

**Abstract Submitted for the 51st Annual Meeting  
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**Improvements to IMFIT Integrated Modeling Tool and Initial Release,\*** A. Collier, L.L. Lao, G. Abla, M.S. Chu, H.E. St. John, R. Prater, *GA*, W. Guo, G. Li, C. Pan, Q. Ren, *ASIPP*, J.M. Park, *ORNL*, R. Srinivasan *IPR*, M. Worrall, *Colorado School of Mines* – The current status of a modern integrated modeling tool named IMFIT used to support key elements of DIII-D and EAST research is summarized. IMFIT is a Python-based GUI tool utilizing a modular framework with a central manager that coordinates tasks between component modules. Different component managers provide access to specific physics codes for equilibrium, stability, and transport analysis. An IMFIT plasma state file and associated translator are being developed to allow efficient inter- and intra-module communication. The IMFIT state file includes all necessary information for transport, stability, equilibrium, and data processing codes. The translator can generate native state files for codes and includes support for bi-directional translation. IMFIT is designed to be portable and includes the capability to dynamically link to codes and also provide source management tools for developers. The first public version of IMFIT has been released.

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