

Simulation of Reflectometry in Alborz Tokamak

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Abstract : Microwave diagnostics such as reflectometry are receiving growing attention in magnetic confinement fusion research. In order to obtain the better understanding of plasma confinement physics, more detailed measurements on density profile and its fluctuations might be required. A 2D full-wave simulation of ordinary mode propagation has been written in an effort to model effects seen in reflectometry experiment. The code uses the finite-difference-time-domain method with a perfectly-matched-layer absorption boundary to solve Maxwell's equations. The code has been used to simulate the reflectometer measurement in Alborz Tokamak.

Keywords : reflectometry, simulation, ordinary mode, tokamak

Conference Title : ICFPP 2015 : International Conference on Family Physicians and Practice

Conference Location : Barcelona, Spain

Conference Dates : August 17-18, 2015