

# The largest research expedition of its kind near the site of Deepwater Horizon incident

July 23 2012

---

Scientists have embarked on a 3-week expedition aboard the R/V Walton Smith in the Gulf of Mexico to understand how surface ocean currents near the site of the Deepwater Horizon influence the fate and transport of oil/dispersants, like those from the 2010 spill. In other words, they will investigate where pollutants travel, and how fast they get there. This experiment is an essential step in understanding the elusive surface ocean currents that transport pollutants.

This unprecedented expedition marks the first time that a study of this [magnitude](#) will map the relatively unknown [surface currents](#) found in the GoM. In the past, only a handful of monitoring devices were set adrift along the currents. This summer, more than 300 custom-made buoys known as "drifters" will be released during the Grand Lagrangian Deployment (GLAD.)

"In the aftermath of the Deepwater Horizon oil spill it became clear that understanding the various scales of oceanic currents and flows lies at the very [heart](#) of being able to improve our understanding and prediction of [oil spills](#)," explained Dr. Tamay Özgökmen, University of Miami (UM) Professor and Director of the Consortium for Advanced Research on Transport of Hydrocarbons in the Environment (CARTHE), a project funded by the [Gulf of Mexico](#) Research Initiative (GoMRI). "In this case we are like detectives uncovering clues and following the 'trail' to find out exactly where pollutants might go."

UM Professor and Chief Scientist Brian Haus will oversee the release of

drifters from UM's 96-foot catamaran, the R/V Walton Smith. "The drifters will collect a wealth of oceanic information that will be plugged into predictive models to help us better understand the role of near-[surface ocean](#) flows in spreading and dispersing materials in the marine environment," said Haus.

The GLAD experiment is one of two inaugural CARTHE research expeditions this summer. Haus leads the drifters' deployment, while Dr. Brad Rosenheim at Tulane University led sediment and water sampling along select Florida Panhandle beaches aboard the RV Pelican earlier this summer. Data from Rosenheim's experiment will help scientists confirm the presence or absence of oil and the type of weathering that has occurred to the oil in both the sedimentary and shore-line water environment.

For a few months following the GLAD experiment, the drifters will continue to drift along the Gulf of Mexico currents. All CARTHE data derived during the project will be shared with the U.S. Coast Guard (USCG) to improve their search and rescue operations.

"This joint research operation between the USCG and CARTHE combines our expertise and resources – it is a partnership that can truly save lives," said Art Allen, a physical oceanographer with the USCG Office of Search and Rescue in Washington, D.C. Allen worked with CARTHE researcher Bruce Dr. Lipphardt from the University of Delaware to release five drifters by aircraft. The drifters deployed by USCG aircraft in advance of the GLAD experiment helped CARTHE researchers to identify appropriate locations for the larger deployment.

CARTHE's field work at sea, combined with laboratory experiments and the development of interconnected modeling systems, will produce a comprehensive, four dimensional description of the oil/dispersant fate and transport in the GoM, as well as its impact on other coastal

environments across all relevant time and space scales. "Our research goes well beyond the Deepwater Horizon incident," Özgökmen said. "These experiments are complex and painstaking, but the results will be key to generating vast improvements in how and where emergency responders are deployed in the event of another oil spill or at-sea emergency."

**More information:** The CARTHE program includes twenty-six principal investigators from twelve research institutions in eight states. Together these scientists are engaged in novel research through the development of a suite of integrated models and state-of-the-art computations that bridge the scale gap between existing models and natural processes. For more information about CARTHE, please visit [www.carthe.org](http://www.carthe.org) or like us on Facebook at [www.Facebook.com/carthe.gomri](https://www.facebook.com/carthe.gomri)

Provided by University of Miami

Citation: The largest research expedition of its kind near the site of Deepwater Horizon incident (2012, July 23) retrieved 12 May 2024 from <https://phys.org/news/2012-07-largest-kind-site-deepwater-horizon.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.