

Abstract Submitted  
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**Simulations of Electron Bernstein Wave Heating in Field-Reversed Configuration Plasmas** XIAOKANG YANG, Tri Alpha Energy, Inc., YURI PETROV, CompX, Inc., ALF KOEHN, Max Planck Institute for Plasma Physics, FRANCESCO CECCHERINI, LAURA GALEOTTI, Tri Alpha Energy, Inc. — It is extremely challenging to use microwaves to heat electrons effectively in high-beta Field-Reversed Configurations (FRCs) such as the C-2U experiment [1]. For a fixed two dimensional profile of C-2U equilibrium field, electron density and temperature, feasibility studies of electron Bernstein wave (EBW) heating via O-X-B mode conversion, have recently been conducted with use of the Genray ray-tracing code for six selected frequencies which cover the frequency range from fundamental electron cyclotron resonance (ECR) up to more than 20 harmonics of ECR. Very promising and also physically interesting simulation results, which are strongly related to the unique C-2U configuration, will be presented in detail

[1] M.W. Binderbauer *et al.*, Physics of Plasma **22**, 056110 (2015).

Xiaokang Yang  
Tri Alpha Energy, Inc.

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