

Crystal channeling investigations at medical synchrotrons

Thursday 18 July 2024 17:15 (15 minutes)

The CREMA project investigates channeling for low energy carbon ions interacting with bent crystals in the hundreds MeV/u energy range. The experimental setup to assess the process efficiency will be operated in the experimental area (XPR) of the CNAO accelerator complex in Pavia (Italy). The project's aim consists on optimising a bent crystal that could be installed at a later stage in a medical synchrotron to complement or replace the electrostatic extraction septum for beam extraction. The proposed layout and calibration measurements on the CNAO beam will be presented, as well as simulations that confirm the feasibility of the channeling tests.

Alternate track

1. Accelerator: Physics, Performance, and R&D for Future Facilities

I read the instructions above

Yes

Authors: VARIOLA, Alessandro (Sapienza Università e INFN, Roma I (IT)); MEREGHETTI, Alessio (CNAO); PETRI, Anna Raquel (Università degli Studi e INFN Milano (IT)); Prof. ANDREAZZA, Attilio (Università degli Studi e INFN Milano (IT)); GARATTINI, Marco (CERN); PULLIA, Marco (CNAO); VALENTE, Paolo (Sapienza Università e INFN, Roma I (IT)); ZANZOTTERA, Riccardo (Università degli Studi e INFN Milano (IT)); ROSSI, Roberto (CERN); D'AURIA, Saverio (Università degli Studi e INFN Milano (IT)); SCANDALE, Walter (Imperial College (GB))

Presenter: D'AURIA, Saverio (Università degli Studi e INFN Milano (IT))

Session Classification: Technology and Industrial Applications

Track Classification: 17. Technology Applications and Industrial Opportunities