

Abstract Submitted
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TRANSP and PTRANSP at PPPL: Status and Plans.¹ D. McCUNE, R. ANDRE, E. FEIBUSH, K. INDIRESHKUMAR, S. JARDIN, L.P. KU, C. LUDESCHER-FURTH, L. RANDERSON, Princeton University, Plasma Physics Laboratory — The PPPL TRANSP code suite is a set of tools for time dependent simulation of tokamak plasmas. The entire system consists of over a million lines of fortran-77, fortran-90, C, and C++ code. Although pieces of the code are over 25 years old, the code has been continually upgraded and modernized, now representing over 60 manyears of labor invested. TRANSP now runs as a service on the Fusion Grid, supporting plasma physics research groups around the world. In this poster, status and plans for TRANSP and associated predictive modeling upgrades (PTRANSP) are summarized. Recent TRANSP code development highlights include: (a) deployment of TRANSP heating modules (NUBEAM and TORIC) as MPI-parallel services, and (b) deployment of the entire TRANSP code as a service supporting separate free boundary predictive simulation of ITER and other future experiments. A summary of recent TRANSP utilization is presented, along with plans for future development of all aspects of the code. Posters covering TRANSP-related topics in greater detail are cross referenced.

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D. McCune
Princeton Plasma Physics Laboratory

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