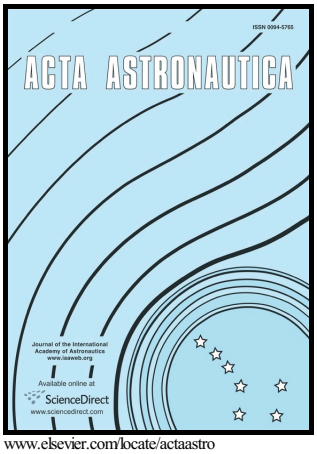

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Experimental investigation on drag and heat flux reduction in supersonic/hypersonic flows: A survey

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Abstract

The drag and heat reduction problem of hypersonic vehicles has always attracted the attention worldwide, and the experimental test approach is the basis of theoretical analysis and numerical simulation. In the current study, research progress of experimental investigations on drag and heat reduction are summarized by several kinds of mechanism, namely the forward-facing cavity, the opposing jet, the aerospike, the energy deposition and their combinational configurations, and the combinational configurations include the combinational opposing jet and forward-facing cavity concept and the combinational opposing jet and aerospike concept. The geometric models and