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Fundamental Physics with Slow Neutrons

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Neutrons are electrically neutral and massive particles. They experience all known forces, which are electromagnetic, gravitation, weak, and strong forces. Slow neutrons with low kinetic energy are good tools for observing the effects of those interactions. They are used for various fundamental physics experiments, taking advantage of the property.
Depending on their kinetic energy, slow neutrons are called cold, very cold, and ultra cold neutrons. In this presentation, the property of such slow neutrons will be introduced. They are unique probes for exploring new physics beyond the standard model. I will also discuss the cutting-edge experiments using slow neutrons, such as neutron electric dipole moment searches, neutron lifetime measurements, gravity experiments, and so on.

Scientific topic

Fundamental interactions

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