

Abstract Submitted
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Recoil order correction of ^8B beta decay for solar neutrino spectrum TOSHIYUKI SUMIKAMA, Tokyo University of Science — The solar neutrino spectrum of ^8B has been measured precisely at the Super-Kamiokande and the SNO. For the precise neutrino oscillation parameters, the systematic uncertainty about the ^8B neutrino spectrum without neutrino oscillation need to be reduced. Main uncertainty about the neutrino spectrum is the recoil order correction which includes matrix elements. The weak magnetism and the time component of the axial vector current, which is called the axial charge, are the recoil order correction in the ^8B neutrino spectrum. In the present study, the weak magnetism and the axial charge are determined directly from the beta-decay measurements, which are for the beta-alpha angular correlation term [1] and the recently measured spin-alignment correlation term [2]. I will present the extraction of the recoil order correction and compare it with the previous one [3].

[1] R.D. McKeown et al., Phys. Rev. C 22, 738 (1980).

[2] T. Sumikama et al., Phys. Lett. B 664, 235 (2008)

[3] C.E. Ortiz et al., Phys. Rev. Lett. 85, 2909 (2000), W.T. Winter et al., Phys. Rev. C 73, 025503 (2006).

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