Ocean Class AGOR Program

Program Status

19 November 2013

Prepared For

RVTEC

Office of Naval Research

Ocean Class AGOR Names Armstrong Class R/Vs

ONR
Office of Naval Research

R/V Neil Armstrong (AGOR 27)

R/V Sally Ride (AGOR 28)

Tuesday, September 25, 2012 - Secretary of the Navy Ray Mabus announced today that the first Armstrong-class Auxiliary General Oceanographic Research (AGOR) ship will be named Neil Armstrong, after the first man to walk on the moon during the 1969 Apollo 11 mission who died in August 2012 at age 82. Armstrong's widow, Carol, will serve as the ship's sponsor.

On April 12, 2013 Secretary Mabus announced that AGOR 28 will be named in honor of the first woman in space and former Scripps/UCSD Professor, Dr. Sally Ride. "Sally Ride's career was one of firsts and will inspire generations to come," Mabus said. "I named R/V *Sally Ride* to honor a great researcher, but also to encourage generations of students to continue exploring, discovering and reaching for the stars."

Ocean Class AGOR Quad Chart

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Key Characteristics:

- Hull Material: Steel; Aluminum pilothouse
- Length: 238 ft
- Beam (Max): 50 ft
- Draft: 15 ft
- Displacement: 3043 LT (Full Load)
- Sustained Speed: 12 kts
- Range: 10,545 nm
- Endurance: 40 days
- Propulsion: 4 x 1044 kW Diesels, 2 x 879 kW Electric Propulsion Motors, 2 x Controllable Pitch Propellers, Bow & Stern Thrusters
- Accommodations: 20 crew, 24 science berths
- ABS Classed/ABS Designed to ABS ✠A1 Circle E, ✠AMS and ✠ACCU, NIBS, Ice Class D0, USCG COI

Mission: Integrated, interdisciplinary, general purpose oceanographic research in coastal and deep ocean areas. Oceanographic sampling and data collection of surface, mid-water, sea floor, and sub-bottom parameters.

Quantity: Two (2)

User: Woods Hole Oceanographic Institution (AGOR 27), Scripps Institution of Oceanography (AGOR 28)

Ship Names: R/V *Neil Armstrong* (AGOR 27)
R/V *Sally Ride* (AGOR 28)

Builder: Dakota Creek Industries, Inc.

Contract: FFP

Contract Value: $177.4M

ROM Unit Cost: $74.1 M (lead), $71.0M (follow)

Key Events:	Date:
Phase I Contract Award	Jan 10
Milestone B/C	Sep 11
Phase II Contract Award	Oct 11
Follow Ship Award	Feb 12
Start Construction (Lead Ship)	Jun 12
Start Construction (Follow Ship)	Jul 12
Launch 1st Ship	~ Feb 14
Launch 2nd Ship	~ Aug 14
Delivery (Lead Ship)	Oct 14
Delivery (Follow Ship)	Apr 15

Ocean Class AGOR
Science Mission Equipment

- Shortly after Delivery the following mission equipment systems will be installed at Dakota Creek under the supervision of WHOI and SIO
  - Multi-Beam Swath Mapping System: Deep Water - Kongsberg EM-122 12 kHz 1º x 2º
  - Multi-Beam Swath Mapping System: Mid Water – Kongsberg EM-710 0.5° x 1°
  - Acoustic Doppler Current Profilers: 38 kHz, 75 kHz (WHOI), 150 kHz (SIO), 300 kHz
  - Sub Bottom and Single Beam Profiler: Knudsen Chirp 3260, 16 Massa TR-1075 3.5 kHz transducer array; and one12 kHz Single beam transducer
  - Attitude, Heading, Reference System (AHRS): Applanix PosMV 320, or IXSEA HYDRIN (or equal)
  - Sea Surface Sound Velocity System: Kongsberg SSVS, Seabird Thermosalinograph (or equal)
  - Flow Thru Seawater Instrumentation (piping and pumps by shipyard)
  - Broadband Satellite Communications System – TBD – Fleet Broadband, HiSeas Net, other?
  - Acoustic Navigation and Tracking system – Kongsberg HiPap or Sonardyne
  - Fisheries Echosounder System – Kongsberg EK60 (frequencies tbd)
  - Local Area Network servers, printers, plotters, etc.

