RESEARCH VESSEL

KNORR

The WHOI ship that helped discover the RMS *Titanic* and hydrothermal vents

Woods Hole Oceanographic Institution

The EVOLUTION of *Knorr*

1967

Keel for the U.S. Navy's newest Auxiliary General-purpose Oceanographic Research vessel (AGOR-15) is laid at Defoe Shipbuilding in Bay City, Michigan.

1968

The hull of the ship is christened the R/V *Knorr*, after Ernest R. Knorr, a nineteenth-century Navy cartographer, and launched.

1970

Knorr arrives in Woods Hole.

1989-91

At McDermott Shipyard in Amelia, Louisiana, *Knorr* is cut in half to lengthen the vessel by 10 meters (33 feet) and install a new propulsion system.

2003

Knorr receives a new computer-controlled dynamic positioning system that allows the ship to hold its position within 1 meter (3 feet).

2007

Knorr undergoes modifications to accept the new WHOI Long Corer, a 30,000-pound instrument capable of extracting 150-foot sediment cores from the seafloor.

Knorr MILESTONES

1972-74

Scientists with Geochemical Ocean Sections Study (GEOSECS) on *Knorr* and other vessels complete the first global, three-dimensional survey of the distribution of chemical, isotopic, and radiochemical tracers in the ocean.

1973

Knorr hosts a reception for members and representatives of the United Nations Seabed Committee during a port call in New York City.

1974

Knorr helps deploy the submersible *Alvin* on Project FAMOUS (French-American Mid-Ocean Undersea Study), a 3-year effort to explore the mid-Atlantic Ridge that helps establish *Alvin*'s usefulness as a research submersible.

1977

A team of geologists working aboard *Knorr* and *Lulu*, the support ships for the submersible *Alvin*, see for the first time active hydrothermal vents and unique animals during dives to the Galapagos Rift in the East Pacific.

1981

Working a zigzag track across the North Atlantic, scientists occupy *Knorr* for seven months as part of the Transient Tracers in the Ocean (TTO) project.

1985

On September 1, scientists working on *Knorr* take the first photographs of the wreck of RMS *Titanic* more than 12,400 feet beneath the surface.

1990

From 1990 to 2002, scientists use *Knorr* to collect samples from more WOCE (World Ocean Circulation Experiment) locations in the Atlantic, Pacific, Southern, and Indian Oceans than any other U.S. research vessel.

1997

Knorr braves frigid weather in the Labrador Sea to help scientists make the first mid-winter studies of one of the few places where cold, dense surface water sinks to the deep ocean.

2005

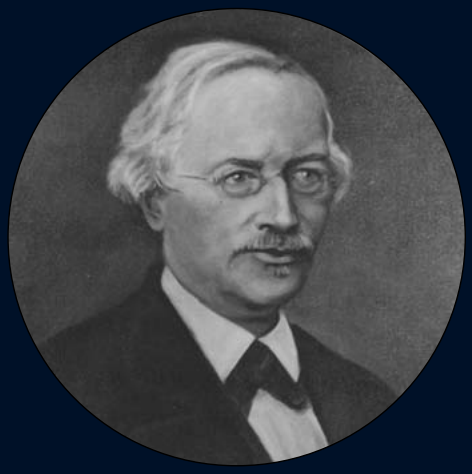
Knorr surpasses the million-mile mark.

