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Development of Off-Normal and Fault Event Detection and Response Techniques for ITER and DEMO,* M.L. Walker, B.S. Sammuli, D.A. Humphreys, J.R. Ferron, R.D. Johnson, B.G. Penaflor, D.A. Piglowski, E.J. Strait, *General Atomics* — Future devices such as ITER and DEMO will demand a sophisticated collection of actions in response to a set of off-normal and fault events. The number of such response actions is significantly larger than on any presently operating fusion device. The objective of these actions is to allow fusion devices to operate disruption-free, thereby making fusion a more attractive power generating technology. We report on work performed at DIII-D to develop appropriate methods for detection of and response to off-normal and fault events and the software and computational infrastructure needed to support these methods.

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