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EVALUATION OF THE INFORMATION CONTENT OF WIDEBAND AND ULTRA-WIDEBAND RADAR RETURNS FROM AN F14, F15 AND F16 USING ASYMPTOTIC ELECTROMAGNETIC TECHNIQUES

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Abstract

This paper addresses the prediction of the maximum recognition performance of a radar for a predetermined set of targets and radar waveforms. Use is made of the information theoretic concept of mutual information (MI) to perform this analysis. Returns from an F14, F15 and F16 were simulated using an asymptotic RCS prediction code. The information content of the three targets is evaluated for four sets of radar waveforms.