

Into the Storms

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(PhysOrg.com) -- For the first time in nine years, NASA and other federal agencies will use aircraft and satellites this summer to mount an intensive, U.S.-based study of how hurricanes are born and rapidly intensify, and a University of Utah meteorologist is one of three project scientists leading the study.

“The project scientist role involves making strategic decisions on what missions to fly on any given day,” says meteorologist Ed Zipser, a professor of atmospheric sciences at the University of Utah. “It requires careful monitoring of [weather conditions](#), and close coordination with the other scientists.”

The study - [named GRIP for Genesis and Rapid Intensification Processes](#) - will take Zipser to the Fort Lauderdale-Hollywood International Airport in Florida during Aug. 12-19 and Sept. 1-25.

There, he will coordinate with scientists from the National Aeronautics and Space Administration, [National Oceanic and Atmospheric Administration](#) and National Science Foundation to make plans for scientific aircraft flights into [tropical cyclones](#) that are developing into hurricanes and into hurricanes as they develop and become more intense.

“A critical decision point each day at 1 p.m. EDT is to alert all six aircraft from the three agencies for likely flight schedules for the coming three to four days,” says Zipser, a veteran of some 30 previous storm research campaigns.

Such planning is tricky because of the need to deploy the aircraft flying out of Florida, St. Croix, Texas and California to study both weather systems in the Atlantic Ocean that may develop into tropical depressions, storms or hurricanes, and incipient hurricanes in the Gulf of Mexico as they intensify.

One project scientist will be on duty at all times, and Zipser says another key responsibility will be to make “go or no-go” decisions three hours before each aircraft takes off.

“The project scientist also is responsible for tactical decisions, such as whether to change the flight plans, even during a mission, to take advantage of fast-changing conditions or to advise the pilots and mission managers of potentially hazardous turbulence that should be avoided,” says Zipser.

“We will be looking at a huge amount of data from many instruments on the [aircraft](#), and on satellites,” he says.

Zipser also may take to the air himself at times, riding a NASA DC-8 research plane that will fly out of Fort Lauderdale.

Provided by University of Utah

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