

Abstract Submitted
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EDGE2D Simulations of Diverted Tokamak Migration Patterns JIM STRACHAN, PPPL, Princeton University — Campaign averaged erosion/deposition measurements from JET, DIII-D, JT-60U, and AUG, as well as ^{13}C tracer migration results from DIII-D, JET, and AUG are modeled using EDGE2D. Experimentally, the erosion peaks at the outer strike point, while the material eroded from the main chamber wall can dominate the deposited material. The deposition can peak at the inner strike point, or can be spread away from the inner strike point displaced to the SOL side. These features challenge any single model applied to the different experiments. Seemingly, three migration paths are important: 1) migration via the private flux region essentially from the outer strike point to the inner strike point, 2) migration via the main chamber SOL resulting in deposition on the inner target displaced away from the inner strike point, and 3) migration via the core and back into the main chamber SOL, also resulting in deposition on the inner target displaced away from the inner strike point. This study has examined the primary migration patterns ignoring re-erosion effects. Effects due to ELMs and projection to ITER are being examined.

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