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Theory Experiment

Intense Bursts of Millimeter-wave Emission in QH-mode Plasmas on the DIII-D Tokamak,* L. Yu, C.W. Domier, N.C. Luhmann, Jr., *UC-Davis*; B.J. Tobias, W.M. Solomon, *Princeton Plasma Physics Laboratory*; M.E. Austin, *U. Texas-Austin* – Intense bursts of millimeter-wave emission have been observed during low collisionality QH-mode plasmas on the DIII-D tokamak. These bursts are synchronized to the edge harmonic oscillation (EHO) and the rising edge of longer period oscillations observed in filterscope data. Enhanced electron transport precedes the bursting and we hypothesize that this bursting is due to some of the resulting electron orbits being in resonance with the 3D structure of the EHO. We present a 3D model for the EHO and we locate the bursting on this structure. This is compared to the orbits of trapped electrons.

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