

## APPENDIX

The primary wind tunnel test results including static test, force oscillation test and rotary balance test are present in the following figure A1 ~ A7. Detailed results can be found in Ref.24.

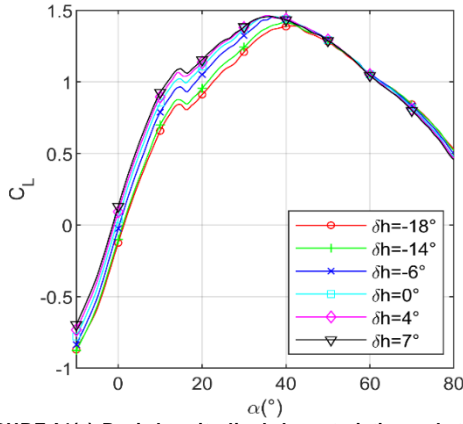


FIGURE A1(a) Basic longitudinal characteristics and stabilizer effect; all other controls zero -- Lift

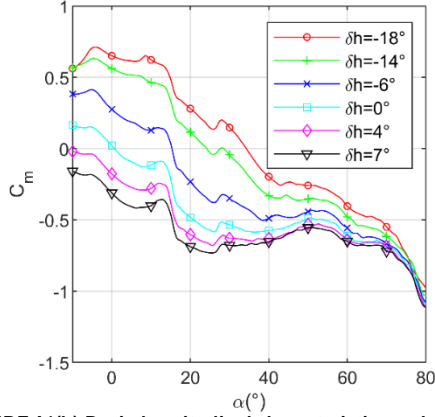


FIGURE A1(b) Basic longitudinal characteristics and stabilizer effect; all other controls zero -- Pitch moment

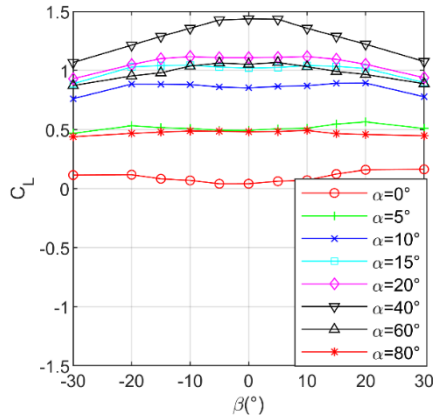


FIGURE A1(c) Basic longitudinal characteristics in sideslip; all controls zero -- Lift

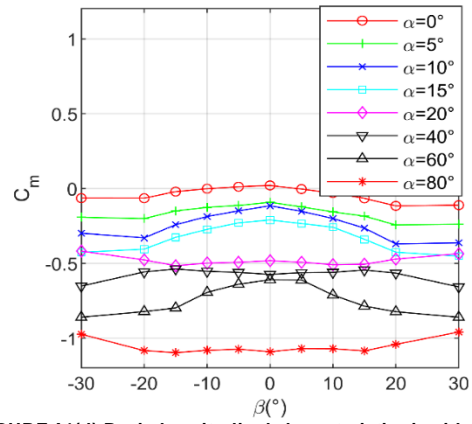


FIGURE A1(d) Basic longitudinal characteristics in sideslip; all controls zero -- Pitch moment

