

A computer code is developed based on iterative physical optics (IPO) for predicting the RCS of ground vehicles. The IPO method includes higher-order multi-bounce effects by iterating the PO surface currents on the target. The effect of the ground is incorporated using a reciprocity formulation. Efficient model-based parameter estimation (MBPE) algorithms are investigated for reducing the number of solution points necessary generate the RCS pattern. The asymptotic phasefront extraction (APEs) method is implemented to extend the applicability of the code to much higher frequencies.