

thinfilms and NEW IDEAS for SRF

Contribution ID: 60

Type: not specified

Nuclotron based Ion Collider Facility - Injection complex development

Monday, 8 October 2018 17:55 (10 minutes)

The New Injector Linac for Nuclotron-Nica is the proposed replacement for LU-20 accelerator. The possibility of old DTL LU-20 replacement by the new superconducting (SC) linac of 30 MeV energy for protons and ≥ 7.5 MeV/nucleon for deuterium beam is discussed now. The development of the SRF technologies is the key task of new Russian - Belarusian collaboration. The collaboration of JINR, NRNU MEPhI, INP BSU, PTI NASB, BSUIR and SPMRC NASB started in 2015. According to the concept of the new SC Linac for Nuclotron-NICA, 162.5 MHz quarter-wave resonators (QWR) with geometric velocity of 0.12c will be used for the first group of the cold part of the accelerator. The second group of cold cavity resonators is designed for a frequency of 324 MHz, velocity 0.21c and 7.7 MV/m accelerating gradient. Currently JINR, NRNU MEPhI and INP BSU start the new collaborative R&D project "Investigation of the features of obtaining and metrology of the coating of the Nb and Nb₃Sn system based on Cu in order to create superconducting high-frequency resonators for mega-rate accelerators". Results of lianc and SRF technologies will presented in this report

Primary authors: BUTENKO, A.V. (JINR, Dubna, Russia); Dr GUSAROVA, Maria (JINR, NRNU MEPhI); KULEVOI, T.V. (NRNU MEPhI and NRC Kurchatov Institute -ITEP, Moscow, Russia)

Co-authors: SYRESIN, E.M. (JINR, Dubna, Russia); LALAYAN, M.V. (NRNU MEPhI, Moskow, Russia); POLOZOV, S.M. (NRNU MEPhI, Moskow, Russia); SHATOKHIN, V.L. (NRNU MEPhI, Moskow, Russia)

Presenter: BUTENKO, A.V. (JINR, Dubna, Russia)

Session Classification: Open Discussion

Track Classification: Perspective of thin film cavities in international projects