Applying Data Quality to the Searches for Compact Binary Coalescences in the First Observing Run of Advanced LIGO

LAURA NUTTALL, Syracuse University, LIGO SCIENTIFIC COLLABORATION — Crucial to the searches for gravitational wave transients in Advanced LIGO data is the characterization of the detectors to understand and mitigate noise artifacts which could mimic a gravitational wave signature. During the 4 month observing run of Advanced LIGO which concluded in January of this year, the LIGO detectors were assessed in close to real-time and vital information fed back to the transient searches regarding how to address features in data caused by environmental conditions and hardware concerns. This talk discusses the main data quality challenges faced by transient searches targeting gravitational waves from compact binary coalescences, in addition to the impact this information had on the sensitivity of these searches.

Laura Nuttall
Syracuse University

Date submitted: 07 Jan 2016

Electronic form version 1.4