

Asset, maintainance and reliabilty management at the Heidelberg Ion Beam Therapy (HIT) medical accelerator

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The HIT (Heidelberg Ion Beam Therapy) center is the first dedicated European accelerator facility for cancer therapy using both carbon ions and protons, located at the university hospital in Heidelberg. It provides three fully functional treatment rooms, two with fixed beam exit, operational for therapy since 2009, and a rotatable Gantry, used for therapy since 2012. Using an accelerator facility for medical purposes is a more challenging task than the usual scenario of an accelerator used for research. The regulations for medical therapies on national and European level are very strict and require an in-depth risk analysis, thus reporting and tracking the status of the machine is even a legal issue. The reliability of a medical accelerator is an important fact, both from a medical point of view that the radiation of a patient during the therapy plan must not be interrupted by more than four days, as from a commercial point of view. Thus, the management of facility maintainance and life cycles of accelerator devices, reliability purposes, and tracking of changes to the machine become important from all aspects, e.g. hardware, operation, physical settings. We will present on the current status of the asset and reliability management of the HIT accelerator facility, showing that we live now with a zoo of different tools, both commercially (like Lotus Notes) as self-developed, leading to the question how these tools may be unified to a more homogenous solution.

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