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Title *Joint Optimization of RCS and IR Reduction*

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Abstract

The present study incorporates both the infrared (IR) signature and radar cross section (RCS) so as to enhance the survivability of the aircraft in the hostile environment. Jet engine inlet is one of the significant contributors to the RCS as well as IR signature. In this report, the techniques for predicting RCS and IR of the cavities are presented. Various parameters governing both the signatures are investigated. Computations are performed for the joint optimization of RCS and IR signatures of the cavities based on aspect ratio, radar absorbing material and spectral optical thickness.