

Abstract Submitted  
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**Development of an optical system for high-speed, small-scale velocity measurements** H.R. DAVIES, D.J. CHAPMAN, Fracture and Shock Physics, SMF Group, Cavendish Laboratory, JJ Thomson Ave., Cambridge, CB3 0HE, T.A. VINE, QinetiQ Ltd., Fort Halstead, Sevenoaks, Kent, TN14 7BP, UK, W.G. PROUD, Fracture and Shock Physics, SMF Group, Cavendish Laboratory, JJ Thomson Ave., Cambridge, CB3 0HE — An optical system was developed to allow the accurate focussing and alignment of small scale samples for velocity analysis with streak photography. Even at low magnifications, the small streak slits required meant that any vibration or instability in the system would greatly reduce the accuracy of the velocity measurements achieved. Therefore, the optical system was designed to reduce the effects of any vibration. A spatial mount and rotation stage were modified to allow three spatial axis and rotational freedom of a custom-made sample mount. Markers within the sample mount were used to achieve precise alignment of the sample with the optical axis of the streak camera.

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