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Use of near-field energy-based error signals for active control of free-field sound RYAN CHESTER, TIMOTHY LEISHMAN, Brigham Young University — Practical efforts to actively control sound often require error sensors located in the acoustic or geometric near field of sound sources. Conventional pressure-based error sensors are highly sensitive to near-field position and other system parameters due to the spatial and spectral variation of the pressure field. Other acoustic quantities are less sensitive to spatial and spectral changes. This paper compares the potential, kinetic, and total energy density in the near field of sound source pairs. It also discusses the spatial and spectral variations of the aforementioned quantities.

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