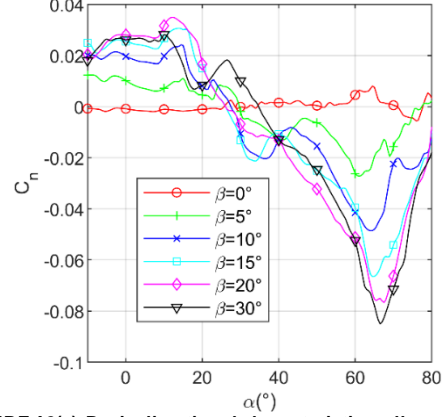


FIGURE A2(a) Basic directional characteristics; all controls zero

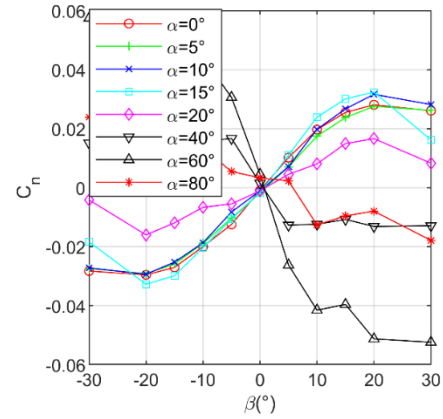


FIGURE A2(b) Basic directional characteristics; all controls zero

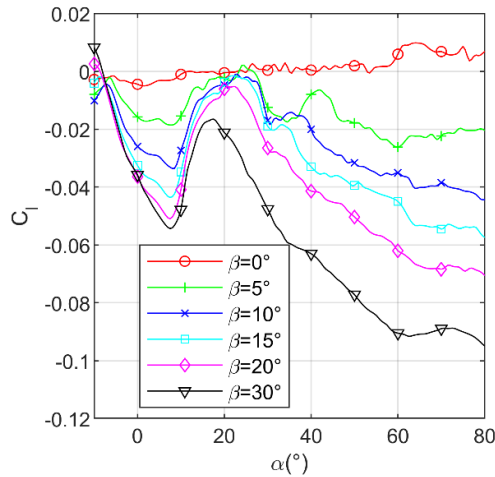


FIGURE A2(c) Basic lateral characteristics; all controls zero

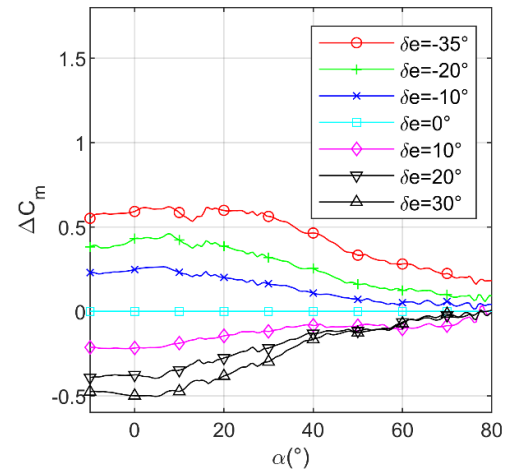


FIGURE A3(b) Elevator effect; all other controls zero – Incremental pitch moment

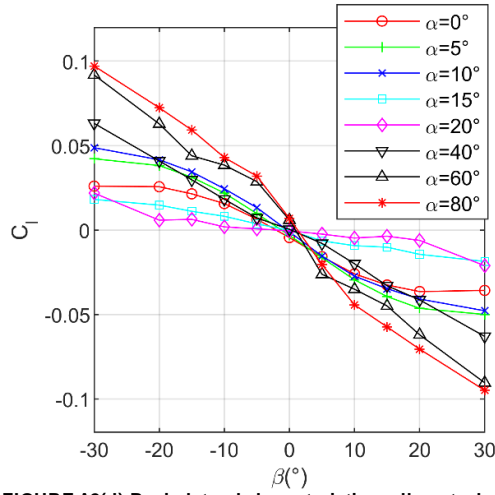


FIGURE A2(d) Basic lateral characteristics; all controls zero

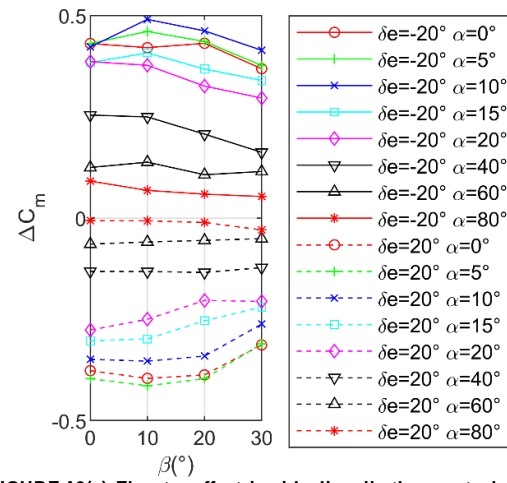


FIGURE A3(c) Elevator effect in sideslip; all other controls zero – Incremental pitch moment

