Abstract Submitted
for the SHOCK19 Meeting of
The American Physical Society

High Resolution Broadband Laser Ranging ANDREA ALBERT, Los Alamos National Laboratory — Broadband Laser Ranging (BLR) is an optical diagnostic that measures the position along the line of sight of surfaces and particle clouds moving at speeds of a few kilometers per second at a repetition rate of 20 ns. BLR is a spectral interferometer that uses dispersive Fourier transforms to translate the beat frequency between a reference leg and a signal leg into a surface distance. Current generations of BLR measure position with a resolution of 20 microns and use mod-locked 1550 nm fiber lasers with a 20 nm bandwidth. Better position and time resolution is expected from using a broader bandwidth. We present results from a series of tests performed using a new BLR system with a 90 nm bandwidth. LA-UR-19-21392

Andrea Albert
Los Alamos National Laboratory

Date submitted: 11 Mar 2019 Electronic form version 1.4