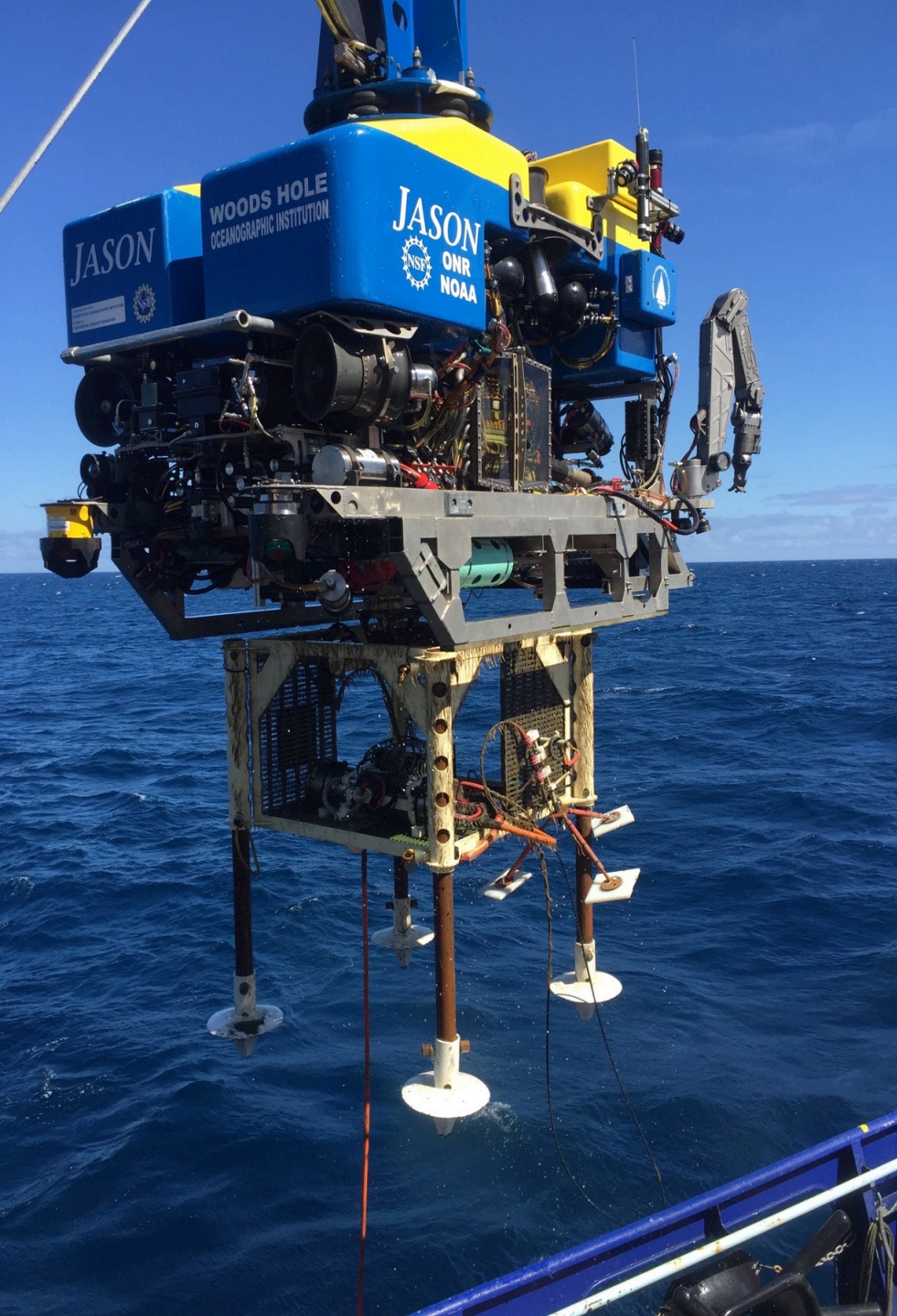
Under-Vator

Under-Vator
replaces Elevators
1000 lb. payload

