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Fundamental Physics with Very-cold and Ultracold Neutrons at the Institut Laue-Langevin

Tuesday 9 September 2025 14:00 (30 minutes)

Very slow neutrons are excellent probes for fundamental physics at the precision frontier.
In recent years, the Institut Laue-Langevin (ILL) has been strengthening its corresponding infrastructure: The superthermal UCN source SuperSUN has been commissioned and successfully put into user operation. The work-horse of UCN physics, the instrument PF2, has been modernized, and its VCN-port entirely refurbished. As a result, new exciting experiments have been performed or are planned for the close future,ranging from neutron interferometry using VCN, advanced searches for mirror neutrons, precision tests of gravity at short distances within the qBounce experiments, as well as the commissioning of the new-generation nEDM-spectrometer PanEDM.

In my talk, I will review news about the instruments as well as some experiments.

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