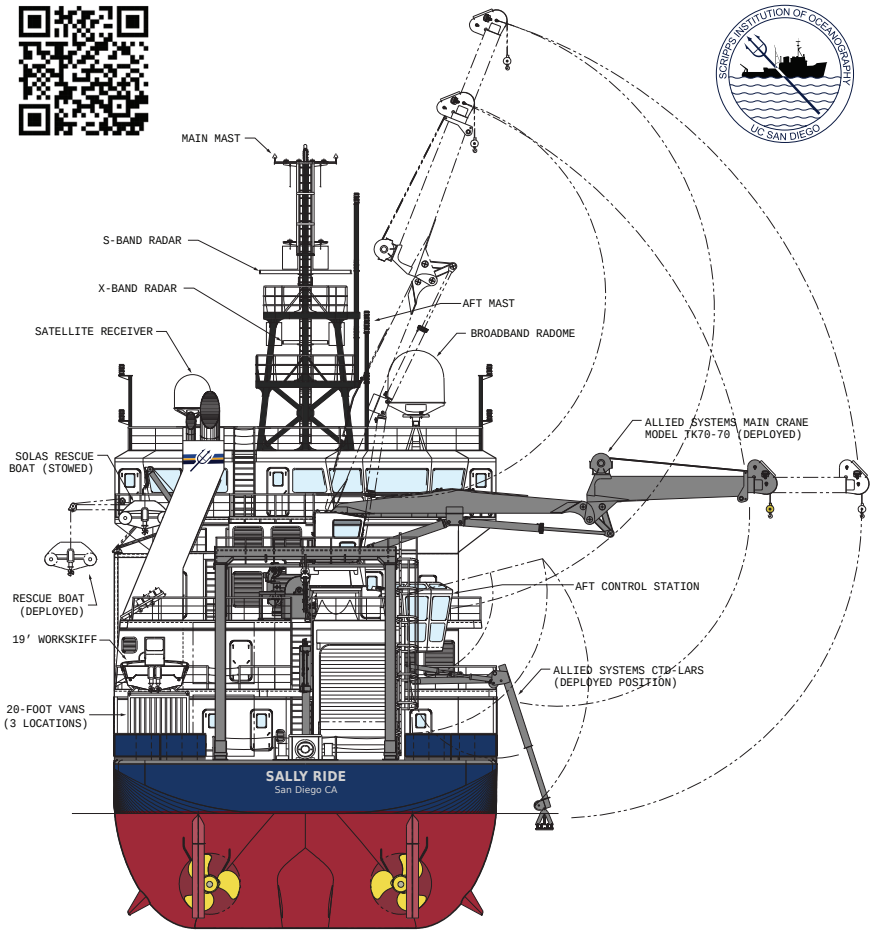
RESEARCH VESSEL

Sally Ride

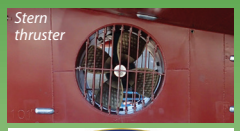
Advancing the state-of-the art for scientific discovery at sea

Owned by the United States Office of Naval Research and operated by Scripps Institution of Oceanography, R/V *Sally Ride* is an Ocean Class Auxiliary General Oceanographic Research (AGOR) vessel designed to perform multidisciplinary oceanographic research worldwide, from littoral environments to the deepest ocean, from the tropics into first-year sea ice. Aboard R/V *Sally Ride*, new systems will permit improved over-the-side operations, station keeping, trackline maneuvering, and acoustic system performance to support demanding scientific tasks. Designed to be reliable, cost effective and flexible, the Ocean Class AGOR will capably support the evolving needs of U.S. scientists for decades to come.

http://scripps.ucsd.edu/ships



STERN VIEW



R/V *Sally Ride* Specifications

Length: 238 feet Beam: 50 feet Draft: 15 feet
Gross tonnage: 3,043 long tons
Sustained speed: 12 kts Maximum speed: 12.8 kts
Dynamic positioning & trackline following: ± 5m in SS5
Endurance: 40 days at 12 knots (fuel) Range: 10,545 nm
Ice strengthening: independent ops in first-year ice (ABS Ice Class D0)
Superior maneuverability and reliability from variable-speed controllable pitch propellers and bow and stern thrusters

Room on Board

Accommodation: 20 crew, 24 scientists (includes ADA stateroom)
Laboratory space: 2,035 ft² Main deck working area: 3,036 ft²
Science storage space: 5,017 ft³ Science payload: 250 long tons
Portable vans: 3 20-foot containers aft, 1 container forward

