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**Coupled GEM-XGC Simulations of Edge Pedestal Plasmas**<sup>1</sup> SCOTT PARKER, WEIGANG WAN, YANG CHEN, Univ. of Colorado, CEN-TER FOR PLASMA EDGE SIMULATION TEAM<sup>2</sup> — Global GEM gyrokinetic turbulence simulations of the edge pedestal are performed assuming closed flux surfaces and using numerical profiles obtained from the XGC neoclassical calculation<sup>3</sup>. The plasma profiles used in GEM are output from an XGC simulation of L and H-mode DIII-D plasmas. XGC's magnetic geometry includes the separatrix and the magnetic X-point. Only the plasma profiles inside the separatrix are output to GEM. Simulations show the interesting result that in the electrostatic limit the anomalous diffusion agrees with what is used in the XGC simulation to accurately predict the pedestal profile build up. However, electromagnetic turbulence simulations produce too much transport which would causes a pedestal crash in the XGC calculation. Work is under way to couple GEM and XGC under the EFFIS End-to-end Grame for Fusion Integrated Simulation.

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> Scott Parker Univ. of Colorado

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