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**VDE Disruption Halo Currents: Rotation and Peaking**,<sup>1</sup> M.J. SCHAFFER, T.E. EVANS, D.A. HUMPHREYS, A.W. HYATT, A.G. KELLMAN, R.J. LA HAYE, General Atomics — Halo currents are large, transient scrape-off layer currents induced by tokamak disruptions. We studied deliberately produced vertical displacement event (VDE) disruptions, because VDEs drive the largest halo currents in DIII-D. An array of current monitors measured the time-resolved poloidal and toroidal distribution of halo current in the vessel floor. Total poloidal halo current has reached 40% of the pre-VDE plasma current for short times (<1 ms). Halo current can be very concentrated toroidally, with toroidal peaking factors of 5 common early in the VDE; however, peaking is only 2 or 3 at the time of greatest halo current. MHD modes rotate rapidly at first but may slow and lock. The halo current distribution rotates much more slowly. Data are compared against a deformed plasma model. Neon pellet injection reduces both halo current magnitude and toroidal peaking.

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Prefer Oral Session  
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