

Processing of an Infrasound mSeed File

Wednesday, 6 November 2024 16:50 (10 minutes)

Infrasound is known as very low frequencies that humans cannot hear but can be picked up or retrieved by sensors. It can be used to detect and verify different processes and phenomena that may be going on in the environment. This work focuses on creating data processing methods using Python to evaluate mSeed files from commercial off the shelf systems, such as the Raspberry Shake & Boom. This analysis is completed through the usage of spectrograms visualizing Short-Term Fourier Transforms. The method begins by analyzing the waveform, then creating both low and high pass filters, adjusts DC bias by removing the near 0 Hz frequencies, and ends by generating a spectrogram with customizable features with an option to regenerate itself based off inputted arguments by the user, such as length of evaluation. This method of data processing will enable rapid infrasound data analysis through Python utilizing any commercial sensor.

E-mail

cissoks@rose-hulman.edu

Primary author: Mr CISSOKHO, Souleymane (Rose-Hulman Institute of Technology)

Co-author: Dr OCAMPO GIRALDO, Luis (Idaho National Laboratory)

Session Classification: Poster

Track Classification: Poster session