

# 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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