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**Simulations of DIII-D Rapid Shutdown Experiments with One and Two Gas Jets*** V.A. Izzo, E.M. Hollmann, R.A. Moyer, *UCSD*; N. Commaux, D. Shiraki, *ORNL*; N.W. Eidietis, P.B. Parks, *General Atomics* – DIII-D has two massive gas jets for disruption mitigation, separated by 120º degrees toroidally and poloidally. Based on two radiated power measurements made at 90º and 210º degrees toroidally, little variation has been observed in the toroidal distribution of radiated energy between shots in which just one gas jet is fired, or both are fired. Three NIMROD simulations of massive neon injection – each jet individually and both simultaneously – are compared with the measurements. For each case, we calculate the radiation toroidal peaking factor (TPF) in two ways: 1) using only information from 90º and 210º, and 2) using full toroidal information. The two-point TPF reproduces the experimental result of little variation depending on gas jet(s) used. But, the real TPF shows significant variation, with a logical trend in which two jets produces more symmetric radiated power than one. This comparison suggests that the lack of experimental trend may be a measurement artifact.

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