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Upgrade plans and new target stations for the HZB cyclotron

Thursday, 11 May 2023 16:30 (2 hours)

The HZB cyclotron provides protons for eye-tumor treatment in collaboration with the Charité –Universitätsmedizin Berlin. So far, more than 4300 patients have been treated. Parallel to therapy, there is an on-going R & D program for beam dosimetry and beam delivery. Furthermore, beam time is used for external users, e.g. the irradiation of geological samples or radiation hardness tests.
For the irradiation of geological samples, a new experimental setup was designed and implemented.
For radiation hardness tests, the set-up has been equipped with a new camera for measuring the spatial beam distribution. The use of this camera facilitates the area determination of irregularly formed beam shapes. For the measurements of degradation of solar cells their response is monitored on-line in parallel with the incoming proton beam.
In response of requests of our users, a new target station for the irradiation of solar cells is planned. This target station will be equipped with in-situ luminescence measurements.
Furthermore, a study for a cyclotron being able to deliver He and protons with an energy of 70 MeV/u has been started.

Funding Agency

Footnotes

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Yes

Primary author: DENKER, Andrea (Helmholtz-Zentrum Berlin für Materialien und Energie)

Co-authors: BUNDESMANN, Jürgen (Helmholtz-Zentrum Berlin für Materialien und Energie); DITTWALD, Alina (Helmholtz-Zentrum Berlin für Materialien und Energie); KOURKAFAS, Georgios (Helmholtz-Zentrum Berlin für Materialien und Energie)

Presenter: DENKER, Andrea (Helmholtz-Zentrum Berlin für Materialien und Energie)

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