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Testing the Paleoclassical Transport Model As a Component of the H-mode Edge Model[1] K. MCFARLAND, G. BATEMAN, A.H. KRITZ, Lehigh University, Bethlehem, PA, USA — The paleoclassical transport model [1] is tested in ASTRA simulations of pedestal formation and ELM crashes at the edge of H-mode discharges [2]. Simulation results for the shape of the pedestal temperature profiles and the frequency of ELM crashes are compared with detailed experimental data from the DIII-D 98889 discharge provided by T. Osborne. In the ASTRA simulation model, flow shear in the pedestal reduces the transport driven by ion drift modes, resistive ballooning modes, and the electron gradient temperature (ETG) mode, while flow shear does not affect the paleoclassical electron thermal transport or the neoclassical ion thermal transport. A limit on the pressure gradient triggers ELM crashes, which abruptly change the temperature profiles in a region that is wider than the pedestal at the edge of the plasma. The inclusion of the paleoclassical model has the effect of making the electron temperature pedestal wider, which is in better agreement with experimental data compared with previous simulations that used only the ETG mode for electron thermal transport in the pedestal. [1] J.D. Callen, Phys. Rev. Lett. **94** (2005) 055002. [2] A.Y. Pankin et al., Plasma Phys. Control. Fusion **47** (2005) 483.

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