Keel Laying Ceremony
August 17, 2012

AGOR 27 (R/V *Neil Armstrong*) Production by Module

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AGOR 27

Production Progress: 60%

Material Obligations: 90%

Overall Progress: 64%

On schedule

Color Key
Mat'l Prep
Fabrication
Assembly
Erection
Post-Outfitting
Complete

AGOR 27 (R/V *Neil Armstrong*) Current Production

Pilot House being installed on *Neil Armstrong*

AGOR 27 (R/V *Neil Armstrong*) Current Production

R/V NEIL ARMSTRONG

Takes on its identity

AGOR 27 (R/V *Neil Armstrong*) Current Production

R/V NEIL ARMSTRONG
Primer coat on the hull

AGOR 27 (R/V *Neil Armstrong*) Current Production

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R/V NEIL ARMSTRONG Galley Taking Shape

AGOR 27 (R/V *Neil Armstrong*) Current Production

Bridge Console Mockups – reviewed by Capt's

Moving Genset into place

Stateroom joiner work, insulation, port light

Multibeam openings – Transducer Flat

AGOR 28 (R/V *Sally Ride*) Production by Module

Office of Naval Research

AGOR 28

Production Progress: 36%
Material Obligations: 79%
Overall Progress: 45%
On Schedule

Color Key
Mat'l Prep
Fabrication
Assembly
Erection
Post-Outfitting
Complete

AGOR 28 (R/V *Sally Ride*) Current Production

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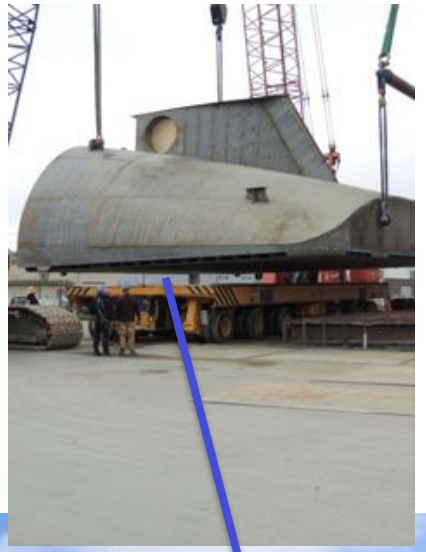
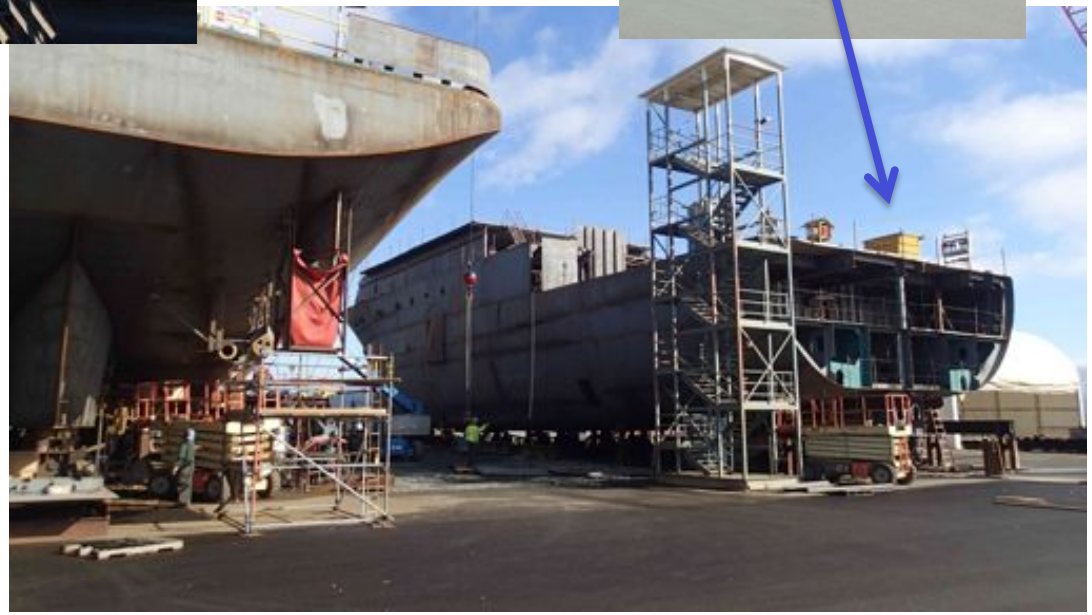
All the parts are coming together this month



