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CC-1-3 cyclotron complex

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The CC-1-3 cyclotron complex, to be used for analysis of materials, has been designed. The techniques of analysis of materials that will be implemented are RBS spectrometry, PES spectrometry, NRA, and PIXE spectroscopy. The complex is composed of a compact isochronous cyclotron and a particle beam preparation system with the chosen energy characteristics.

The cyclotron enables the acceleration of negative hydrogen ions up to the energy range from 1 to 3 MeV, and the extraction of protons using a thin carbon stripping foil. The cyclotron magnet is of the closed type with the median plane in the horizontal position. The isochronous magnetic field is formed with a four-sector structure. A two-dee acceleration system is placed completely inside the magnet poles. The proton beam preparation system ensures that the width of the beam energy spectrum is below 0.1 %. The basic element of this system is a magnetic analyzer having the bending angle of 270 deg.

The parts of the cyclotron complex are in the phase of fabrication. Its assembling and commissioning will be performed in the Vinca Institute of Nuclear Sciences by the end of 2012.

Please indicate preferred presentation (poster or talk?)

Talk

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