



Contribution ID: 352

Type: Oral Presentation

## Microwave induced electron losses from an ECR Ion Source

Thursday, 28 June 2018 12:40 (20 minutes)

To enhance high charge state ion beam production it is imperative to maximize the electron confinement time of the heated electron populations of an Electron Cyclotron Resonance Ion Source (ECRIS). A key loss mechanism for heated electrons are induced by the injected microwaves which heats the plasma electrons of an ECRIS. This electron loss mechanism is thought to limit ultimate source performance. With this investigation a number of plasma diagnostics were combined to study this plasma process. Here we will report on the results of preliminary measurements on the JYFL 14 GHz ECRIS.

**Please confirm that you have carefully read the abstract submission instructions under the menu item "Call for Abstracts" (Yes / No)**

Yes

**Consideration for student awards Choose one option from those below.**  
N/A  
Hons  
MSc  
PhD

N/A

**Supervisor details If not a student, type N/A. Student abstract submission requires supervisor permission: please give their name, institution and email address.**

N/A

**Primary author:** Mr SAKILDIEN, Muneer (iThemba LABS)

**Co-author:** Dr JONES, Pete (iThemba LABS)

**Presenter:** Mr SAKILDIEN, Muneer (iThemba LABS)

**Session Classification:** Nuclear, Particle and Radiation Physics

**Track Classification:** Track B - Nuclear, Particle and Radiation Physics