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Category Number and Subject:

Theory Experiment

Pellet ELM Pacing Developments on DIII-D,* L.R. Baylor, T.C. Jernigan, N. Commaux, S.J. Meitner, S.K. Combs, *Oak Ridge National Laboratory*; T.H. Osborne, P.B. Parks, E.J. Strait, *General Atomics*; M.E. Fenstermacher, C.J. Lasnier, *LLNL*; R.A. Moyer, J.H. Yu, *UCSD* – D₂ pellets injected into DIII-D H-mode plasmas from the low field side have been shown to increase the ELM frequency above the pellet frequency and reduce their size. The pellet injector on DIII-D is being modified to increase the pellet repetition rate for ELM pacing from 14 to >30 Hz and reduce the pellet size from 1.8 to 1.3 mm. An injection line has been added to inject pellets from the low field side near the divertor to test the proposed injection geometry on ITER. Experiments will inject the smaller pellets from three different low field side locations and from the inner wall to compare the physics of the pellet ELM triggering. Fast cameras will provide images of the pellet events to compare the ELM triggering process at all the low field side injection points. Results from the higher repetition rate ELM pacing experiments and implications for controlled ELM triggering on ITER will be discussed.

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