Exploration of the Use of Triple Correlation in the Analysis of Acoustic Data GENEVIEVE STARKE, JACQUES LEWALLE, Syracuse University — Jet noise is a long-standing environmental problem. To better understand the underlying mechanisms, acoustic data from several microphones in the far field of a Ma = 0.6 round jet are being analyzed. Currently, cross-correlation is being used to compare two signals and find the largest peak value of the correlation coefficient. This indicates the best match for the same information reaching two microphones at different times; it also gives the lag of the sound events which is helpful in the location of the sources of the events. This is traditionally done with pairs of signals, either with entire signals or with event-level short excerpts. Then, multiple signals require the matching of the results of various pair-wise correlations. Here, we explore triple correlation as a way to make this process more efficient. Triple correlation uses a sliding method, adjusting the signals by time steps and graphing the mean of the product of the result. One of the signals is selected as a base, and the two other signals are shifted relative to the base signal. The result gives a graph giving the lags of both signals in relation to the base signal. The triple correlation algorithm is being tested on simple signals and will be applied to experimental data. We will report on the applicatio

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