Design of a White Light Velocity Interferometer.* D.J. ERSKINE and N.C. HOLMES, Lawrence Livermore Nat. Lab.--We have invented a simple method of using any light source, regardless of its initial coherence or bandwidth, for applications in interferometry with a fixed delay. This makes possible a simultaneous multi-spectral VISAR powered by flashlamp, for example. Any laser can be used, including pulsed or CW lasers run in all-lines mode. Powerful, compact and inexpensive incoherent sources such as flashlamps, arclamps or light from detonations can now be used in interferometry where they were previously prohibited due to incoherence. The superior broadbanded power of such sources in turn makes practical two dimensional velocity field measurement of surfaces.

*Work at LLNL was performed under auspices of U.S. DoE contract No. W-7405-ENG-48.

Dave Erskine
Lawrence Livermore National Lab
P.O. Box 808, L-299
Livermore, CA 94550