

# Drilling for climate change

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Researchers aboard the drilling vessel JOIDES Resolution will finish their Mediterranean voyage next week to unearth thousands of centuries of climate data from beneath the ocean floor.

“The climate change recovered at one of the drill sites will be dedicated to providing the most complete marine record of [climate change](#) over the past 2 million years of Earth’s history,” said UC Davis geophysicist Gary Acton, who was among a team of scientists to set sail from the Azores Islands on Nov 17.

The expedition — to understand the influence that warm water flowing out of the Mediterranean has on climate and the environment — will end Tuesday, Jan. 17, in Lisbon, Portugal.

The vessel is run by the Integrated Ocean Drilling Program and has the unique ability to core into the deepest reaches of the oceans and recover the sediments and rocks that contain Earth’s history. The IODP Expedition 339 is targeting thick sediment drifts that have accumulated from warm water flowing from the Mediterranean through the Strait of Gibraltar. In measurable ways, the sediments record subtle changes in environmental conditions.

“My goal is to reconstruct centennial-scale changes in climate and in Earth’s magnetic field for a time period spanning the past 400,000 years,” said Acton. “Only thick, rapidly deposited sedimentary units like those we are coring provide that ability. They are virtual prehistoric observatories.”

The research, conducted by 34 scientists from 13 nations, will provide a marine archive comparable with ice core records from the Greenland and Antarctic ice sheets and with land-based records from tree rings, cave stalactites and lake sediments.

Provided by UC Davis

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