Contribution ID: **15** Type: **Parallel Sessions**

OPTICALLY-PUMPED POLARIZED H- AND 3HE++ ION SOURCES DEVELOPMENT AT RHIC

Monday, 10 September 2018 15:50 (20 minutes)

The RHIC Optically-pumped Polarized H- Ion Source (OPPIS) upgrade with the atomic beam hydrogen injector and the He-ionizer cell was commissioned for operation in the Run-2013. The use of the high brightness primary proton source resulted in higher polarized beam intensity and polarization delivered for injection to Linac-Booster-AGS-RHIC accelerator complex in RHIC Runs 2013-2017. The proposed polarized 3He++ acceleration in RHIC and future electron- ion collider (eRHIC) will require about 2·1011 ions in the source pulse. A new polarization technique had been proposed for production of high intensity polarized 3He++ ion beam. It is based on ionization and accumulation of the 3He gas (polarized by optical-pumping and metastability-exchange technique in the high magnetic field of a 5.0 T) in the Electron Beam Ion Source (EBIS). We will present a status of the 3He++ ion source development.

Primary author: Dr ZELENSKI, Anatoli (BNL)

Presenter: Dr ZELENSKI, Anatoli (BNL)

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