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arges with Weak or Negative Central Magnetic Shear[1]

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83 (1996)] improved performance in DIII–D plasmas with weak anced in recent experiments where controlled L-H transitions detrimental MHD activity [E.A. Lazarus et al., submitted to ma energy ($\geq$4 MJ) and fusion reactivity ($R_{\rm DD} \leq 4.8 \times 10^{16}\,{\rm s}^{-1}$, D. In such discharges, the core magnetic shear is reversed by power, neutral beam injection. These plasmas often undergo a ncrease in the applied heating power. At the transition time, r the location of the minimum safety factor, $q_{\rm min}$. Formation mperature and density profiles, is consistent with suppression mission spectroscopy and far infrared scattering measurements transition to high performance, fluctuation levels are reduced with the ONETWO and TRANSP transport codes indicates vels at or below Chang-Hinton neoclassical. Smaller reductions ned shortly before the plasma would become MHD unstable in . In the resulting state, the region exhibiting ion diffusivities at Analysis to date suggests that the effect of strongly negative vs. e is a significant effect on stability. A comparison of transport n L– (peaked profiles) and H–mode (broadened profiles).

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us, G.A. Navratil, R.V. Budny, K.H. Burrell, T.A. Casper, J.C. Groebner, L.L. Lao, D.C. McCune, M. Murakami, C.C. Petty, aebler, E.J. Strait, R.E. Waltz, and the DIII–D Team.