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## Setting Up High-Energy Polarized Neutron at the China Spallation Neutron Source

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Polarized neutrons serve as a critical probe in nuclear physics to investigate spin-dependent interactions and nuclear dynamics. Polarized neutron enables precise studies of nuclear forces, include probing nuclear structure, analyzing reaction mechanisms and resolving nucleon internal spin-quark distributions via deep inelastic scattering. Challenges persist in achieving high polarization stability, measuring low cross-section reactions, advancing our understanding of spin-mediated nuclear phenomena and QCD in dense matter. We present our recent effort on setting polarized neutron at the China Spallation Neutron Source Back-n beamline, as well as the polarization technique available for future research. Key instrument development in polarized  $^3\text{He}$  neutron spin filter, guide fields and spin flippers shall be presented, and the corresponding method for designing experiment will be discussed.

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