1145-VF-85   **Sarah Neitzel*** (`sarahbneitzel.wa@gmail.com`), **Kathryn Haglich** (`haglichk@lafayette.edu`), **Amy Pitts** (`amy.pitts1@marist.edu`) and **Jeffrey Liebner** (`liebnerj@lafayette.edu`). *A Bayesian method for locating breakpoints in time series.* Preliminary report.

Our presentation proposes a new approach to finding the quantity and location of breakpoints, or change points, in time series data. This allows for more appropriate data modeling by accounting for structural changes. Bayesian Adaptive Auto-Regression (BAAR) is a Bayesian technique that samples from the distribution of number and locations of possible breakpoints. It proposes new sets of breakpoints as determined by a reversible-jump Markov Chain Monte Carlo and evaluates the proposals using the Metropolis-Hastings algorithm. Simulation results have shown that our method is able to detect changes in models, and we have provided a demonstration of BAAR as applied to the population of Pacific brown pelicans. (Received July 25, 2018)