

## Shock Wave-Boundary Layer Interaction Control by Streamwise Vortices

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In many applications shock waves induce separation, which often leads to unsteady effects. Such interactions are hard to investigate and difficult to control. It is proposed to use streamwise vortices for this interaction control. The most useful method of the streamwise vortex generation is by air jets (AJVG), because it allows a simple method of switching it on and off. This paper presents our first experimental results which allow displaying the advantages of the AJVG's in the shock wave boundary layer control. Chosen Mach number cases cover the range from not separated to strongly separated flows. It was decided that the stagnation pressure of air jets was equal to the stagnation pressure of the main stream. Hence, there is no need for any driving system for jets. Obtained results show that the AJVG reduce the scope of separation area and that unsteady effects induced by the interaction are considerably dumped.

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