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3D Field Effects on Disruption-Generated Runaway Electrons in DIII-D[1] D.A. HUMPHREYS, N.W. EIDIETIS, T.E. EVANS, P.B. PARKS, E.J. STRAIT, J.C. WESLEY, General Atomics, N. COMMAUX, T.C. JERNIGAN, ORNL, E.M. HOLLMANN, A.N. JAMES, J.H. YU, UCSD — A relatively modest conversion of thermal current-carrying electrons to multi-MeV runaway electrons (RE) during a disruption current quench can lead to damage of ITER in-vessel components. Effective mitigation of this conversion process is therefore essential to ITER operation. Injection of large amounts of impurities holds promise for RE mitigation, but has not yet reached the density levels expected to ensure full suppression. Experiments in TEXTOR and other devices have suggested that resonant magnetic perturbations (RMP) may suppress disruption runaways (e.g. [1]). We report on recent experiments in DIII-D applying nonaxisymmetric fields during disruptions with RE current channels, produced in ITER-like lower single null configurations using Ar cryogenic pellet injection. Experimental summaries and analysis of the effects of 3D fields on RE generation and deconfinement are presented.

[1] M. Lehnen, *et al.*, Phys. Rev. Lett. **100** (2008) 255003.

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