Abstract Submitted
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Identity Experiments in the Hybrid Regime on DIII-D and JET[1] C.D. CHALLIS, EURATOM/UKAEA Fusion Assoc., E. JOFFRIN, Assoc. EURATOM-CEA, T.C. LUCE, P.A. POLITZER, General Atomics, DIII-D TEAM, JET EFDA TEAM — Hybrid plasmas have the potential for high fusion yield and long pulse tokamak operation. However, performance extrapolation to future devices depends on an understanding of the transport scaling with machine size, which may not be adequately described by existing ELMy H-mode scalings. An identity match and $\rho*$ scan has been performed in the hybrid regime on DIII-D and JET to investigate the core confinement. A similar plasma shape and NBI heating were used and ν^*, ρ^*, β and Mach number profiles were all matched within about 20% at the plasma mid-radius. A ρ^* range of roughly 2.5 was covered across the two devices for plasmas with $q_0 \sim 1$ and normalized beta in the range ∼2.5-3.0. These experiments allow a comparison of transport in this domain on the two devices and an assessment of the ρ^* dependence of core confinement.

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