Scientific Equipment

Deep Water Multibeam Survey System: Kongsberg EM122
Shallow Water Multibeam Survey System: Kongsberg EM712
Acoustic Doppler Current Profilers:
Teledyne RDI Ocean Surveyor 38 kHz and 150 kHz
Teledyne RDI Mariner Workhorse 300 kHz
Sub-Bottom Profiler: Knudsen 3260, 16-element Massa 3.5 kHz Array
Echosounder: Knudsen 3260 with 12 kHz single-beam transducer
Fisheries research sonar: Kongsberg EK80 with five frequencies (split beam transducers at 18, 38, 70, 120 and 200 kHz)
Acoustic synchronization unit: Kongsberg K-Sync, 8 channels
Motion sensors: Kongsberg Seapath 330+, IXSEA PHINS
Underway salinity & temperature: Seabird thermosalinograph
Underway temperature profiling: Turo expendable bathythermograph
Seawater sound speed: Calculated from thermosalinograph (surface) and Turo XBT system (vertical profiles)
Underwater navigation system: Kongsberg HiPAP 501 (30 kHz, range to 4,000 m) and HiPAP 101 (12 kHz, range to 10,000 m)
Long baseline transponder navigation: Kongsberg HiPAP
Supply of submersible transponders: Kongsberg cNODE (12 & 30 kHz)
Scientific wave radar: Rutter WAMOS II-300 Wave Monitoring System measures and displays ocean wave spectra in real time
Flow-through uncontaminated seawater system, instrumented for meteorological and sea surface measurements
Shipboard data system: Wired and wireless shipboard network
Satellite broadband: Redundant satellite internet connectivity

Support Equipment

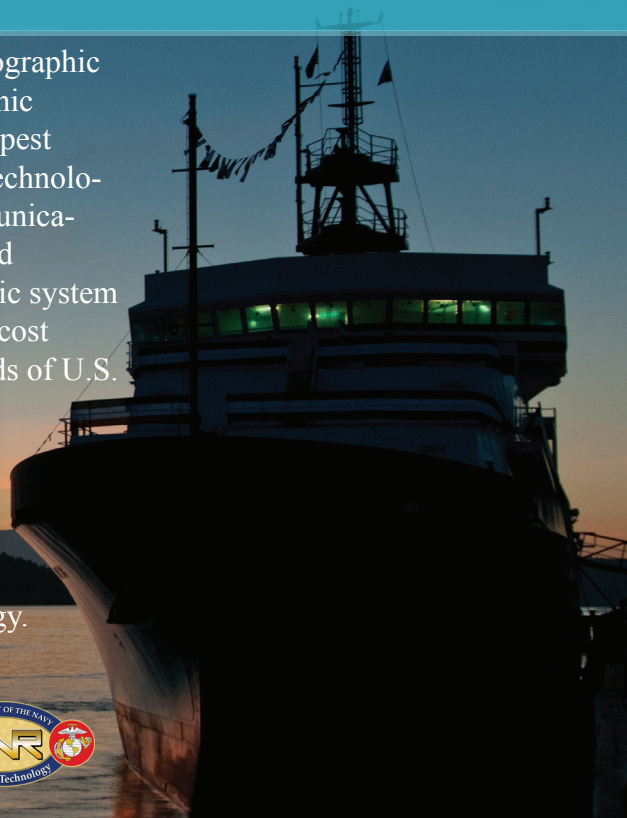
Main crane: Allied TK70-70 telescoping knuckleboom, 10,000 lbs at 70 feet extension (sea state 4), 22,000 lbs at 70 feet (sheltered ops)
CTD handling system: Allied CTD-LARS
Starboard overboard handling system: Allied
Handling systems reach to waterline for improved safety and load control
Portable crane: Allied TK10-40 telescoping knuckleboom, 2,000 lbs at 30 feet extension
A-Frame: Allied, 30,000 lbs dynamic working load
A-Frame lowers forward to deck for access to sheaves at sea
CTD/hydro winches: Dual Markey CAST6 with motion compensation and rend & recover modes, each with rated full drum capacity of 14,000 m 0.322" electro-mechanical (EM) cable, 12,000 m 0.375" 3x19 torque-balanced wire rope, or 10,000 m 0.393" EOM (electro-optical-mechanical) cable
Main winch: Markey traction winch with rated line pull 25,000 lbs at 45 m/min and dual storage drums, each with rated full capacity of 12,000 m 9/16" 3x19 torque-balanced wire rope, 10,000 m 0.680" EM cable, or 10,000 m 0.681" EOM cable.

SALLY RIDE (AGOR 28)

OCEANOGRAPHIC RESEARCH VESSEL

The Research Vessel *Sally Ride* is an Ocean Class Auxiliary General Oceanographic Research (AGOR) vessel designed to perform multidisciplinary oceanographic research worldwide, in environments ranging from shallow coasts to the deepest oceans. AGORs enable cutting-edge scientific research by using advanced technologies to carry out sampling, data acquisition, computing, analysis, and communications at sea. With the Ocean Class AGOR, new systems will permit improved over-the-side operations, station keeping, trackline maneuvering, and acoustic system performance to support demanding scientific tasks. Designed to be reliable, cost effective and flexible, R/V *Sally Ride* will capably support the evolving needs of U.S. scientists for decades to come.

The namesake for AGOR 28 is an inspirational American hero. A PhD physicist, accomplished astronaut, professor of physics at UC San Diego, and award-winning author of science books for children, Dr. Sally Ride devoted her life to scientific accomplishment, technical achievement, space exploration and igniting student enthusiasm for science, math, and technology.



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