

Abstract Submitted  
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**Study of SOL in DIII-D tokamak with SOLPS suite of codes.**  
ALEXEI PANKIN, SAIC, GLENN BATEMAN, Lehigh University, DYLAN BRENNAN, MIT, DAVID COSTER, Max-Planck-Institut für Plasmaphysik, JOHN HOGAN, ORNL, ARNOLD KRITZ, Lehigh University, ANDREY KUKUSHKIN, ITER JCT, DALTON SCHNACK, SAIC, PHIL SNYDER, General Atomics — The scrape-of-layer (SOL) region in DIII-D tokamak is studied with the SOLPS integrated suite of codes. The SOLPS package includes the 3D multi-species Monte-Carlo neutral code EIRINE and 2D multi-fluid code B2. The EIRINE and B2 codes are cross-coupled through B2-EIRINE interface. The results of SOLPS simulations are used in the integrated modeling of the plasma edge in DIII-D tokamak with the ASTRA transport code. Parameterized dependences for neutral particle fluxes that are computed with the SOLPS code are implemented in a model for the H-mode pedestal and ELMs [1] in the ASTRA code. The effects of neutrals on the H-mode pedestal and ELMs are studied in this report. [1] A. Y. Pankin, I. Voitsekhovitch, G. Bateman, et al., Plasma Phys. Control. Fusion 47, 483 (2005).

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