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**Vectoring of parallel synthetic jets: A parametric study** TIM BERK, GUILLAUME GOMIT, BHARATHRAM GANAPATHISUBRAMANI, University of Southampton — The vectoring of a pair of parallel synthetic jets can be described using five dimensionless parameters: the aspect ratio of the slots, the Strouhal number, the Reynolds number, the phase difference between the jets and the spacing between the slots. In the present study, the influence of the latter four on the vectoring behaviour of the jets is examined experimentally using particle image velocimetry. Time-averaged velocity maps are used to study the variations in vectoring behaviour for a parametric sweep of each of the four parameters independently. A topological map is constructed for the full four-dimensional parameter space. The vectoring behaviour is described both qualitatively and quantitatively. A vectoring mechanism is proposed, based on measured vortex positions.

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