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ITER Simulations Using the PEDESTAL Module in the PTRANSP Code F.D. HALPERN, G. BATEMAN, A.H. KRITZ, A.Y. PANKIN, Lehigh University, R.V. BUDNY, C. KESSEL, D. MCCUNE, PPPL, T. ONJUN, SIIT, Thailand — PTRANSP simulations with a computed pedestal height are carried out for ITER scenarios including a standard ELMy H-mode (15 MA discharge) and a hybrid scenario (12MA discharge). It has been found that fusion power production predicted in simulations of ITER discharges depends sensitively on the height of the H-mode temperature pedestal [1]. In order to study this effect, the NTCC PEDESTAL module [2] has been implemented in PTRANSP code to provide boundary conditions used for the computation of the projected performance of ITER. The PEDESTAL module computes both the temperature and width of the pedestal at the edge of type I ELMy H-mode discharges once the threshold conditions for the H-mode are satisfied. The anomalous transport in the plasma core is predicted using the GLF23 or MMM95 transport models. To facilitate the steering of lengthy PTRANSP computations, the PTRANSP code has been modified to allow changes in the transport model when simulations are restarted. The PTRANSP simulation results are compared with corresponding results obtained using other integrated modeling codes.

[1] G. Bateman, T. Onjun and A.H. Kritz, Plasma Physics and Controlled Fusion, **45**, 1939 (2003).

[2] T. Onjun, G. Bateman, A.H. Kritz, and G. Hammett, Phys. Plasmas **9**, 5018 (2002).

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