

Abstract Submitted
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Effects of divertor geometry on H-mode pedestal structure near divertor detachment HUIQIAN WANG, Oak Ridge Associated University, HOUYANG GUO, ANTHONY LEONARD, AUNA MOSER, THOMAS OSBORNE, PHILIP SNYDER, EMILY BELLI, RICHARD GROEBNER, DAN THOMAS, General Atomics - San Diego, JONATHAN WATKINS, Sandia National Lab, ZHENG YAN, University of Wisconsin Madison — Divertor geometry is found to significantly affect the shape of H-mode pedestal profiles as a function of density up to divertor detachment. In the open divertor, i.e. with the strike point on a flat target plate, the pedestal width is reduced during the detachment state. In contrast, for the closed divertor, i.e. with a baffle-dome divertor or small-angle-slot divertor, the pedestal is significantly wider during the detachment state. In addition, near divertor detachment, the open diverted plasma exhibits a more aligned density and temperature pedestal, while in the closed divertor the detachment results in a greater relative shift between the density and temperature pedestal. Moreover, enhanced fluctuations are excited with divertor detachment in both divertor geometries. The fluctuations appear to be stronger in the open divertor than that in the closed divertor, opposite to previous results with additional transport broadening the pedestal. *Work supported by US DOE under DE-FC02-04ER54698, DE-NA-0003525.

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