

## **Survey of Target Facility Landscape: Accelerator-based Materials Irradiation Facilities**

*Tuesday, 20 May 2014 11:25 (45 minutes)*

Materials irradiation facilities based on accelerators are usually secondary facilities taking profit of accelerators driven by other main application (i.e. spallation sources). As a consequence the measured irradiation effects on the materials can be very different and, in some cases, hardly comparable between them.

Presently, the accelerator-based materials irradiation facilities designed from the very beginning based on the materials requirements are those related to the simulation of fusion-like irradiation effects on materials. To this family belongs IFMIF and other ones recently proposed and presently under discussion (ENS, DONES, FAFNIR, SORGENTINA).

In a very rough approach, the accelerator-based materials irradiation facilities can be classified based on the type of irradiation on the material, i.e. the accelerator particle is directly used to irradiate the material of interest (including facilities like some electron or ion accelerators) or facilities in which the accelerated particle is used to generate other particles that are used to irradiate the material (like MEGAPIE, MTS, MYRRHA, IFMIF or others). These last ones can be further classified based on the type of target (solid or liquid) or the accelerator power.

In this contribution a general overview of some of these different facilities will be made making special emphasis on the target characteristics of them, its main issues and their present status.

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**Session Classification:** Opening Plenary Session

**Track Classification:** Plenary Sessions