

Abstract Submitted
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Preparation of DIII-D Data to Test Edge Physics Models,¹

R.J. GROEBNER, T.H. OSBORNE, A.W. LEONARD, G.M. STAEBLER, D.M. THOMAS, GA, C. HOLLAND, UCSD — DIII-D experimental data are being assembled as inputs for models of the plasma edge. One goal of this work is to provide data to test gyrofluid and gyrokinetic transport models of the H-mode pedestal, several of which are now in development. For these purposes, well-characterized discharges with long ELM-free periods have been identified. Time-dependent profiles are available and being assembled for: electron density, electron temperature, ion temperature, toroidal rotation (carbon), and Z_{eff} . These profiles are fit with smoothing functions that provide good representations of both the pedestal and core profiles. These fits are used as input to the 1.5D TRANSP or ONETWO codes to compute the fast ion density and pressure and the total heating profile. The best way to obtain the particle source is still a subject of study. Density fluctuation measurements are available and can provide constraints on pedestal transport models. The data assembled here will be stored in an MDSplus database, with a format specified for the ITPA profile database.

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