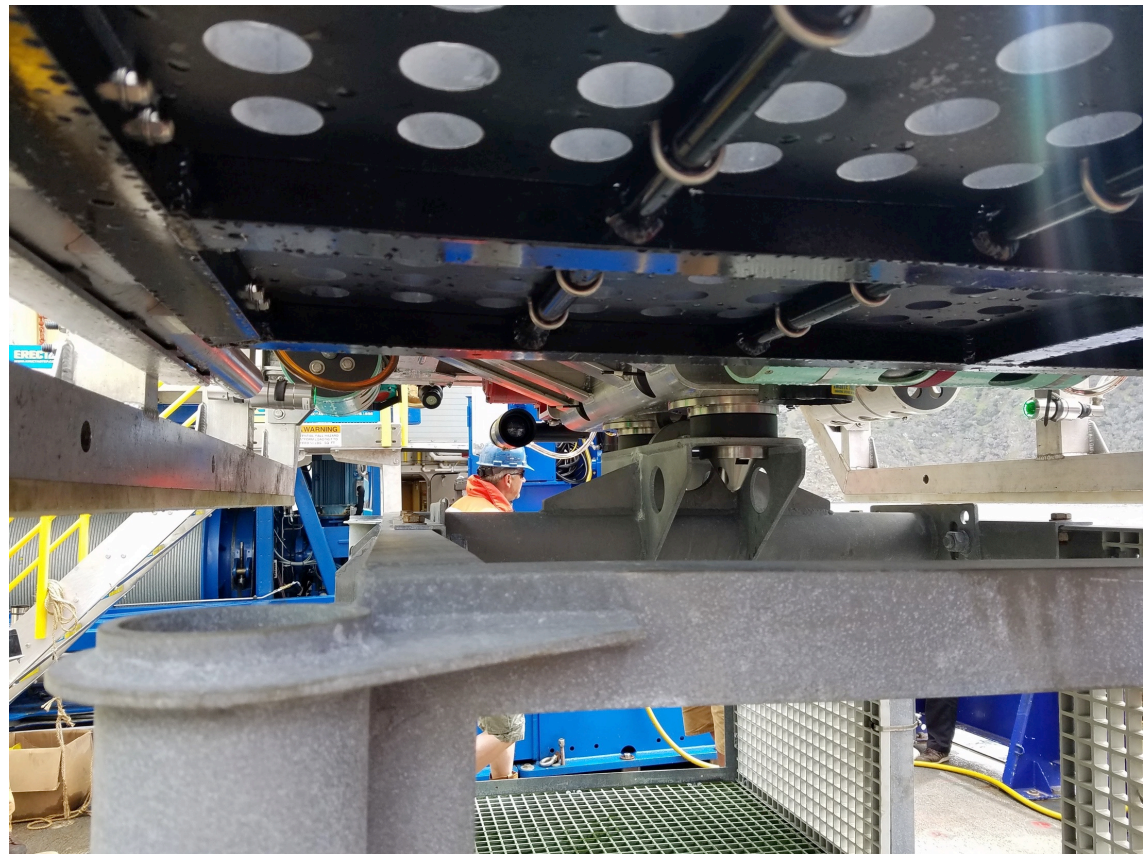
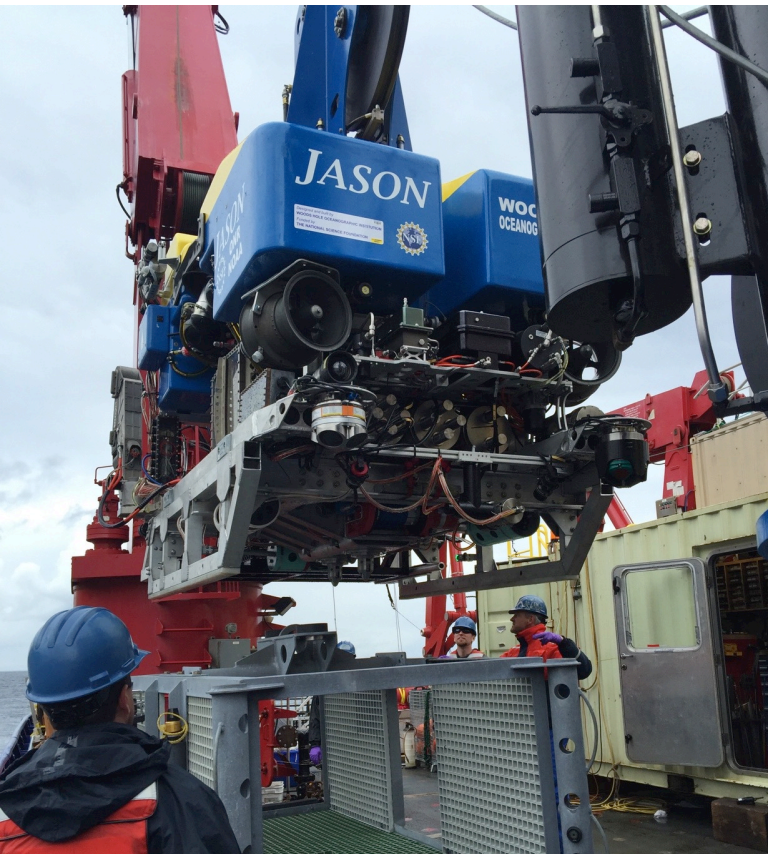




