Contribution ID: **306** Type: **Poster**

Transverse Free-Electron Target for the Heavy-Ion Storage Ring CRYRING@ESR

Monday, 17 September 2018 17:45 (15 minutes)

It is planned to install a ribbon-shaped high-density free-electron target in the experimental section of the presently being commissioned storage ring CRYRING@ESR of the upcoming Facility for Anti-proton and Ion Research (FAIR) [M. Lestinsky et al., Eur. Phys. J Spec. Top. 225, 797 (2016)]. Electron beam and circulating stored ion beam interact under an angle of 90°. Recently, we have developed a new versatile electron gun with electron energies up to 12.5 keV which is optimized for the storage ring environment as well as for photon spectroscopy. This gun is presently built as well as the entire target station. In this contribution we present the physics opportunities of such a free-electron target at a heavy-ion storage ring and give an overview about the present status of the project.

Primary authors: BRANDAU, Carsten (Justus-Liebig-Universität Gießen); BOROVIK JR., Alexander (Justus-Liebig-Universität Gießen); DÖHRING, Michel (Justus-Liebig-Universität Gießen); EBINGER, Benjamin (Justus-Liebig-Universität Gießen); LESTINSKY, Michael (GSI); MOLKENTIN, Tobias (Justus-Liebig-Universität Gießen); MÜLLER, Alfred (Justus-Liebig-Universitätä Gießen); SCHIPPERS, Stefan (Justus-Liebig-Universität Gießen, I. Physikalisches Institut)

Presenter: SCHIPPERS, Stefan (Justus-Liebig-Universität Gießen, I. Physikalisches Institut)

Session Classification: Poster session 1

Track Classification: P1 Instrumentation and methods