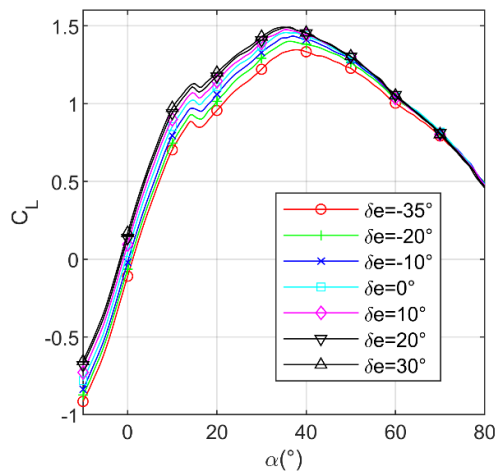


FIGURE A3(a) Elevator effect; all other controls zero – Lift

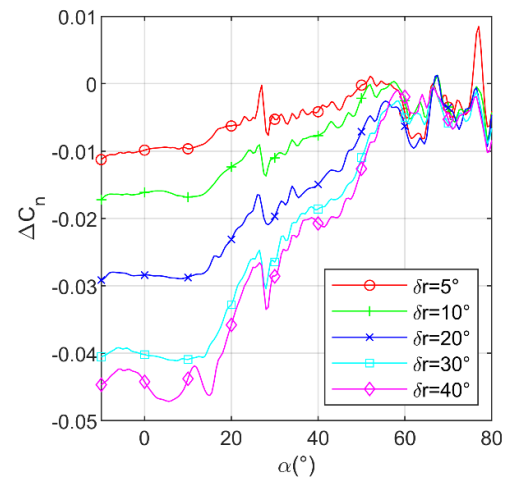


FIGURE A4(a) Incremental rudder control power; all other controls zero;  $\beta = 0^\circ$

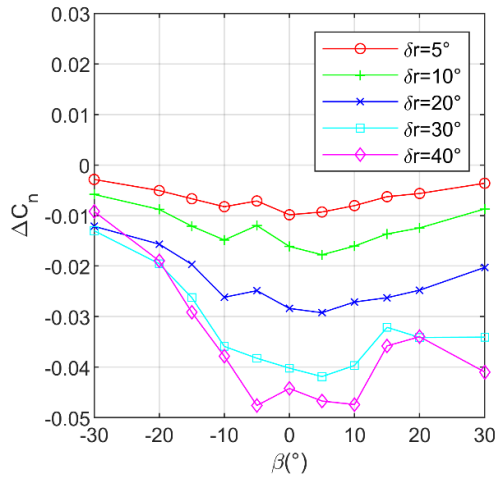


FIGURE A4(b) Incremental rudder control power, sideslip effect at  $\alpha = 0^\circ$ ; all other controls zero

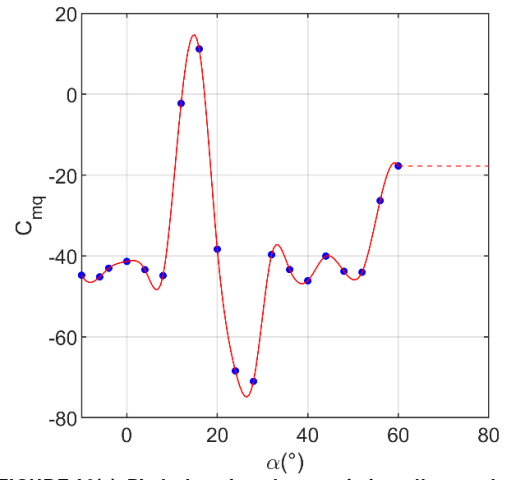


FIGURE A6(a) Pitch damping characteristics; all controls zero

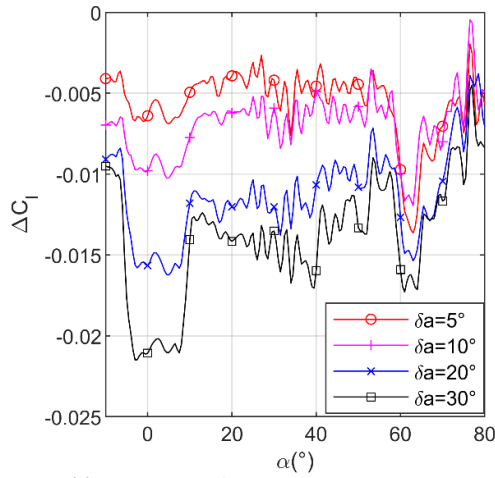


FIGURE A5(a) Incremental aileron control power; all other controls zero;  $\beta = 0^\circ$

