

Acoustic Visualization of Transient Inhomogeneities Induced by Intense Focused Ultrasound in Lucite

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On the basis of analytical considerations, it was first indicated by one of the authors (W.J.F.) that transient inhomogeneities in sound speed induced in media by pulsed acoustic energy of appropriate level would be detectable by standard ultrasonic reflection techniques. [*Ultrasonic Energy, Biological Investigations and Medical Applications*, Elizabeth Kelly, Ed. (University of Illinois Press, Urbana, 1965)]. This presentation is concerned with describing conditions appropriate for demonstrating such effects in Lucite by employing 3-Me/sec ultrasound for durations over the range 0.3–1.6 sec. The results obtained indicate that the total energy applied for heating is the significant parameter (for the range of pulse durations employed) whose values can be used to characterize the observed effects. [Investigation supported in part by the National Cancer Institute, National Institutes of Health. Public Health Service, U. S. Department of Health, Education, and Welfare.] ©1966 *Acoustical Society of America*

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