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Research at FSU center impacts everyone from fishermen to farmers

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While some of the scientists at Florida State's Center for Ocean-Atmospheric Prediction Studies are working to improve the accuracy of hurricane forecasts, others are conducting research of importance to political discussions, such as the fight over water rights between Florida, Georgia and Alabama.

The average day at the center is anything but.

"One of the fun things about being a scientist is that there is no daily routine," said Brian Arbic, an assistant professor of oceanography at the center. "We want to teach, train students and post-docs on how to do research, and publish original scientific articles on new findings about the ocean (and atmosphere). Today I've been involved in almost all those aspects."

COAPS director Eric Chassignet said the center was formed in August 1996 by the Florida Board of Regents and founded by James O'Brien, the Robert O. Lawton Professor of Meteorology and Oceanography. Chassignet, who took over for O'Brien as director in 2006, said what makes COAPS special is that it is interdisciplinary in nature, featuring research scientists and students from a variety of departments including meteorology, mathematics, oceanography and computer science.

"We do better research by being all together and able to communicate," Chassignet said.

Chassignet said more than 50 people work at COAPS, which has an annual budget of about \$3 million. He said it receives limited state support, with the majority of its money coming from grants and private funding from groups including the National Ocean & Atmospheric Administration, National Aeronautics and Space Administration, the U.S. Department of Agriculture, the National Science Foundation, the U.S. Department of Energy and the Office of Naval Research.

Chassignet said the importance of COAPS' research, which primarily seeks to further scientific understanding of the effects of the interaction between the ocean and atmosphere on weather and climate, is its many applications to every day society, from fishermen and farmers to oil and insurance companies. Associate scholar scientist Steve Cocke agreed, saying he's lucky to be working on topics of great interest to the general public.

"If you just pop in on any conversation that people might have, I think you'll find weather is one of the items people are talking about," said Cocke, the primary developer of the climate model used at COAPS for making seasonal hurricane forecasts.

Cocke said he does a lot of the "under the hood" work at the center, creating detailed computer models that simulate atmospheric motion. He said he's going to be conducting experiments to see what results the climate model produces under changing climate conditions.

Arbic is researching how tides respond to changes in climate and sea level, while Mark Powell, a NOAA hurricane scientist stationed at COAPS, is doing research on hurricane wind fields.

Powell said COAPS is unique because it is an academic environment where the scientists can devote

most of their time to research, while still interacting with students. Those students, Arbic said, have a chance to be directly involved in important scientific research.

"The concept of COAPS is very compelling," Powell said. "It gives you opportunities to interact with a diverse group of scientists who give you some new ideas that can help your own research development."
