R/V Kilo Moana

R/V KILO MOANA is the newest US oceanographic research vessel. The small waterplane area, twin hull (SWATH) form is designed to provide a comfortable, stable platform allowing general purpose oceanographic research in coastal and deep ocean areas, even in high sea conditions. She has the speed (15 kts max; 12 kts survey), endurance (50 days), mission payload (100 LT) and range (10,000 nm) to operate throughout the Pacific and indeed globally. Dynamic positioning (with twin screws and bow-thruster), (differential) GPS, an inertial reference unit, and an integrated bridge and power control system, permit accurate surveying and station keeping. Accommodations for 18 crew and 30 scientists complement the generous lab spaces (~3,000 sq ft) outfitted to support oceanographic and meteorological research.

R/V KILO MOANA is equipped with an extensive suite of sonar systems (including Simrad EM120 and EM1002 multi-beam bathymetry, Sontek 125kHz ADCP, and 4, 12, 38 and 200 kHz echosounders) plus a gravimeter, magnetometer, fluorometer, thermostalinograph and CTD system. There is a ship-wide computer and video/data-sharing network. Cranes, winches and a movable stern frame (providing a reach of 12 ft beyond the transom) allow equipment to be launched, towed and recovered over the stern and side from the 2,200 sq ft aft working deck. On the 01 level there is an additional 2,000 sq ft of working deck located forward, as well as several (20 ft x 8 ft) van locations midship. A radiosotope van is available. Further information on the ship’s characteristics and systems is described at http://soest.hawaii.edu/KiloMoana.

BUILT: 2002
DESIGN: SWATH (Small Waterplane Area Twin Hull)
LENGTH: LOA 186’
Strut Length: 172’
BEAM: 88’
DRAFT: 25’ (Max); 21’ (Min)
GROSS TONNAGE: 2500 LT
COMPLEMENT:
Crew: 20
Scientific Personnel: 28
SPEED:
Cruising & Survey: 12 kt
Full: 15 kt
OPERABILITY: Sea State 6
ENDURANCE: 50 days
RANGE: 10,000NM @ 12 kt
FUEL CAPACITY: 130,000 gal
OPERATED BY: School of Ocean and Earth Science and Technology, University of Hawaii
OWNERSHIP: U.S. Navy
LABORATORIES:
- Hydrographic 290 sq ft
- Chemical 290 sq ft
- Wet 320 sq ft
- I-Met 270 sq ft
- General Lab #1 170 sq ft
- General Lab #2 560 sq ft
- Computer 560 sq ft
- Staging Bay 370 sq ft
- Science Office 90 sq ft
- ET Shop 110 sq ft
- TOTAL 3,030 sq ft

CONFERENCE ROOM: 270 sq ft

LIBRARY: 260 sq ft

FULLY AIR CONDITIONED

INCINERATOR: Yes

BOW THRUSTER: Elliott White Gill Model 40 Located in starboard hull

MAIN PROPULSION: Diesel electric
- (4) 910 kW diesel generators driven by Caterpillar 3508B SCAC diesel engines
- (2) 1.5 MW Westinghouse (Class 3) DC motors fed by 12-pulse SCRs and phase shifting transformers

PROPELLERS: Twin, fixed pitch, 5 blade

DYNAMIC POSITIONING & SHIP CONTROL:
EDI Power Management

EMERGENCY GENERATOR: 190 kW Caterpillar 1406

CERTIFICATION:
- ABS: A1 Circle E, AMS, ACCU UWLD (Underwater inspection in lieu of dry docking.) Unrestricted ocean service, Ice Class DO
- USCG: Oceanographic Research Vessel (Sub Chapter U)