Abstract Submitted
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**Experimental studies of electronegative plasma in a DC-discharge device (EPaX) designed to study internal sheaths and boundary sheath formation**[1] LENA BELVIN, Dept. of Physics & Biophysics, University of San Diego, PEIXUAN LI, NOAH HERSHKOWITZ, Dept. of Engineering-Physics, University of Wisconsin-Madison, GREG SEVERN, Dept. of Physics & Biophysics, University of San Diego — Theory and computational physics studies of electronegative discharges have been intense and ongoing for several decades driven in part by the myriad applications of plasma processes in industry, but also by open questions in the physics of electronegative plasma. A focused set of benchmarking experiments testing sheath formation in electronegative plasma involving direct measurements of parameter distributions is still lacking. A DC-discharge device is nearing completion to begin those tests. The plan is to commission the device in Argon, then Argon-Oxygen, and then Argon-Iodine discharges. The first discharges are planned for Summer of 2020. Progress and results will be presented.

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