

Abstract Submitted
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**ITER Vertical Stability Guidance from
Multi-machine Experiments¹** D.A. HUMPHREYS, N. EIDIETIS, G.L. JACK-
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IPP-Garching — Sufficiently robust vertical stability control is critical to ITER, in
which the consequences of a vertical displacement event (VDE) disruption can be
very severe. Experimental results from many devices have provided guidance to
determine the necessary level of robustness, and theoretical analysis has quantified
the tradeoffs inherent in various design choices. The maximum controllable displace-
ment normalized by minor radius is shown to be a useful metric for performance, and
must be greater than 4% for robustness to VDEs in operating machines. Analysis
of controllability limits, axisymmetric control performance, noise environments, and
disturbances in operating devices including Alcator C-Mod, DIII-D, NSTX, TCV,
and JET will be presented.

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