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**UCN n-EDM experimental developments at RCNP**

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Our KEK-RCNP-Osaka-ICEPP collaboration group led by Y. Masuda of IPNS, KEK and K. Hatanaka of RCNP, Osaka Univ. is developing a new type high intensity UCN (ultracold neutron) source at RCNP, Osaka Univ., for the future experiments on fundamental physics including n-EDM (neutron electric dipole moment) precision measurements, which may disclose origin of the baryon asymmetry in the present universe by providing active evidence of the violation of the time reversal invariance. Our UCN source produces 15 UCN/cm$^3$ at the exit, by the compact combination of the spallation neutron source and the super-fluid He-II moderator, which provides with the best power efficiency. In the present stage, we are trying to establish Ramsey resonance technique for the n-EDM measurements, by studying behavior of UCN and the polarization, using abundant UCNs produced in this source, in addition to the improvement of the source performance. The energy spectrum of UCN, i.e. the velocity distribution, is an important information in the estimation of the false EDM effect such as Bloch-Siegert shift and is found to be well reproduced by the uniform production in phase space. We tried to polarize UCN by the magnetic potential in pure ion foil. The production of polarization itself is found rather easy, namely, the polarization could reach as high as 100% in the beginning. Average polarization, however, is dominated by the relaxation of polarization during transportation and storage. For the n-EDM measurements in the next generation, our effort should be devoted to the understanding of the geometric phase such as Bloch-Siegert shift which dominates systematic error in the EDM measurements. Our next step will be demonstration of Ramsey resonance and the installation of the co-magnetometer and electric field, to detect geometric phase.