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NUCLEAR PHYSICS CAPABILITIES OF THE IFMIF-DONES NEUTRON SOURCE

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The International Fusion Materials Irradiation Facility –Demo Oriented Neutron Source (IFMIF-DONES) is a research infrastructure for irradiation the materials to be used in a fusion reactor. The facility would provide a unique neutron source of energy spectrum and flux level representative of those expected for the first wall containing future fusion reactors. Its construction is close to be started in the proposed site at the Escúzar Metropolitan Park (located 18 km southwest from Granada city).

Its unique characteristics are also well adapted for the development of a number of different types of other experiments relevant for nuclear physics and other scientific topics.

This paper will present an overview of the implementation, engineering design and main irradiation characteristics of the facility as well as a review of the different possible experimental applications of interest for nuclear physics that has been identified.

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