New flight test results are presented for a pilot-selectable autonomous system designed within a framework termed, "Mission-Adaptive Autonomy". The system was tested on the U.S. Army Aeroflightdynamics Directorate (AFDD) RASCAL JUH-60A Black Hawk and included features such as: obstacle field navigation, safe landing area determination, threat avoidance, selectable flight level control, any-time redirection, and pilot-autonomy shared control. Control and display interfaces were designed to enable a pilot to work in concert with the available autonomy. Autonomy status and intent was displayed using both new moving map symbology and symbology derived from prior forward-flight and landing-approach displays.

Pilots were able to switch between autonomous control and conventional Level 1 attitude-command/attitude-hold (AACA) manual control laws at will. Operationally relevant mission tasks were flown in a simulated degraded visual environment over urban areas with defined traffic control regions and also at low level in mountainous terrain with pop-up threats. Three configurations were tested: 1) a baseline ACAH system with no autonomous features, 2) a display-only configuration that provided autonomous navigation guidance via symbology, and 3) a full Mission-Adaptive Autonomy configuration.

*Please note, due to construction at the Moffett Boulevard Main Gate, the only direct access to the NASA Research Park, where Building 3 is located, is via the Ellis Gate

(for more info on Building 3 see: http://naccenter.arc.nasa.gov/index.php)