Hypersonic International Flight Experimentation (HIFEX) is a joint US Air Force Research Laboratory (AFRL) and German Aerospace Centre (DLR) effort to advance the maturity of enabling technologies for the realization of a next generation hypersonic aerospace system.

A highly successful integrated aerodynamic and aerothermal test and analysis of a twin scramjet-powered hypersonic cruise vehicle has been completed in the AEDC Hypervelocity Wind Tunnel 9 facility in White Oak, MD.

The effects of engine unstart on stability and aerodynamic heating of a complex hypersonic vehicle design were evaluated during the Tunnel 9 wind tunnel test prior to flight experimentation.

HIFEX model installed in the Tunnel 9 test cell in preparation for an integrated force and moment, pressure and heat-transfer Mach 8 test.

Global heating data acquired on the windward surface of the vehicle during a continuous pitch sweep, both inlets started.

Global heating data acquired on the windward surface of the vehicle during a continuous pitch sweep, starboard inlet unstarted.