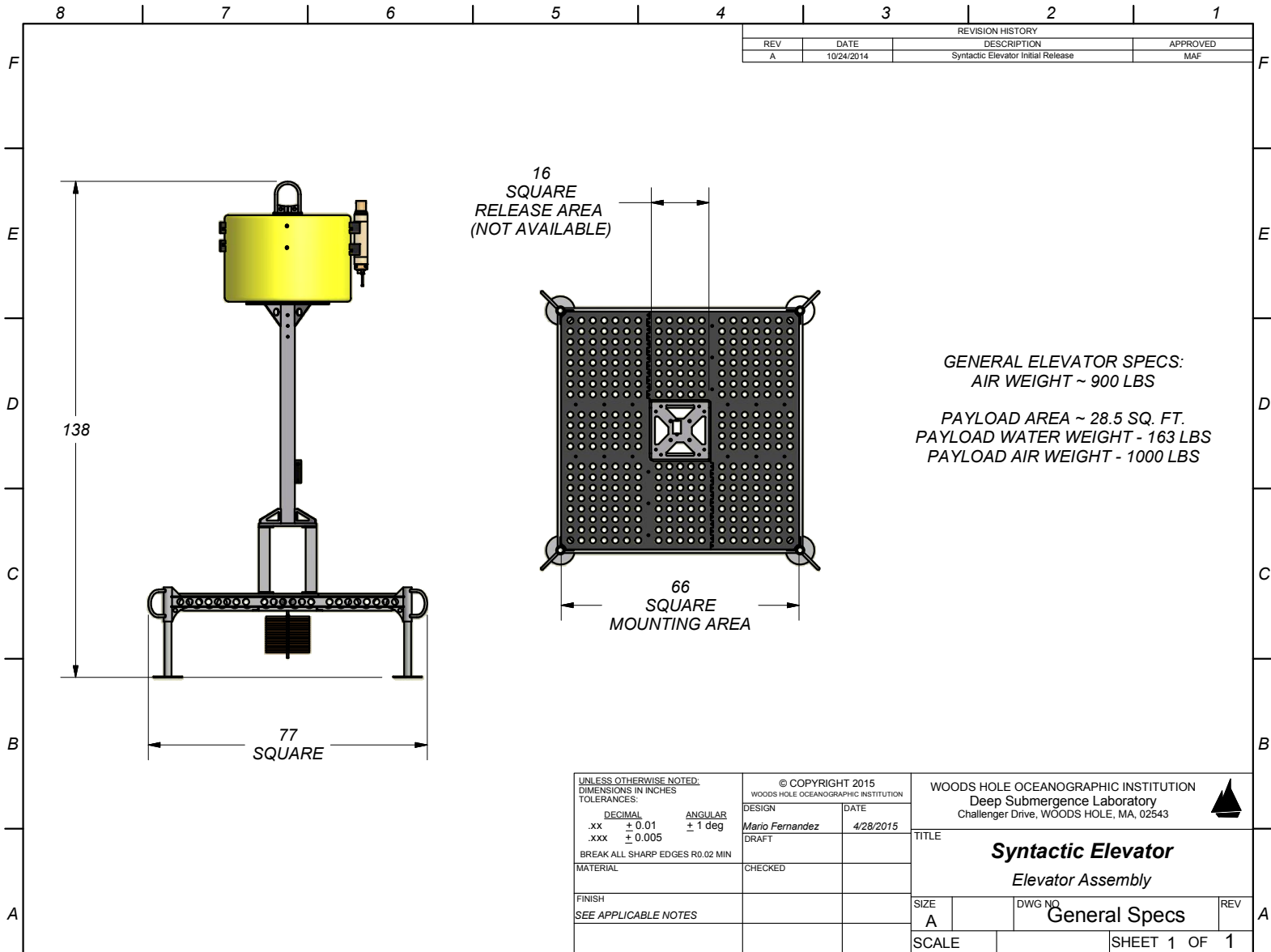
Deploy RSN Test Package



