

## Computation of aerodynamic characteristics and parameters of flow around the launch vehicle nose fairing half in the ANSYS CFX package

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*The article considers aerodynamic characteristics of a thin-walled shell, which is a model of the separating nose fairing half of a typical launch vehicle. Mathematical simulating the flow past the model at the trans- and supersonic speed of the oncoming flow is carried out, aerodynamic coefficients are obtained, the aerodynamic characteristics versus the angle of attack are constructed. The calculated data are compared with the experimental values, a satisfactory coincidence of the results is obtained. Various options of passive stabilization of the fairing half are investigated, a comparative evaluation of their effectiveness is made.*

**Keywords:** aerodynamic characteristics, launch vehicle, separable elements, nose fairing, nose fairing half, fairing simulation, ANSYS CFX

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