

Magnetic system of the xenon core polarizer

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A model of a magnetic system and a verified calculation of the distribution of magnetic induction in its volume are presented. This system will be part of an installation for producing ^{129}Xe hyperpolarized along nuclear spins by optical pumping of rubidium vapor followed by spin exchange with noble gas isotope atoms. A visualization of the magnetic field created by a system of four rings with a different number of turns is presented. Verification of the computational model showed excellent compliance with the experimental data.

Keywords: magnetic field, field uniformity, hyperpolarized xenon.

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