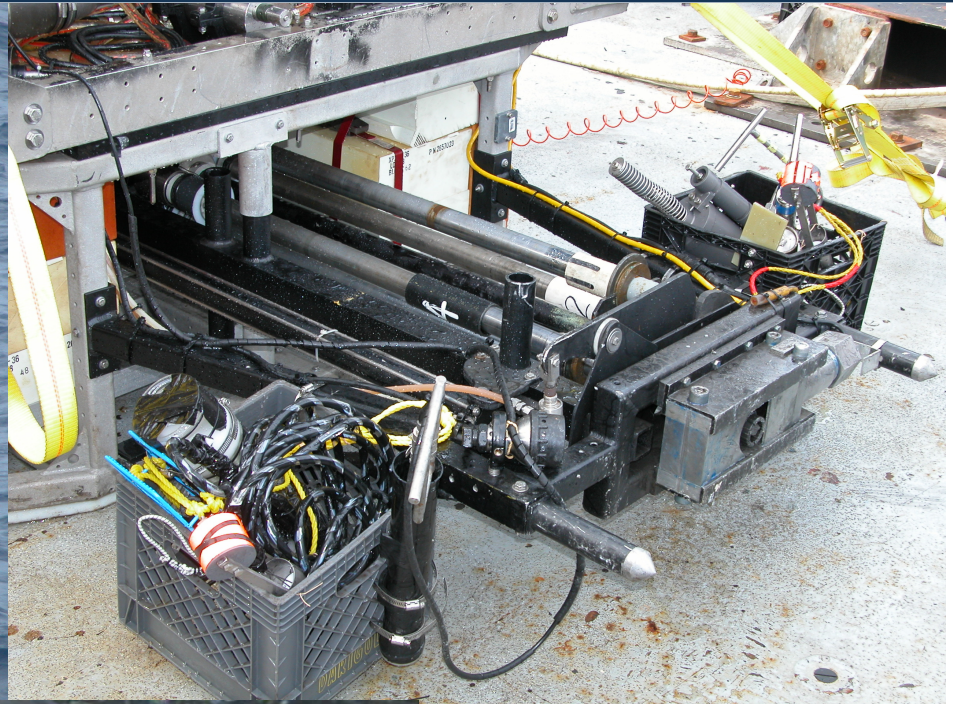
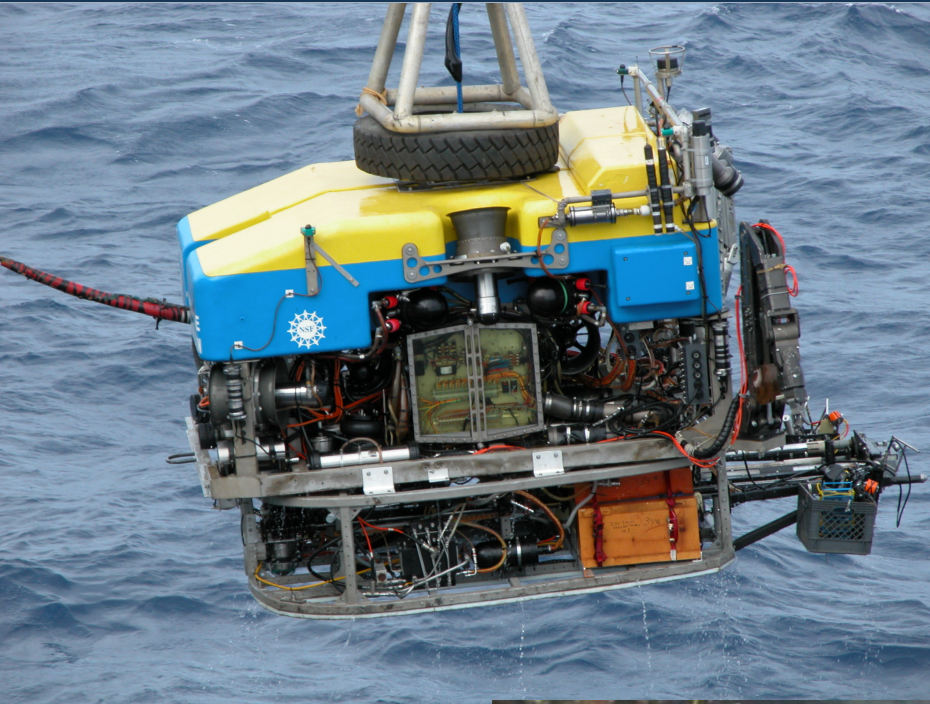
Hydraulic latches



