Contribution ID: **223** Type: **Oral talk (15 min + 5 min questions)**

The experimental research of cyclotron DC-280 work

Friday, 15 July 2022 11:00 (20 minutes)

The DC280 is the high current cyclotron with design beam intensities up to 10 pμA for ions with energy from 4 to 8 MeV/nucleon. It was developed and created at the FLNR JINR. The first was extracted from the cyclotron on January 17, 2019. Experiments on acceleration of 84Kr, 12C, 40Ar, 48Ca, 48Ti, 52Cr and 54Cr beams production were carried out. The following intensities of accelerated beam have been achieved: 1.43 pμA for 84Kr+14; 10 pμA for 12C+2; 9,2 pμA for 40Ar+7; 7,7 pμA for 48Ca+7. The long time experiments were done in 2020-2022. The features of work of High Voltage axial injection systems, buncher systems and Flat-top systems were explored. The work of accelerator was stable and high efficiency. The total acceleration efficiency from ion source to transport channel was about 46%.

The speaker is a student or young scientist

No

Section

1. Design and development of charged particle accelerators and ionizing radiation sources

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