

Abstract Submitted  
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**Modelling nonperturbative frequency sweeping of MHD modes in magnetic confinement fusion plasmas** RODERICK VANN, University of York, U.K., RICHARD DENDY, MIKHAIL GRYAZNEVICH, SERGEI SHARAPOV, UKAEA — Frequency sweeping of magnetohydrodynamic modes for which the sweeping rate is approximately constant have been observed at the Mega-Amp Spherical Tokamak in the presence of heating by energetic particles. A fully non-linear self-consistent numerical implementation of the Berk-Breizman augmentation of the Vlasov-Maxwell system is applied in the nonperturbative regime; frequency sweeping events phenomenologically comparable to experiment are observed. Experimental observations and simulation results are presented; the existence of a congruence between them is discussed.

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