



**National
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RESTRICTED

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CONFIGURATION
PART II: RESULTS AT SUPERSONIC SPEEDS
AND ANALYSIS.

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Abstract :

Tests were conducted in the NAL 1.2m trisonic wind tunnel on a 1/15 scale model of the LCA Delta-5 configuration to generate six-component force and moment data at subsonic, transonic and supersonic speeds. The "flow-through model was supported by a ventral strut. The results have been corrected to account for the effects of strut interference, balance cavity pressure and through-flow in addition to the usual effects of strut deflection and base pressure.

Part I of this report presented results at subsonic and transonic speeds. This report presents results from tests in the Mach number range of 1.3 to 1.8 and an overall analysis of the results including those presented in Part I of this report. A preliminary analysis of the results indicates that the drag penalty due to close combat missiles is about 13% at subsonic and supersonic speeds and about 30% at transonic speeds. The zero lift drag variation with Mach numbers indicates two "troughs" - one at $M = 1.1$ and the other $M = 1.3$. Comparisons of characteristic low angle of attack parameters like lift-curve slope, zero lift drag, etc. with comparable results obtained from the High