

Abstract Submitted
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Progress in the Development of an Integrated Modeling Tool to Support DIII-D and EAST¹ Q. REN, ASIPP, L.L. LAO, M.S. CHU, H.E. ST. JOHN, G. ABLA, A. COLLIER, R. PRATER, GA, J.M. PARK, ORNL, G. LI, W. GUO, C. PAN, ASIPP, R. SRINIVASAN, IPR, M. WORRALL, Colorado School of Mines — Recent progress in the development of the IMFIT Integrated modeling tool is presented. The goal of IMFIT is to develop a modern and efficient integrated modeling platform to support DIII-D and EAST research, including the capability to simulate the behavior of tokamak discharges. Recent progress includes user-friendly and Python-based GUIs with multi-links to equilibrium, transport, and stability codes to facilitate modeling and analysis, and EFIT F90 upgrade with dynamic memory allocation and MPI option to support multiple devices and grid sizes. Through the GUI, straightforward analysis for kinetic EFIT reconstruction is made available. Ongoing developments include design of efficient algorithms to support interactions among physics modules such as EFIT/ONETWO/TGLF coupling for scenario development and transport flux analysis and EFIT/PEST3/TORAY coupling for modeling of tearing mode stability. Details will be presented.

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