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Design, Development and Characterization of High temperature source for Radiometer calibration.

Abstract

Radiometers are sensitive microwave receivers that are used in varied applications like remote sensing, imaging and as tokamak diagnostics. The radiometer, as a plasma diagnostic, is used to determine the evolution of plasma electron temperature. However, for reliable temperature measurements, the system needs to follow a standard calibration technique that requires a high temperature black body source.

The present work shall deal with the design of such a high temperature source that shall serve the purpose of radiometric calibration aspect. The project includes the design through simulation, development and experimental characterization of the developed source.

Academic Project Requirements:

- 1) **Required No. of student(s) for academic project: 01**
- 2) **Name of course with branch/discipline: Electronics and Communication**
- 3) **Academic Project duration:**
 - (a) **Total academic project duration: 12 Months**
 - (b) **Student's presence at IPR for academic project work: 4 (min) Full working Days per week**

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