2008

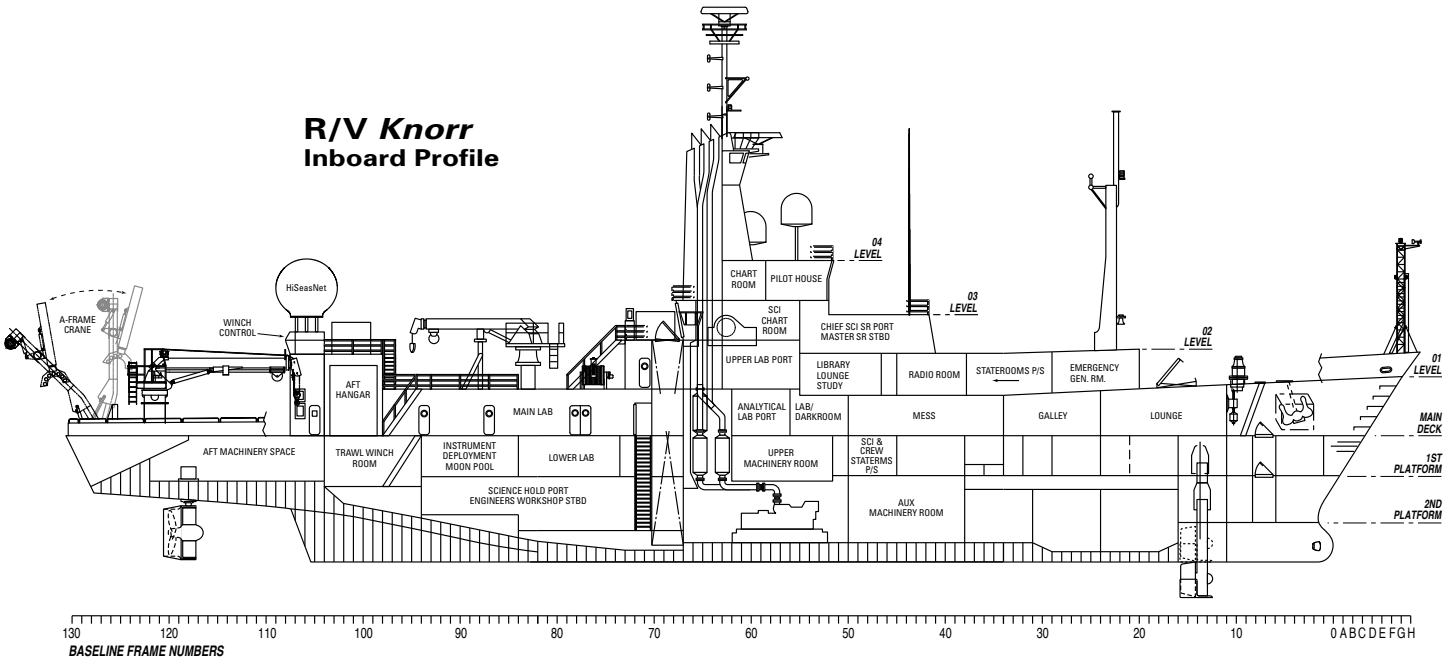
Knorr makes its northernmost journey, to 80°14' N, while tracking atmospheric pollution in the Arctic.

WOODS HOLE OCEANOGRAPHIC INSTITUTION 1930

The Research Vessel *Knorr* is owned by the U.S. Navy and operated by the Woods Hole Oceanographic Institution (WHOI) for the benefit of the ocean research community. Launched in 1968 and delivered to WHOI in 1970, R/V *Knorr* has traveled more than one million miles in support of research on the biology, chemistry, geology, geophysics, and physics of the ocean, as well as on instrument and vehicle development and ocean engineering.



The ship is named in honor of Ernest R. Knorr, a distinguished hydrographic engineer and cartographer, who was appointed senior civilian and Chief Engineer Cartographer of the U.S. Navy Hydrographic Office in 1860. Mr. Knorr was largely responsible for the success of the Navy's first systematic charting and surveying effort from 1860 to 1885.



Knorr specifications

Length:	279 feet (85m)
Draft:	16.5 feet (5m); Bow thruster lowered: 23 ft (7m)
Beam:	46 feet (14m)
Gross weight:	2,518 tons
Range:	12,000 nautical miles
Speed:	11.0 knots cruising
Endurance:	60 days
Fuel Capacity:	160,500 gallons
Propulsion:	2 Lips diesel-electric stern thrusters (1500 SHP each)
Bow Thruster:	Lips retractable azimuthing (900 SHP)
Laboratory space:	2,756 sq. feet
Crew:	22
Technicians:	2
Science party:	32

The Woods Hole Oceanographic Institution is dedicated to research and education to advance understanding of the ocean and its interaction with the Earth system, and to communicating this understanding for the benefit of society.

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