

Green aviation project tests shape changing wing flaps

May 15 2015, by Sarah Loff



Credit: Boeing/John D. Parker Credit: NASA

A NASA F-15D flies chase for the [G-III Adaptive Compliant Trailing Edge \(ACTE\)](#) project.

This photo was taken by an automated Wing Deflection Measurement System (WDMS) camera in the G-III that photographed the ACTE wing every second during the [flight](#). The ACTE experimental flight [research project](#) is a joint effort between NASA and the U.S. Air Force Research Laboratory to determine if advanced flexible trailing-edge wing flaps, developed and patented by FlexSys, Inc., can both improve aircraft aerodynamic efficiency and reduce airport-area noise generated during takeoffs and landings.

The experiment is being carried out on a modified Gulfstream III (G-III) business aircraft that has been converted into an aerodynamics research test bed at NASA's Armstrong Flight Research Center. The ACTE project involves replacement of both of the G-III's conventional 19-foot-long aluminum flaps with the shape changing flaps that form continuous bendable surfaces.

Provided by NASA

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