

Seminar

Institute for Plasma Research

Title: Simulation and Experimental Study of a View Dump for Vertical Electron Cyclotron Emission (VECE) Diagnostic System.

Speaker: Dr. Prabhakar Tripathi (Post-Doctoral Fellow)
Institute for Plasma Research, Gandhinagar

Date: 16th April 2024 (Tuesday)

Time: 11:00 AM

Venue: Committee-3, IPR

Online link: <https://meet.google.com/fqn-yaba-upv>

Abstract:-

Electron Cyclotron Emission (ECE) measurements can provide valuable information about the localized temperature profile of the electrons and velocity distribution profile and its evolution. In Vertical-ECE (V-ECE) radiation is measured vertically i.e., along a constant magnetic field path provides a sensitive information about the energy distribution of electrons present in a tokamak. These measurements can be eroded by multiple wall reflections from inside the tokamak chamber. To avoid these spurious infiltrations, a view dump is placed, residing at the opposite end of the receiving antenna. The design of the view dump ensures absorption of unwanted thermal radiation.

The talk will deals with the simulation and experimental findings of a view dump using CST Microwave Studio in the frequency range of 60-180 GHz which covers the fundamental and 2nd harmonic cyclotron emission emissions at 1.5 Tesla, for SST-I Tokamak.

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