

Abstract Submitted  
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**Advances in the Remote Glow Discharge Experiment** ARTURO DOMINGUEZ, A. ZWICKER, Princeton Plasma Physics Laboratory, L. RUSAITIS, City University of New York, M. MCNULTY, Rutgers University, CARL SOSA, Polytechnic University of Puerto Rico — The Remote Glow Discharge Experiment (RGDX) is a DC discharge plasma with variable pressure, end-plate voltage and externally applied axial magnetic field. While the experiment is located at PPPL, a webcam displays the live video online. The parameters (voltage, magnetic field and pressure) can be controlled remotely in real-time by opening a URL which shows the streaming video, as well as a set of Labview controls. The RGDX is designed as an outreach tool that uses the attractive nature of a plasma in order to reach a wide audience and extend the presence of plasma physics and fusion around the world. In March 2014, the RGDX was made publically available [1] and, as of early July, it has had approximately 3500 unique visits from 107 countries and almost all 50 US states. We present recent upgrades, including the ability to remotely control the distance between the electrodes. These changes give users the capability of measuring Paschen's Law remotely and provides a comprehensive introduction to plasma physics to those that do not have access to the necessary equipment.

[1] <http://www.pppl.gov/news/2014/03/students-try-out-pppl-plasma-physics-experiment-can-be-accessed-anywhere-world>

Arturo Dominguez  
Princeton Plasma Physics Laboratory

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