

Abstract Submitted  
for the DPP09 Meeting of  
The American Physical Society

**The Real Mission of ITER**<sup>1</sup> G.A. WURDEN, Los Alamos National Laboratory — ITER will operate subject to multiple physics and engineering constraints, and to be successful it must satisfy many constraints simultaneously. One of the most serious issues it will face is learning how to handle 100-400 MJ of plasma energy that can be quickly released in the event of a disruption, and the conversion of an additional 500 MJ of stored poloidal magnetic field energy. The number of full energy disruptions that the armor system can survive is very small. The consequences of multi-megaampere beams of runaway electrons (created in a disruption) hitting water-cooled armor tiles will be catastrophic for ITER if not mitigated. A survey of disruption features in existing machines is discussed. A coordinated global effort to avoid, control, and mitigate tokamak disruptions must be developed with the highest priority.

<sup>1</sup>Supported by DOE Contract DE-AC52-06-NA25396.

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Date submitted: 21 Jul 2009

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