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Keyla Pagan-Rivera*, 4850 Mark Center Dr, Alexandria, VA 22311. *The use of Bayesian Logistic Models in Defense Analysis: a Case Study*. Preliminary report.

The use of Bayesian statistics as a tool to scope testing and analyze data related to defense has increased in recent years. Understanding which factors can affect a detector's performance can influence military tactics, techniques and procedures, and improve a commander's situational awareness when making decisions in an operational environment. Classical statistic techniques were previously used to predict an instrument's probability of detection. For this purpose, a simple logistic regression was fitted. In this talk, the results of a Bayesian multiple logistic model will be used to show how the operational environment can affect the detector's performance. (Received September 10, 2018)