

New Physics Searches with Neutron Beams

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The neutron represents a versatile tool in the realm of fundamental particle physics. It is used to perform precision physics measurements at low energies with the goal to search for beyond Standard Model signals. In this presentation, I will introduce a few activities currently pursued at the University of Bern. The projects comprise the hunt for a CP-violating neutron electric dipole moment using a pulsed beam, the search for axions as dark matter candidates and the development of a high-sensitivity interferometer which shall ultimately be used to measure the neutron's electric charge.