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Role of Pedestal in Hybrid Discharges in DIII-D,* R.J. Groebner, *GA*. C.F. Maggi, *IPP-Garching,* C.C. Petty, A.W. Leonard, T.H. Osborne, J.R. Ferron, A.W. Hyatt, P.A. Politzer, J.C. DeBoo, W.P. West, B.D. Bray, *General Atomics* – Studies of hybrid discharges in DIII-D show that the best performance in the hybrid regime is due to a combination of pedestal and core effects. The role of the H-mode pedestal in this regime has been studied with scans of β_N (heating power) in discharges with 2 different values of average triangularity δ = 0.25 and 0.50. For both δs, the pedestal beta, as determined from measurements of pedestal temperatures and densities, increased as the global β was increased. For a given value of β_N, discharges with the higher delta had significantly higher values of pedestal β and also of H98(y,2) than discharges with the lower δ, a result which is consistent with improved MHD stability of the pedestal expected at higher δ. However, at the highest values of β_N in the high δ discharges, some of the increase in core energy with increased power cannot be attributed directly to changes in the pedestal. Thus, both core and pedestal physics are important in determining the global confinement achieved in hybrid operation.

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