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A System for simultaneous measurements of lightning induced voltages on lines with and without arresters

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Abstract: The growing importance of improving the power quality and the high number of lightning-caused faults on distribution lines have motivated a research project with the aim of evaluating experimentally the effect of surge arresters on the improvement of the indirect lightning performance of MV lines. This paper describes the most important features of a system designed for this purpose, which has been implemented at the campus of the University of São Paulo and started to operate at the end of the 2001/2002 thunderstorms season. Some of the recorded induced voltage waveforms are also presented.

Keywords: lightning, induced voltages, distribution lines, experimental investigation.