

# Abstracts

## Application of the Backscattering Technique to the Determination of Parameter Fluctuations in Multimode Optical Fibers

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*M. Eriksrud and A. Mickelson. "Application of the Backscattering Technique to the Determination of Parameter Fluctuations in Multimode Optical Fibers." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1466-1471.*

An experimental study of backscattering traces from fibers with random variations of core diameter and numerical aperture has been carried out. The "mode-filtering" technique, which is employed in the measurements, is shown to be a powerful means of separating the parameter fluctuation effects from the actual exponential power decay. The experimental results are then found to be in excellent agreement with the predictions of a recent backscattering theory. It is shown that backscattering measurements can easily be used to place upper limits on the magnitudes of parameter fluctuations in present day fibers.

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