Contribution ID: **16** Type: **Poster**

The Internal and External Ion Sources for the Felsenkeller Underground Accelerator

Monday 11 June 2018 16:20 (10 minutes)

In order to determine the cross sections of astrophysical reactions at relevant energies pioneering work has been done at LUNA using a 0.4 MV accelerator. The new Felsenkeller laboratory, Germany, will house a 5 MV Pelletron accelerator with stable and intense ion beams in a low background environment to extend on this framework. For this purpose two ion sources are going to be part of the shallow-underground accelerator facility: First an external 134 MC-SNICS cesium sputter source providing carbon beams in tandem mode, secondly an internal radio frequency source for hydrogen and helium beams in single-ended mode.

In order to determine the characteristics of these ion sources, overground tests were undertaken at HZDR. This poster will report on long time measurements of the ion current for both ion sources and the beam emittance for the external one.

Primary authors: Mr LUDWIG, Felix (Helmholtz-Zentrum Dresden-Rossendorf); Mr GRIEGER, Marcel (Helmholtz-Zentrum Dresden-Rossendorf)

Co-authors: Dr BEMMERER, Daniel (Helmholtz-Zentrum Dresden-Rossendorf); Prof. ZUBER, Kai (TU Dresden); Ms KOPPITZ, Martina (Helmholtz-Zentrum Dresden-Rossendorf); Dr AKHMADALIEV, Shavkat (Helmholtz-Zentrum Dresden-Rossendorf); Mr REINICKE, Stefan (Helmholtz-Zentrum Dresden-Rossendorf); Dr SZÜCS, Tamás (Helmholtz-Zentrum Dresden-Rossendorf)

Presenter: Mr GRIEGER, Marcel (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Poster Session