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LIST OF PAPERS PRESENTED AT CONFERENCES/SUMPOSIUM

1. "Nonlinear Optical Effects as a tools for spectroscopic studies". At National Workshop on spectroscopy and Lasers, 26th Feb. to 1st March 1989, Department of Physics, Andhra University, VISAKHAPATTANAM(A.P.).
2. "Analysis of subpicosecond Pulse-spread Minimization in Nonlinear single mode optical fiber " At National Seminar On Instrumentation (November 7-9, 1989), Department of Physics, Cochin University, of Science and Technology, COCHIN-682022.

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SEMINAR DIGEST

P 4 Analysis of Subpicosecond Pulse-Spread Minimization in Nonlinear Single Mode Optical Fibers

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A two stage optical pulse compressor is a viable technique to produce subpicosecond laser pulses. Such short pulses are broadened due to self-phase modulation and dispersion effects during a long range propagation in monomode optical fibers. The nonlinear dispersion too becomes significant for a power level above 1 TW/cm^2 . The Problem of minimizing the pulse-spread is of sizeable interest in the telecommunication domain. In this study we have considered the effect of the "Shock term" (arising due to nonlinear dispersion) on the analysis of subpicosecond pulse-spread minimization around a zero dispersion wavelength. The pulse propagation equation including shock term is obtained and is solved numerically. The results are discussed. Expressions for the mean time and rms pulse width are also derived.

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