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Assurance of Ground Motion Data Using the IRIS MUSTANG Analytics System

The Incorporated Research Institutions for Seismology (RIS) Data Management Center has developed and currently operates the Modular Utility for Statistical Knowledge Gathering (MUSTANG) system. IRIS receives data from approximately 3500 stations in real time and has roughly 30,000 stations covering 5 decades in its holdings. MUSTANG has analyzed all Broadband, High Broadband, and Long period time series data it manages at the present time. The extension to shorter period and higher frequency channels is now underway as well. MUSTANG calculates approximately 50 different metrics on the time series data to assess the data quality and to aid in the identification of data problems. The metrics are stored in a PostgreSQL database and the metrics are made available to anyone through web services. A variety of clients have been developed to aid in using the nearly 7 terabytes of metrics that have been calculated. This talk will discuss how the MUSTANG system works, how it can be extended, and identify some of the problems that it has uncovered. An overview of some of the clients that are available will also be given including, the MUSTANG Databrowser, LASSO, and MUSTANGular, a system that displays values of metrics on a map display.

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