

FSTD's fidelity level during the maneuver. The cross-plot or other alternative method must display the relevant validity regions for flaps up and flaps down at a minimum. This validation envelope must be derived by the aerodynamic data provider or derived using information and data sources provided by the original aerodynamic data provider.

- b. **Flight Control Inputs:** The FSTD must employ a method for the instructor/evaluator to assess the trainee's flight control inputs during the upset recovery maneuver. Additional parameters, such as cockpit control forces (forces applied by the pilot to the controls) and the flight control law mode for fly-by-wire aircraft, must be portrayed in this feedback mechanism as well. For passive sidesticks, whose displacement is the flight control input, the force applied by the pilot to the controls does not need to be displayed. This tool must include a time history or other equivalent method of recording flight control positions.
- c. **Aircraft Operational Limits:** The FSTD must employ a method to provide the instructor/evaluator with real-time information concerning the aircraft operating limits. The simulated aircraft's parameters must be displayed dynamically in real-

time and also provided in a time history or equivalent format. At a minimum, the following parameters must be available to the instructor:

- i. Airspeed and airspeed limits, including the stall speed and maximum operating limit airspeed (V<sub>mo</sub>/M<sub>mo</sub>);
- ii. Load factor and operational load factor limits; and
- iii. Angle of attack and the stall identification angle of attack. See section A, paragraph 4.b. of this attachment for additional information concerning the definition of the stall identification angle of attack. This parameter may be displayed in conjunction with the FSTD validation envelope.

#### END QPS REQUIREMENTS

#### BEGIN INFORMATION

An example FSTD "alpha/beta" envelope display and IOS feedback mechanism are shown below in Figure 1 and Figure 2. The following examples are provided as guidance material on one possible method to display the required UPRT feedback parameters on an IOS display. FSTD sponsors may develop other methods and feedback mechanisms that provide the required parameters and support the training program objectives.