

Abstract Submitted
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Measurement of Hydrogen Balmer Series Self Absorption in Air Plasma Produced by Laser Induced Optical Breakdown¹ GHANESHWAR GAUTAM, CHRISTIAN PARIGGER, University of Tennessee Space Institute — Optical breakdown is induced by using Nd:YAG laser radiation. Spatially and temporally resolved spectra are collected with and without a doubling mirror by employing a Czerny-Turner spectrometer and an ICCD camera. The extent of self-absorption of the hydrogen Balmer alpha and beta lines is investigated for various time delays from plasma generation. The electron density is also determined from N^+ lines and compared with values obtained from the hydrogen Balmer series lines to further evaluate self-absorption.

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