



APPLICATION OF BEAMFORMING TO JET/FLAP INTERACTION NOISE

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ABSTRACT

The article is devoted to experimental study of additional noise source which arises due to interaction of deflecting wing flap and dual flow jet modeling the exhaust of modern high-bypass ratio aircraft engines. The study was conducted in TsAGI's free jet aerodynamic tunnel with anechoic test section with small-scale models by the use of 42-channel microphone array and far field microphones. The different test cases were investigated with different nozzle pressure ratios and co-flow velocities corresponding to aircraft take-off and landing conditions. The comparison of source localization obtained by delay and sum postprocessing technique with refined postprocessing is presented.