



Contribution ID: 116

Type: Talk

【803】 Fast Electron Studies using the ECE suite of Diagnostics on TCV

Friday 30 August 2019 11:45 (15 minutes)

Non-thermal electron distributions can be generated by various means in magnetically confined plasmas. On TCV, non-thermal electron populations are routinely generated using electron cyclotron current drive (ECCD), in the presence of magnetohydrodynamic (MHD) instabilities and during disruptions. The kinetic energy of the non-thermal electrons can range from several tens to a few hundred kilo electron volts. Diagnosis of the non-thermal electrons can be partially achieved using electron cyclotron emission (ECE) radiometers, measuring emission in the frequency range 70GHz to 140GHz. On TCV, a suite of ECE radiometers exists and there are several lines of sight available to make measurements. We will describe the available instrumentation, lines of sight, calibration and examine the potential analysis techniques open to us.

Authors: Mr TEMA BIWOLE, Arsène Stéphane (EPFL, Swiss Plasma Center); Dr PORTE, Laurie (EPFL, Swiss Plasma Center)

Presenter: Mr TEMA BIWOLE, Arsène Stéphane (EPFL, Swiss Plasma Center)

Session Classification: Applied Physics and Plasma Physics; Earth, Atmosphere and Environmental Physics

Track Classification: Applied Physics and Plasma Physics