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**Identifying Potential Noise Sources within Acoustic Signals** VICTORIA HOLCOMB, JACQUES LEWALLE, Syracuse University — We test a new algorithm for its ability to detect sources of noise within random background. The goal of these tests is to better understand how to identify sources within acoustic signals while simultaneously determining the strengths and weaknesses of the algorithm in question. Unlike previously published algorithms, the antenna method does not pinpoint events by looking for the most energetic portions of a signal. The algorithm searches for the ideal lag combinations between three signals by taking excerpts of possible events. The excerpt with the lowest calculated minimum distance between possible events is how the algorithm identifies sources. At the minimum distance, the events are close in time and frequency. This method can be compared to the cross correlation and denoising methods to better understand its effectiveness.
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