



FEATURES OF THE PRESSURE DISTRIBUTION OVER THE CONICAL STABILIZER

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The performed numerical research of an aerodynamic configuration with a stabilizing element in the form of a truncated cone showed that the shape of the nose part of a flying vehicle significantly influences the pressure distribution over the flare. Entropy variability caused by the bow shock wave appearing in a flow around the nose part results in qualitative and quantitative changes in the stabilizer pressure distribution. An analysis of flow fields, space distributions of gas-dynamic parameters in a flow and on the stabilizer surface was carried out. Simulation results are compared with experimental data. For the discussed aerodynamic configuration pressure distribution over the flare is a nonmonotonic function.

Numerical visualization of space flow fields made it possible to elucidate the nonmonotonic character of the flare pressure distribution.