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## JCNS @ ILL: News and progress on IN12

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IN12, a three-axis spectrometer for cold neutrons, is operated as a CRG-instrument from the Jülich Centre for Neutron Science (JCNS) at the Institute Laue Langevin in Grenoble. In the years 2010 to 2012 IN12 has been relocated to a new position at the end of a new guide. Along with this relocation the whole primary spectrometer has been upgraded with new state-of-the-art components [1].

Compared to the old IN12 this combination of a modern neutron guide and the focusing Bragg optics has yielded up to a factor of 10 in flux on the sample position. We can now offer a peak flux of about  $10^8$  n/sec/cm<sup>2</sup> around  $k_i = 2 \text{ \AA}^{-1}$ . In addition an extended wavelength range far into the warmish region (max.  $k_i = 5.1 \text{ \AA}^{-1}$ ) is now available.

IN12 further exhibits vast capabilities for the use of an extended sample environment, including high magnetic fields up to 15T. Of course the instrument is equipped for the use of polarized neutrons, full polarization analysis (even together with high magnetic fields at the sample) and a cryopad set-up are available as standard options. We will also report on the progress of the multi-analyser system IN12-UFO that is currently in a commissioning phase.

Further, neutron measurements and results from user experiments will be shown that demonstrate the features and capabilities of this powerful three-axis spectrometer.

[1] K. Schmalzl, W. Schmidt et al., *Nuclear Instr. & Meth. A*, 819, p.89 (2016)

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