

**Construction of a high speed buffer amplifier to measure lightning generated vertical electric fields**

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A high-speed buffer amplifier circuit was constructed with a buffer amplifier IC OPA633 that can be coupled to a parallel plate antenna via 60 cm coaxial cable to measure the lightning generated vertical electric fields. The use of a high speed buffer amplifier isolates the high impedance of the antenna and offers enough power to drive the signal from the antenna to the recording unit through a coaxial cable. The electric field measured by this circuit represents the actual strength of the electric field normal to the ground. According to the frequency response of the circuit, it is seen that the circuit is suitable in recording lightning generated electric fields up to MHz region. It has been successfully used in field tests in recording lightning generated electric fields during the months of December and January.