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**Plans for High Field Side Pellet Fueling in DIII-D<sup>1</sup>** L.R. BAYLOR, T.C. JERNIGAN, S.K. COMBS, C.R. FOUST, Oak Ridge National Laboratory, P. GOHIL, General Atomics — Fueling of DIII-D plasmas with deuterium pellets has been employed in experiments to investigate several aspects of plasma confinement and density control. The measured fueling efficiency and deposition profiles from pellets injected in the low field side configuration show a large discrepancy with pellet ablation theory, while the penetration depth compares favorably with theory. An apparent outward displacement of the deposited pellet mass is observed and is hypothesized to occur from  $\nabla B$  drift effects. Recent high field side pellet injection results from ASDEX-U<sup>2</sup> have motivated us to attempt injection of pellets at other locations inside the magnetic axis to investigate these effects in DIII-D. Data on the pellet structural integrity after accelerating through curved guide tubes are shown and initial results from injecting pellets vertically from the top of the device at locations inside and outside the magnetic axis are presented. Modeling of plasma response to injection of pellets on the high field side is to be discussed.

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<sup>2</sup>Kaufmann, M., et al., Proceedings of 16th IAEA Fusion Energy Conference, Montreal, 1996, IAEA-F1-CN-64/O1-5

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