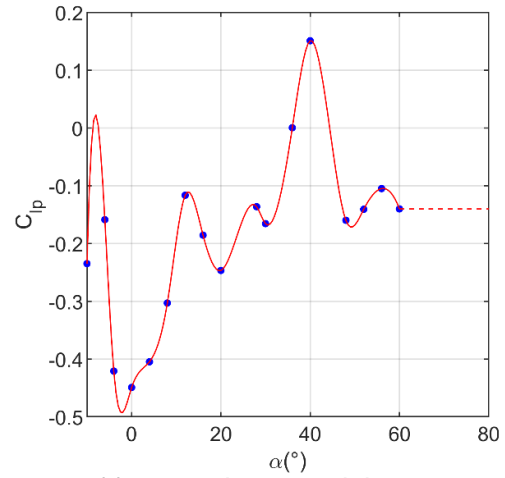


FIGURE A6(b) Roll damping characteristics; all controls zero

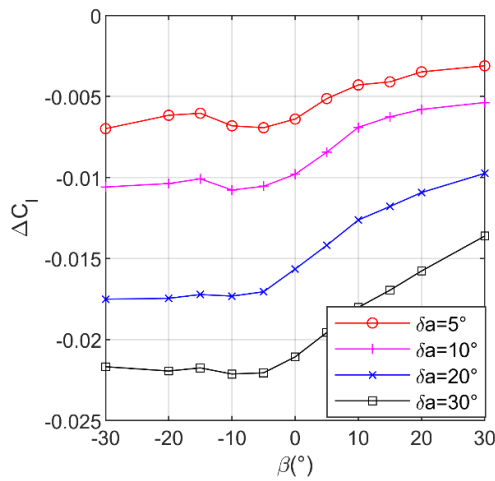


FIGURE A5(b) Incremental aileron control power, sideslip effect at  $\alpha = 0^\circ$ ; all other controls zero

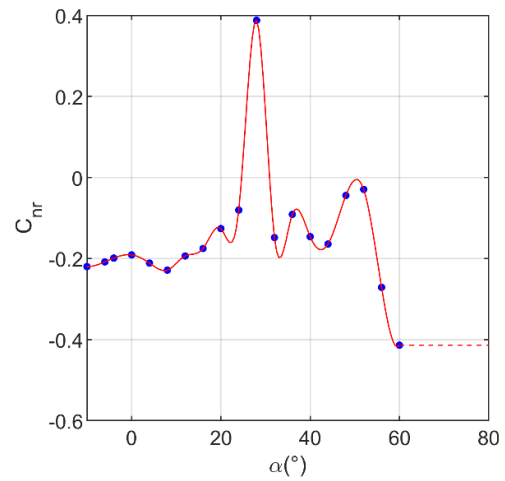


FIGURE A6(c) Yaw damping characteristics; all controls zero

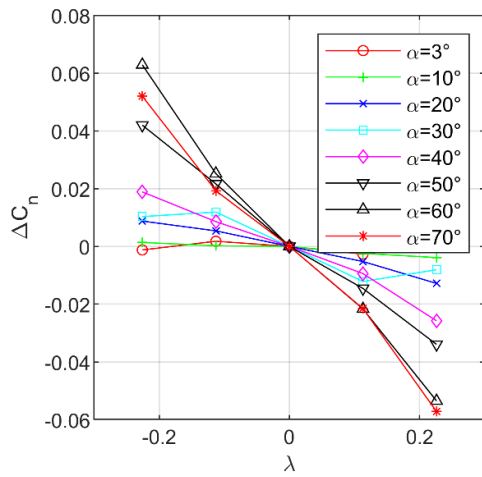


FIGURE A7(a) Rotary yaw damping characteristics,  $\beta = 0^\circ$ ; all controls zero

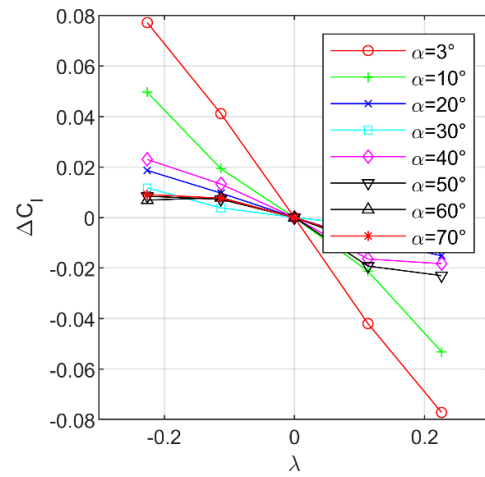


FIGURE A7(b) Rotary roll damping characteristics,  $\beta = 0^\circ$ ; all controls zero