Elevator



Rock Drill on Jason



Manipulators

- 2x Schilling Titan 4
 - ▣ 7 function
 - ▣ Position controlled
 - ▣ Max Lift full ext: 270 lbs
 - ▣ Jaw Force: 920 lbs
 - ▣ Integrated wrist camera
 - ▣ Interlocking Jaw option



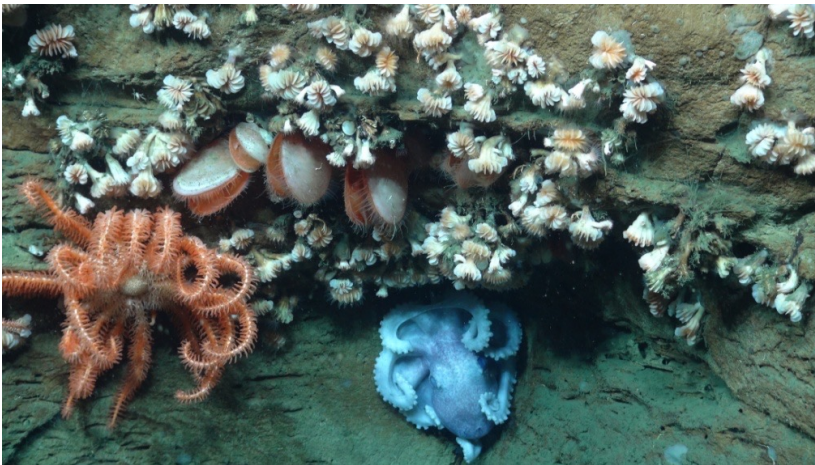
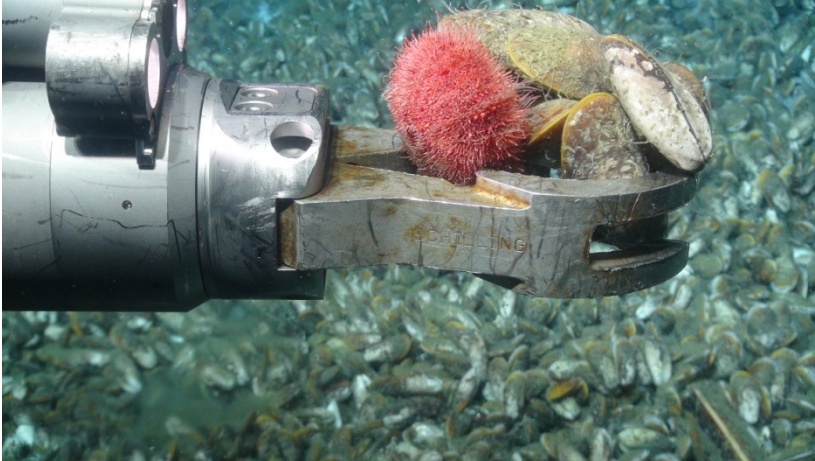
Cameras and lighting



