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DEVELOPING PROTOCOLS FOR BIRD STRIKE RADAR PERFORMANCE ASSESSMENT

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(6) DEVELOPING PROTOCOLS FOR BIRD STRIKE RADAR PERFORMANCE ASSESSMENT

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Over the past six years the Center of Excellence in Airport Technology (CEAT) has been supporting Federal Aviation Administration research in aircraft and airport safety. CEAT has conducted reviews of bird strike sensor technology, and has led validation testing of a radar developed specifically for bird detection at airports. This experience, which includes development of quality assurance plans and field validation of radar capabilities has led to the development of protocols for bird strike radar performance assessment. The protocols to be reviewed are based on a request made to bird radar vendors that asked for information in three areas: 1) A power gains and losses budget that is a flow chart of power change through the sensor system; 2) A listing of performance specifications that provides documented results of testing that provides performance specifications/expectations for the sensor system with either wildlife targets or known or reference targets; and 3) A detailed description of data provided by the radar, including the capacity for remote operation of the system. In addition, CEAT prepared a listing of information required for a comprehensive performance assessments that included information on radar components and the characteristics of remote operation including the cyber infrastructure needed to support effective use of radar data in the airport environment, including both data and metadata. The protocol developed will be reviewed with the objective of identifying critical information needs and the comprehensive technical and data analysis and management issues in assessing radar performance. Performance will also be reviewed in light of radar performance needs identified in consultation with airport wildlife management personnel.