

Feature

NASA and NOAA join in UAV flight demonstration

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NASA's pioneering work with unmanned aerial vehicles (UAVs) could boost the National Oceanic and Atmospheric Administration's quest for life-saving atmospheric and environmental information.



An Altair unmanned aerial vehicle (UAV) is pioneering climate and environmental research for NASA and the National Oceanic and Atmospheric Administration (NOAA) this month in California.

Though they're not calling it NOAA's ark, the Altair might come in handy for predicting extended days of rain in time to mitigate natural disasters like floods and mudslides. Its sophisticated sensor suite includes a passive microwave radiometer that will be used to measure atmospheric rivers – air currents laden with moisture that sweep up from the tropics. These atmospheric rivers, flowing along polar cold front boundaries, can cause major floods on the U.S. west coast.

Guests at an April 20 flight demonstration of the General Atomics Altair UAV watched the remotely piloted airplane race past their viewing location. NASA and NOAA are using Altair to explore advanced ways of monitoring climate and the environment. (NASA photo by Tom Tschida)

The missions underway represent NOAA's first use of a UAV for this kind of research. A primary goal of the demonstration is to evaluate UAVs for future NOAA requirements.

For the evaluation, NOAA is partnered with NASA, who partially funded the development of the Altair UAV, and with General Atomics Aeronautical Systems, builders of Altair.

NASA, NOAA, and General Atomics hosted representatives of all three organizations along with congressional staff members and media at an Altair flight demonstration April 20 at General Atomics' Gray Butte, Calif., facility.

NASA nurtures the development of UAVs.
Terrence Hertz, Deputy Associate



Administrator for Technology in NASA's Aeronautics Research Mission Directorate, said "NASA is glad to see that UAVs are being used for more and more diverse and important operations."

The slender wings of Altair carried the remotely piloted aircraft during a demonstration flight April 20. NASA's Dryden Flight Research Center is working with the National Oceanic and Atmospheric Administration (NOAA) and General Atomics, builders of Altair, to evaluate the ability of UAVs to satisfy NOAA's far-reaching requirements for climatic and environmental monitoring. (NASA photo by Tom Tschida)

The current set of missions includes six flights racking up 53 flying hours and reaching altitudes up to 45,000 feet. Half the flights will focus on the Channel Islands area off the coast of California; the others will range farther out to sea. NOAA will evaluate UAVs for future usefulness related to that agency's oceanic and atmospheric research, climate research, marine sanctuary mapping and enforcement, nautical charting, and fisheries assessment and enforcement.

Additional Altair photos are available at
http://www1.dfrc.nasa.gov/Gallery/Photo/Altair_PredatorB/index.html

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