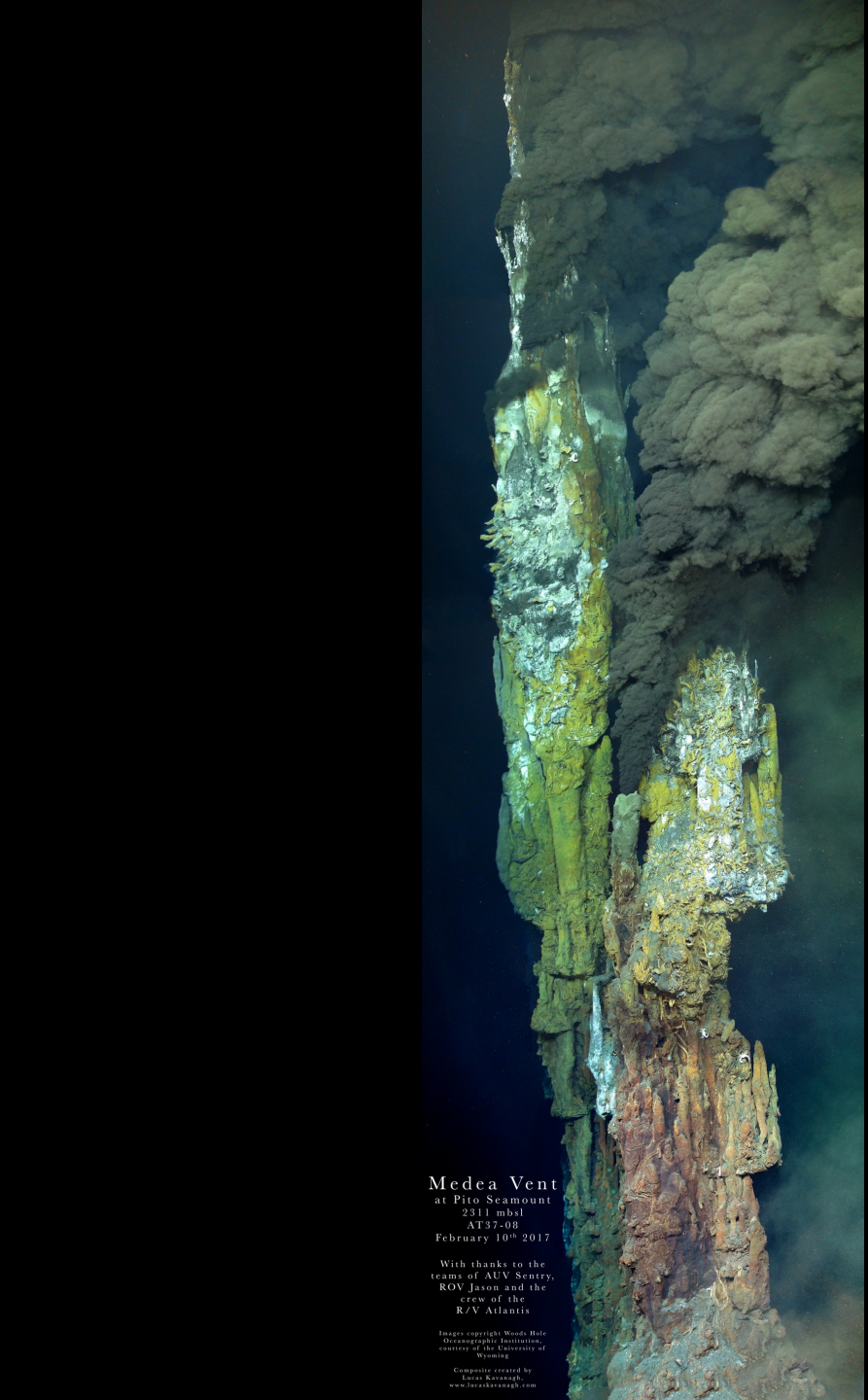
Primary science 4 K Camera

- Subsea Sulis Z70 4 k
- Provides both stills and video in one camera
 - Faster still storage in still mode
 - Possible to capture stills in video mode with delay
- Full res 4 k recorded in highlights and HD 24/7
- Stills in full res to separate hard drive
- Well done GUI with P&T control integral
- Replaces Super Scorpio
- Connector oil leak on demo unit replaced by Jason connector on final unit

