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Simulations of Edge Transport Barrier in a Tokamak using B2 and ELITE SI WOO YOON, National Fusion Research Center — The Edge Transport Barrier(ETB) is one of the critical issues in Tokamak due to its strong impact on the global confinement. The dependence of the width and height of ETB is simulated using the combined model of B2 transport code and ELITE stability code. In this model, several radial transport models are considered including the multi-mode, drift Alfven turbulence, and intermittent models. The neutral transport is also important for ETB modeling and well-benchmarked fluid diffusion model is used. The calculated profiles will be compared with DIII-D pedestal profiles and it will be discussed the relative roles of radial transport and stability on the structure of ETB based on the DIII-D pedestal profiles and modeling.

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