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☐ Theory ☐ Experiment

Benchmarking of ECH Codes for ITER,* R. Prater, *GA* –

Many computer codes have been developed for wave propagation, absorption, and current drive using electron cyclotron waves. These codes include ray tracing codes, like BANDIT-3D, GENRAY, TORAY-GA, and TORAY-FOM, and Gaussian beam codes like ECWGB (now GRAY), OGRAY, and TORBEAM. For absorption, codes may use analytic models or Fokker-Planck calculations, as in BANDIT-3D, CQL3D, and OGRAY. Detailed comparisons of the codes has been made (with the active participation of their authors) for a projected ITER discharge (Scenario 2). To better test the propagation part of the codes, a discharge with higher density and greater refraction was also used. Several code problems were fixed due to these studies, and the resulting profiles of power density and current density lie within a narrow range. Some issues needing further work will be discussed.

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