Cameras



- Insite Super Scorpio DSC - Ultra HD
 - ▣ 12.3 Mega pixel
 - ▣ 10X zoom
 - ▣ 64 G flash storage
- 3X Mini Zeus HDTV
 - ▣ 2 Mega pixel
 - ▣ 10x zoom
- 18X LED lights
 - ▣ over 100 k Lumens

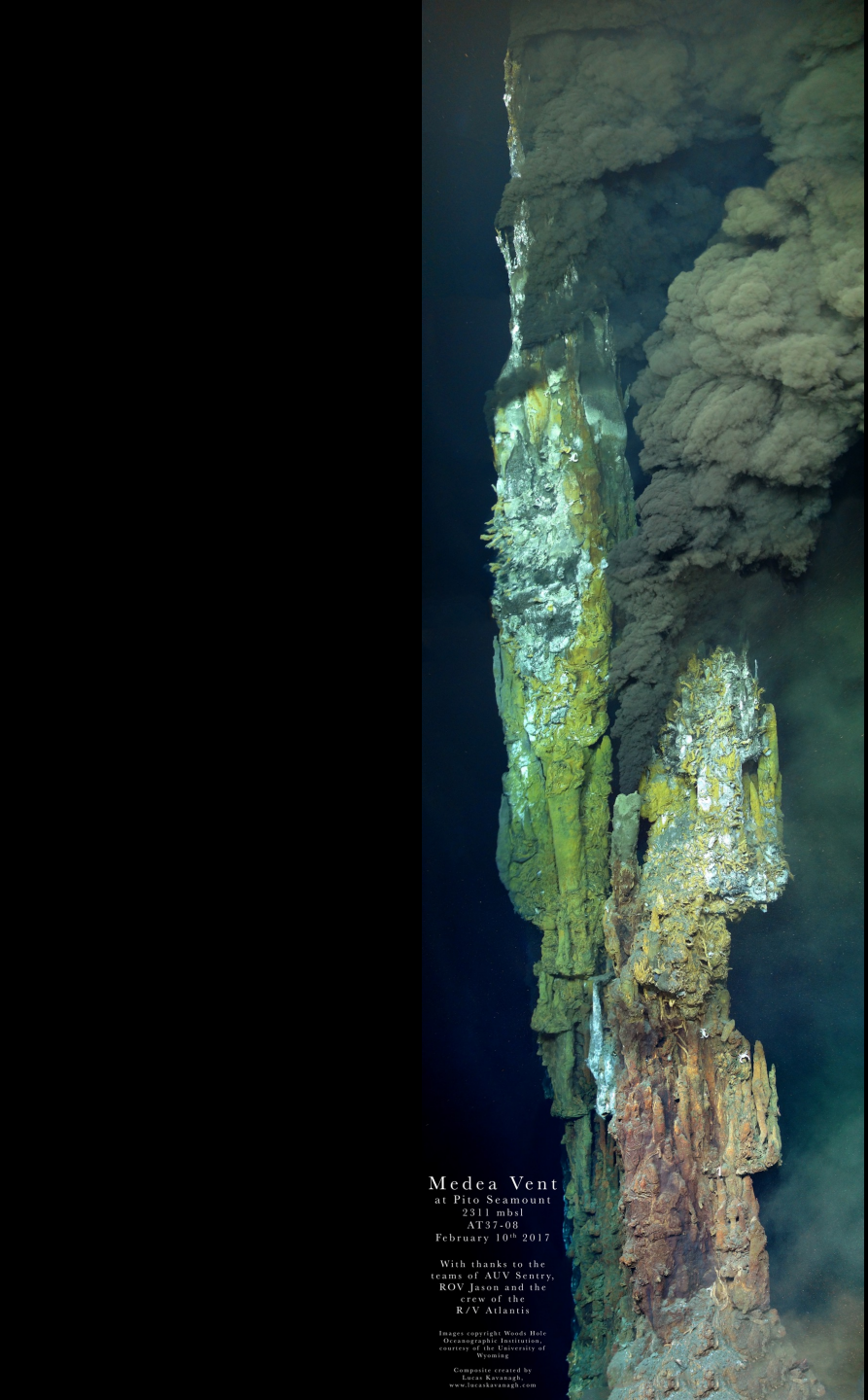


Jason Vent
at Pito Seamount
AT37-08
February 10th 2017

With thanks to the teams of
AUV Sentry, ROV Jason and
the crew of the
R/V Atlantis

