

Developing High Harmonic Fast Wave (HHFW) as an Enabling Electron Heating Actuator for an FRC Plasma

Topic Area: Enabling Technologies

Partner	Company
Princeton Plasma Physics Laboratory	TAE Technologies, Inc.
Dr. Nicola Bertelli	Dr. Xiaokang Yang

Project Summary:

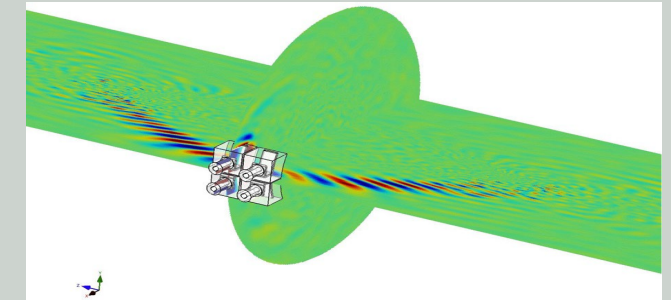
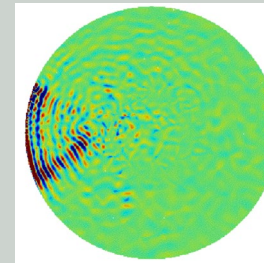
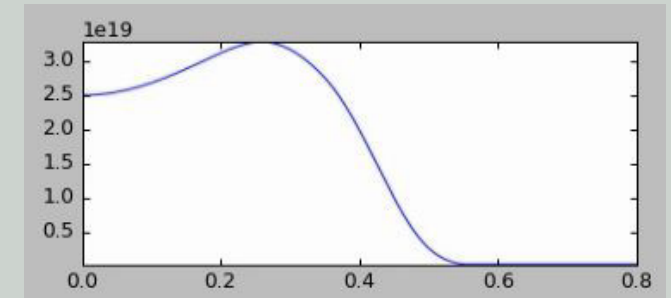
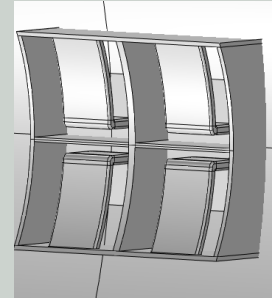
Perform HHFW simulations in FRC plasma by using Petra-M full wave code and a phased-array antenna under different plasma conditions.

Fusion Impact:

Advance RF modeling capability and demonstrate a new method of electron heating in the core of FRC plasma

Business/Market Impact:

Alleviate the concerns on HHFW coupling and propagating into the core of FRC plasma; drive RF project forward to conceptual design of HHFW system for C-2W device.



Period of Performance:	Federal Share:	Cost Share:
INFUSE 2019/20	\$80,000	\$20,000