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Modelling controlled VDE's and ramp-down scenarios in ITER¹ L.L. LODESTRO, Lawrence Livermore National Laboratory, R.A. KOLESNIKOV, W.H. MEYER, L.D. PEARLSTEIN, LLNL, D.A. HUMPHREYS, M.L. WALKER, GA — Following the design reviews of recent years, the ITER poloidal-field coil-set design, including in-vessel coils (VS3), and the divertor configuration have settled down. The divertor and its material composition (the latter has not been finalized) affect the development of fiducial equilibria and scenarios together with the coils through constraints on strike-point locations and limits on the PF and control systems. Previously we have reported on our studies simulating controlled vertical events in ITER with the JCT 2001 controller to which we added a PID VS3 circuit. In this paper we report and compare controlled VDE results using an optimized integrated VS and shape controller in the updated configuration. We also present our recent simulations of alternate ramp-down scenarios, looking at the effects of ramp-down time and shape strategies, using these controllers.

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Lynda LoDestro Lawrence Livermore National Laboratory

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