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Status of the ECR ionizer for polarized ion source at iThemba LABS

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The polarized ion source at iThemba LABS has been in operation for over two decades using Electron Beam (EB) ionizer. The source has been used to deliver beam for nuclear physics research. Due to its disadvantages which are producing beam with large energy spread and having complicated extraction system, the EB ionizer was replaced by Electron Cylotron Resonance (ECR) ionizer. The ECR ionizer has better plasma confinement due to its higher magnetic mirror fields as well as low energy spread of which nuclear physics require. The use of ECR ionizer recently installed at iThemba LABS is under investigation.

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