1050-35-104 **Robert Pertsch Gilbert*** (gilbert@math.udel.edu), 112 Briar Lane, Newark, DE 19711, and **Ana Vasilic**. *Acoustic Propagation in a Random Saturated Medium: The Monophasic Case.*

We extend our study of acoustic wave propagation for an elastic medium from the deterministic case to a randomly fissured medium. Moreover, the fissures are assumed to be statistically homogeneous. Although the underlying stochastic process does not necessarily have to be ergodic, we assume for simplicity of exposition that it is. This allows us to obtain an explicit and computationaly easier auxillary problem in a Representative Elementary Volume. In a later work we intend to study the more general case. (Received February 28, 2009)