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MARIA – The high-intensity polarized neutron reflectometer of JCNS

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The high-intensity reflectometer MARIA of JCNS is installed at the neutron guide hall of the FRM II reactor in Garching and it is a state of the art reflectometer at a constant flux reactor. It gives the opportunity to investigate specular reflectivity curves in a broad dynamic range including off-specular scattering and GISANS measurements. The availability of a polarised neutron beam and the integration of a time-stable ³He polarization spin filter based on Spin-Exchange Optical Pumping (SEOP), together with a multitude of offered sample environments permits the use of the instrument in a wide range of studies ranging from nano-magnetism to biology. In this contribution we highlight the technical aspects of the instrument and also the potential research opportunities it gives to the user.

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