Abstract Submitted for the OSS05 Meeting of The American Physical Society

Dual Laser Beam "Jitter" Analysis GREGG ANDERSON, AFRL/MLPJE, Wright-Patterson AFB, MARK WALKER, Anteon — This work involves recording, analyzing and characterizing the fringe pattern resulting from overlapping two pulsed laser beams. A stationary fringe pattern is essential in order for our laboratory's experimental work to succeed. The resulting fringe pattern, however, is seen to move erratically and hence introduces experimental complications that we would rather avoid. The work proposes isolating the beams from air currents or from sources of vibration external to the beams as a means of reducing, if not eliminating this fringe movement or "jitter." This work explores those solutions and provides data analysis techniques through a plotting, graphing and analysis software package called IGOR(**R**).

> Gregg Anderson AFRL/MLPJE, Wright-Patterson AFB

Date submitted: 18 Mar 2005

Electronic form version 1.4