

Abstract Submitted
for the DPP16 Meeting of
The American Physical Society

O-X mode conversion in a non-symmetric torus at electron cyclotron frequencies¹ HAROLD WEITZNER, New York University — Earlier work on linear wave propagation over a symmetric background state, Phys. Plasmas 11, 866 (2004) is simplified and extended to non-symmetric equilibria. With the exception of one special case, which reduces to the case of a perpendicularly stratified medium, it is shown that mode conversion in symmetric or non-symmetric equilibria satisfies the same set of equations. An examination of the coupling of the geometrical ray optics solution to the mode conversion system provides a relatively simple and physical characterization of the incoming wave structure necessary to achieve effective mode conversion. Part of the work was done while visiting the Max=Planck-Institute-for Plasmaphysics, Greifswald, Germany. its support is gratefully acknowledged.

¹DE-FG-86ER53223

Harold Weitzner
New York University

Date submitted: 13 Jul 2016

Electronic form version 1.4