

Abstract Submitted
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Characterization of 60 Hz environmental electromagnetic noise with a simple antenna. CHRISTOPHER HILL, RICHARD WILLIAMS, JOHN GAFFNEY, CHRISTOPHER SCHNEIDER, Southeastern Louisiana University, SATISH SHRESTHA, McNeese State University, SANICHIRO YOSHIDA, Southeastern Louisiana University, GIOVANNI SANTOSTASI, McNeese State University — The purpose of this project is to characterize environmental electromagnetic noise at 60Hz. We have constructed an antenna consisting of an LC circuit tuned around 60 Hz to detect the noise in the air, and made analyses in both the time and frequency domains. The data has shown considerable fluctuations in the peak frequency as well as the phase over any given period of time. Also, it has been found that the spectrum broadens depending on where the antenna is placed. We suspect that the broadening results from the superposition of seismic motion acting on the antenna to the electric signal. We are currently investigating if location and time of the day has any effect on the characteristics of the electromagnetic noise.

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