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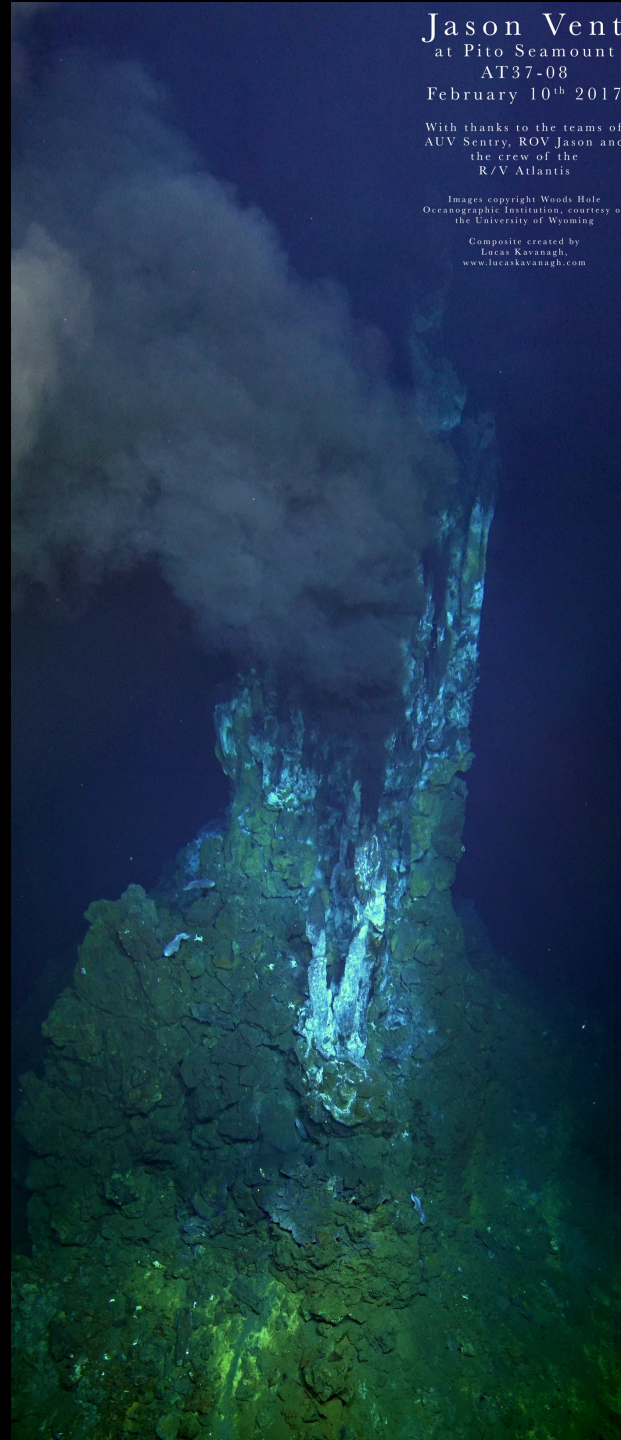


Medea Vent
at Pito Seamount
2311 mbsl
AT37-08
February 10th 2017

With thanks to the
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Sulis stills



Sensors



- Octans Fiber Optic Gyroscope
- Phinns IMU
- 2x Doppler 1200 & 600 kHz
- Paroscientific Depth Sensor: 7000m range
- Kongsberg 4080 High Resolution Multi-Beam Sonar
- Bluebird dual frequency Imaging Sonar
- CDT: Seabird 19 & Seabird 37 SI
- USBL Navigation/Tracking
- Homer Tracking Beacon