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### **Bistatic RCS measurements of large targets in a compact range**

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This communication illustrates the ability to perform bistatic radar cross-section (RCS) measurements at a fixed bistatic angle in a compact range. Literature regarding bistatic RCS measurements in compact ranges is limited. The traditional setup of a compact range was adapted to perform bistatic RCS measurements. These bistatic measurements were conducted on canonical and complex realistic scale airframe models. The targets were illuminated with a plane wave created by an offset parabolic dish reflector. The bistatic scattering of the targets was measured by placing a receive antenna at a fixed bistatic angle and finite distance in the compact range. This communication also investigates the effect of the finite separation between the targets and the receiver on the bistatic scattering measurements of large complex targets. The accuracy of the bistatic RCS measurements is compared to full-wave simulations conducted with FEKO using the multilevel fast multipole method solver. Quantitative comparisons are drawn between the simulations and measurements using the feature selective validation method.