

Abstract Submitted
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Refractive index of K9 Glass under Shock Loading CHANGMING HU, XIANG WANG, LINGCANG CAI, CANGLI LIU, Institute of Fluid Physics, China Academy of Engineering Physics, Mianyang, 621900, China — We study K9 glass refraction index under shock loading conducted on powder gun, all experimental tests are plate impact loading. The impact velocity range from 300m/s to 1200m/s, and the measure method is laser interferometer Photon Doppler Velocimetry(PDV) to measure the particle velocity both at the impact interface and free surface, The shock pressure from 2GPa to 8GPa, values for refraction are found from velocity corrections that must be made to account for refraction-index changes in the K9 glass due to shock wave motion. Experiment results show that refraction-index of K9 glass changes with the shock pressure in line relations, it can be as measure window to study the interesting materials under 10GPa during the shock loading.

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