

Abstract Submitted
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Performance Evaluation of Neutron Polarimeter NPOL SHUMPEI

NOJI, KENJIRO MIKI — A high performance neutron polarimeter NPOL has been constructed for the measurement of polarization correlation function for the $(d, pn[^1S_0])$ reaction for the test of EPR paradox in a system of unlike fermions. The NPOL system consists of 12 planes of two-dimensional position-sensitive neutron detectors with a size of $60 \times 60 \times 3.0 \text{ cm}^3$. Neutron polarization is determined from the azimuthal distribution of the elastic $\vec{n} + p$ scattering in the scintillator. The effective analyzing power of NPOL have been calibrated by using the polarized neutrons from the ${}^6\text{Li}(\vec{d}, \vec{n})X$ reaction at $T_d = 270 \text{ MeV}$. We will report the effective analyzing power and the double scattering efficiency.

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