Abstract Submitted
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ITER Disruption Mitigation System Design[1] DAVID RASMUSSEN, M.S. LYTTLE, L.R. BAYLOR, J.R. CARMICHAEL, J.B.O. CAUGHMAN, S.K. COMBS, N.M. ERICSON, N.D. BULL-EZELL, D.T. FEHLING, P.W. FISHER, C.R. FOUST, T. HA, S.J. MEITNER, A. NYCZ, J.M. SHOULDERS, S.F. SMITH, R.J. WARMACK, Oak Ridge National Laboratory, J.D. COBURN, North Carolina State University, T.E. GEBHART, University of Florida, J.T. FISHER, University of Washington, J.R. REED, T.R. YOUNKIN, University of Tennessee — The disruption mitigation system for ITER is under design and will require injection of up to 10 kPa-m3 of deuterium, helium, neon, or argon material for thermal mitigation and up to 100 kPa-m3 of material for suppression of runaway electrons. A hybrid unit compatible with the ITER nuclear, thermal and magnetic field environment is being developed. The unit incorporates a fast gas valve for massive gas injection (MGI) and a shattered pellet injector (SPI) to inject a massive spray of small particles, and can be operated as an SPI with a frozen pellet or an MGI without a pellet. Three ITER upper port locations will have three SPI/MGI units with a common delivery tube. One equatorial port location has space for sixteen similar SPI/MGI units.

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