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Simulations of waves in magnetised spherical Couette flow ERIK

SPENCE, University of Toronto, KLAUS REUTER, IPP Garching — The observation of hydromagnetic waves in electrically-conducting spherical Couette flow experiments has recently been reported. Here we present simulations of such experiments in the presence of a dipolar applied magnetic field, and report the observation of non-axisymmetric propagating disturbances in the simulated experiment's velocity and magnetic fields. The energy source which fuels the growth of the disturbances is described. Analysis of the waves is presented, and a dispersion relation calculated. The simulated waves are compared to the waves observed in experiments.

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