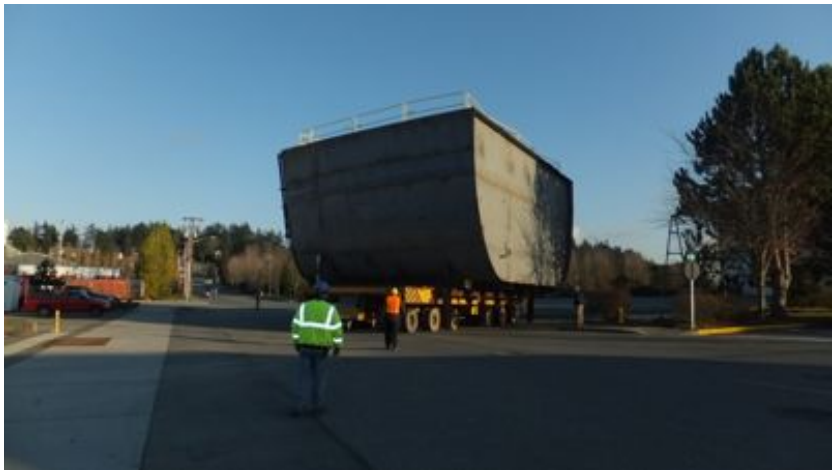


AGOR 28 (R/V *Sally Ride*) Current Production

SALLY RIDE Pilot House nearing completion in the "Big House"

AGOR 28 (R/V *Sally Ride*) Showing a module move

MOD 3 in the “Big House”



Module 3 Move across the street

Lining Up Mod 3 with Mod 4

AGOR 28 Mod 3 & 4 ready for joining

AGOR
Current Production

Office of Naval Research

Stack and Winch Control Booth Ready for installation

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AGOR
Production Pictures

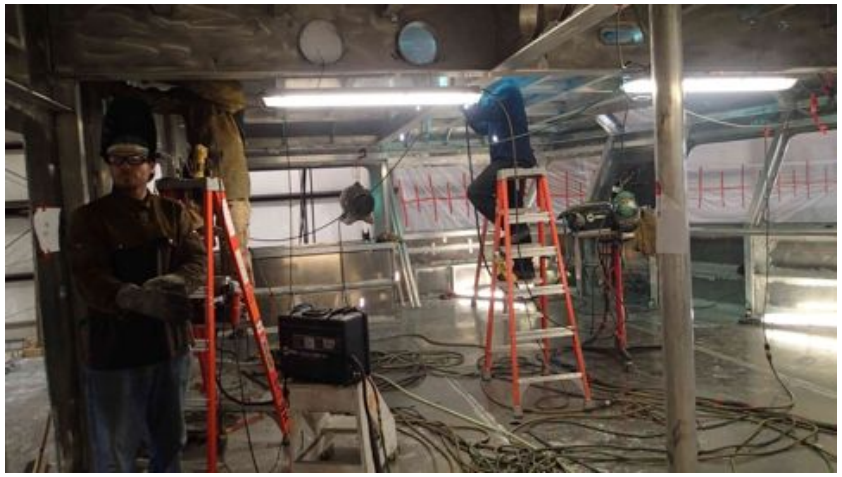
Machy Space

SW bulkhead penetration

Machy Space Wireways in overhead

Prop Shafts

AGOR
Production Pictures



SALLY RIDE Pilot House interior

Cummins Genset loaded into AGOR 27

Al Suchy Inspects Propulsion Motor

AGOR 28 Main Deck – Upside Down – Bolt Holes

Ocean Class
Operator's On Site Reps

Gary McGrath
Chief Engineer
Woods Hole Oceanographic Institution

Paul Bueren
Chief Engineer
Scripps Institution of Oceanography


Questions?