Examination of argon and neon vacuum ultraviolet second continuum emission in a barrier discharge lamp

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As part of our efforts to study the vacuum ultraviolet emission from pulsed discharge excited supersonic expansion of rare gases, we developed a barrier discharge lamp for comparison. A barrier discharge is a discharge in which the there is no current flow between the cathode and anode. The lamp consists of two parallel plates, spaced approximately 5mm apart. The housing is vacuum sealed, thus we are able to pressurize with argon and neon gases. We present the results of our investigation of the dependence of second continuum emission with variable power supply frequency.