

Abstract Submitted  
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**Influence of Plasma Profiles on Particle Disposition in Wendelstein 7-X like Simulation** COLIN MYRICK, SAMUEL LAZERSON , Princeton Plasma Physics Laboratory — An investigation of Beam Emission Spectroscopy (BES) signals subject to different plasma profiles is simulated for a Wendelstein 7-X (W7X) like configuration with the BEAMS3D code. BEAMS3D is a guiding center particle code that follows user defined particles and models neutral beam injection. A study is performed of the influence of plasma profiles on the particle deposition model. A goal of this study is to assess whether BES data can be used to constrain plasma density profiles. Simulation with different numbers of injected particles is being explored to assess incorporation of the BES forward model into STELLOPT for equilibrium reconstruction. As BEAMS3D is a Monte-Carlo code, the number of particles can play an important role in interpretation of results. Should a smaller number of starting particles produce comparable results, we can greatly reduce the runtimes and space needed when running the simulations.

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