

ACOUSTICS2008/2468

Efficiency of shielding effect on installed double stream nozzles

Sébastien Aeberli

SNECMA - groupe SAFRAN, Villaroche - Rond-point R. Ravaud, 77550 Moissy-Cramayel, France

In spite of acoustic improvements on jet noise brought by innovative technologies such as chevrons, a way to ensure important acoustic gains is to optimize the power plant integration on aircrafts in order to benefit of the shielding effect due to wing, empennage and fuselage surfaces. In this presentation, these effects are illustrated thanks to a jet noise test campaign at 1/10th scale in an anechoic chamber as part of a European project. This campaign gives a better understanding of shielding effect by a wing and also of the acoustic impact of pylon azimuthal direction on two representative BPR 9 nozzles (Baseline - smooth - and Low Noise - with chevrons). The efficiency of shielding effect on jet noise sources in these configurations is assessed.