



Contribution ID: 6

Type: **Talk**

## Status of the HZB cyclotron

*Saturday, 12 May 2012 09:50 (20 minutes)*

Since 2009 our cyclotron is again served by two injectors: a 5.5MV Van-de-Graaff and a 2MV tandetron. The tandetron has been optimized especially for the requirements of eye tumour therapy. The stability of the proton beam is of utmost importance for the therapy, both on the short-term and the long-term scale. Development of the ion source resulted in safe source operation times of more than 600h and extremely stable beam current after source tuning. After extensive beam tests, the permit for using the tandetron-cyclotron combination for therapy was granted in December 2010. The tandetron is now in full operation for therapy since the beginning of 2011. It proved to be a reliable machine with extremely high stability, causing no real down time to the accelerator operation during therapy. In 2009 the Van-de-Graaff was considered to be a temporary backup for the tandetron after its successful installation. However, new requests for pulsed beams with a very specific time structure occurred, which can be provided only with the Van-de-Graaff-cyclotron beamline. Accelerator operation, provisions to increase the uptime, and changes on the pulse suppressor will be discussed.

### **Please indicate preferred presentation (poster or talk?)**

talk

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**Session Classification:** Beam dynamics