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Title Flight Data Analysis and Parameter Estimation for
LCA – Phase III – Final Report

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Abstract

The document briefly describes the major tasks accomplished in Phase III of the project. Flight test data were generated from planned maneuvers at various test points in the flight envelope. The analysis was no longer restricted to small amplitude maneuvers; data from large amplitude maneuvers were analyzed as well to obtain parameter estimates over a wider range of angle of attack. Most of the estimates adhered closely to the trends predicted by wind tunnel database and there were no major surprises except for the reduction in direction stability and aileron control effectiveness. Results were also obtained for coefficient level matching, drag-polar estimation and flight data analysis with airbrakes. The tasks carried out are discussed in detail in the interim reports/project documents (a complete list is provided at the end of the report). The document also highlights certain issues that need to be investigated.