

'Dirty blizzard' in gulf may account for missing Deepwater Horizon oil

March 15 2013, by Jill Elish

Oil from the 2010 Deepwater Horizon spill acted as a catalyst for plankton and other surface materials to clump together and fall to the sea floor in a massive sedimentation event that researchers are calling a "dirty blizzard."

Jeff Chanton, the John Widmer Winchester Professor of Oceanography in the Department of Earth, Ocean and [Atmospheric Science](#) at Florida State University, is one of the members of the Deep-C Consortium who presented the dirty blizzard hypothesis at a recent conference in New Orleans that focused on the effects of the oil spill on the Gulf of Mexico ecosystem.

The consortium, which includes researchers from FSU, Eckerd College, the University of South Florida and Georgia Institute of Technology, confirmed the never before observed dirty blizzard hypothesis by using thorium, lead and radiocarbon isotopes in addition to [DNA analyses](#) of sediments.

The dirty blizzard phenomenon may explain what happened to some portion of the more than 200 million gallons of spilled oil. Microbes likely processed most of the oil within months of the spill, but government assessments have not accounted for all of the spilled oil.

"Some of the missing oil may have mixed with deep [ocean sediments](#), creating a dirty bathtub effect," Chanton said. "The sediments then fell to the ocean floor at a rate 10 times the normal deposition rates. It was,

in essence, an underwater blizzard."

The oily sediments deposited on the [sea floor](#) could cause significant damage to ecosystems and may affect [commercial fisheries](#) in the future, he said.

The dirty blizzard hypothesis explains why layers of water that would normally be cloudy with suspended plankton instead appeared transparent during the spill, except for strings of particles falling to the bottom.

"The oil just sucked everything out of the surface," Chanton said.

Chanton and his Deep-C colleagues are continuing their research to determine exactly how much of the oil ended up on the sea floor.

Provided by Florida State University

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