

Abstract Submitted
for the DPP08 Meeting of
The American Physical Society

Full wave analysis including finite gyroradius effects in toroidal plasmas¹ ATSUSHI FUKUYAMA, TOMOHISA OKAMOTO, Kyoto University — In order to describe the finite gyroradius effects and the absorption at the cyclotron harmonics, the integro-differential formulation of full wave analysis is extended to three-dimensional configurations and implemented in the full wave module of the integrated modeling code, TASK. The new module was applied to the analysis of the ICRF waves in tokamaks and helical devices and the electron Bernstein waves in small-size spherical tokamaks. The results are compared with those of conventional analyses based on differential formulation to indicate the validity and the applicability of the new formulation. Preliminary results of Alfvén eigen modes will be also presented.

¹This work was supported by KAKENHI (20226017).

Atsushi Fukuyama
Kyoto University

Date submitted: 16 Jul 2008

Electronic form version 1.4