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Abstract :

This report presents the aerodynamic data generated on a 1/12 scale model of PRITHVI missile configuration - II through tests in the NAL 1.2m wind tunnel. The tests were carried out to obtain aerodynamic data to determine the control effectiveness characteristics of the tail fin controlled missile model. The presentation of test results include the following: (i) basic tests (without CDS) and roll effectiveness tests at $M=0.4$ to 1.2 (ii) Pitch and yaw effectiveness tests in the Mach number range 1.5 to 3.5 (iii) Effect of protrusions on the basic configuration. The test Reynolds number based on the body diameter varied from 1.1 million to 2.8 million. Complete test results are given in the form of tables with few typical plots.