

Abstract Submitted  
for the 4CF11 Meeting of  
The American Physical Society

**Performance of Scanning Ladar Imaging through Atmospheric Turbulence** MAZEN NAIRAT, DAVID VOELZ — The imaging performance of long range laser scanning system through atmospheric turbulence is examined using the concept of Modulus Transfer Function (MTF). The target is assumed to be within the Fresnel zone with considering long time and short time exposures. The effect of beam wander is described in terms of MTF. Our analysis indicates wave front tilt is a dominant factor for recovering high spatial frequencies. A physical optics simulation is employed to demonstrate the utility of the MTF approach and verify the theoretical model.

Mazen Nairat

Date submitted: 19 Sep 2011

Electronic form version 1.4