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Ultracold but cool –Pioneering experiments with ultracold neutrons

Monday 21 October 2019 10:05 (30 minutes)

Due to their outstanding property to be storable and hence observable for long periods of time (several hundreds of seconds) in suitable material or magnetic traps, ultracold neutrons (UCNs) with energies around hundred nanoelectron-volts are a unique tool to study fundamental properties of the free neutron, like its beta-decay lifetime, its electric dipole moment and its wave properties.
The early days of UCN physics are briefly reported, and selected pioneering experiments with UCNs in the last two decades –subject to the author's taste - are described.

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