Benchmarking the UEDGE and SOLPS edge plasma transport codes in DIII-D and JET geometries.[1] L.W. OWEN, ORNL, T.D. ROGNLIEN, LLNL, G.D. PORTER, LLNL, X. BONNIN, Univ. Paris, D.P. COSTER, IPP-Garching — A program to benchmark the 2-D tokamak edge plasma transport codes UEDGE, SOLPS and EDGE2D-NIMBUS, that are widely used for interpretive and predictive edge plasma simulations, began with a comparison of the latter two codes. Here UEDGE and SOLPS are benchmarked against each other using grids based on DIII-D and JET lower single-null discharges. Neutral transport is described by fluid models using flux limiters for kinetic effects. In addition, plasma parameters calculated using the fluid neutrals models are compared to results from SOLPS using EIRENE (kinetic Monte Carlo) neutrals. Two DIII-D plasmas are used: L-mode from discharge 119919 and H-mode from 110223. The JET case is based on a grid for the high X-point-clearance discharge 50401. The comparisons have allowed identification and resolution of some model differences that can have significant impact on the solutions. Final comparisons will be discussed together with lessons learned about the process.

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