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Plasma diagnostics on the GTS-ECRIS at iThemba Labs

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Abstract content
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A new technique is being developed to determine the prevailing charge state distribution (CSD) inside an Electron Cyclotron Resonance Ion Source (ECRIS) by measuring the characteristic X-rays emitted by the ECR heated plasma. We will report here on the results of initial measurements on the ECR ion source at iThemba LABS. The technique will in future be applied to study the two current phenomena which occur when ECR ion sources are operated in pulsed-mode.

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