

## **IFMIF-DONES. Present Status and Experimental capabilities**

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IFMIF-DONES is a powerful neutron source, generated by the interaction of a high current (125 mA) deuteron beam accelerated to 40 MeV and a liquid lithium target, whose design is being completed presently under Eurofusion and which will be sited in Granada (Spain). Its mission is to develop a database of fusion-like neutron irradiation effects in the materials required for the construction of fusion power reactors. Recently the project has experimented a special impulse with the creation of the IFMIF-DONES Spanish Consortium and the establishment of the Steering Committee.

In this talk, the present status of the project both regarding its design and the activities leading to its implementation, will be summarized.

The capabilities of the installation to irradiate under controlled conditions materials which in the present reactor designs will be subjected to high neutron fluxes (like those intended for the structure, breeder, first wall, insulators, diagnostics) will be reviewed. The irradiation capabilities for the High Flux Test Module - dedicated to structural materials – have been analyzed previously [Arbeiter et al. Nuclear Materials and Energy 16, 2018]. The possibility of introducing other irradiation modules apart from the High Flux Test Module, to investigate e.g. tritium production on breeders, the effect of radiation on tritium and lithium diffusion or other phenomena relevant in a reactor, will be discussed.

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