

Abstract Submitted
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New RF heating and current drive codes in TRANSP K. INDIRESHKUMAR, D. MCCUNE, Princeton Plasma Physics Lab, J. WRIGHT, MIT-PSFC, R.W. HARVEY, A.P. SMIRNOV, CompX — Radio Frequency (RF) heating/current drive comprise an important aspect of present and future tokamaks. The PPPL tokamak transport code (TRANSP) has many RF modules currently available. This poster describes improvements to the RF modeling capabilities of TRANSP by incorporating the general ray tracing code (GENRAY) and upgrading the capabilities of the currently available TORIC code by including its parallel solver capabilities. Currently efforts are underway to incorporate the electron cyclotron (EC) heating/current drive aspects of GENRAY into transp. GENRAY has been built as a TRANSP library and a transp-based executable has been written. Routines from GENRAY have been adapted to produce the input files to GENRAY from the PPPL plasma state software and load the results into the plasma state. In regard to parallel TORIC, a transp executable has been developed and tested. Routines have been developed to broadcast the input data for parallel toric operation. Scaling studies of TORIC are underway on the PPPL Kruskal cluster. This poster will describe the status of GENRAY and Parallel TORIC in TRANSP along with results of scaling studies.

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