

Abstract Submitted  
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**On the Source of Noise in Gauge Traces in Geological Materials**

C.H. BRAITHWAITE, D.J. CHAPMAN, J.E. FIELD, W.G. PROUD, Cavendish Laboratory, University of Cambridge, J.J. Thompson Avenue, CB3 0HE — It has been previously speculated that two distinct sources of noise in gauge traces in geological materials exist. These sources are straining of the gauge element through the non planarity of the shock front after it has passed through the polycrystalline material, and electromagnetic emission from piezoelectric minerals within the bulk material. Experiments have been conducted in materials of differing quartz content to show that the electromagnetic emission is indeed an issue. Further, mineral analysis data is presented to support the conclusion that gauge straining is also occurring.

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