

Abstract Submitted
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Electron-Beam Produced Air Plasma: Optical and Electrical Diagnostics¹ ROBERT VIDMAR, University of Nevada, Reno, KENNETH STALDER, Stalder Technologies and Research, MEGAN SEELEY, University of Nevada, Reno — High energy electron impact excitation is used to stimulate optical emissions that quantify the measurement of electron beam current. A 100 keV 10-ma electron beam source is used to produce air plasma in a test cell at a pressure between 1 mTorr and 760 Torr. Optical emissions originating from the N₂ 2nd positive line at 337.1 nm and the N₂⁺ 1st negative line at 391.4 nm are observed. Details on calibration using signals from an isolated transmission window and a Faraday plate are discussed. Results using this technique and other electrical signal are presented.

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