

New constraints on magnetic moments of solar neutrinos in Borexino

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Effective magnetic moment of solar neutrinos is constrained using a 1291.5 days dataset of Borexino Phase-II. The sought-for effect from electromagnetic neutrino interaction is the contribution to the low-energy part of the $\nu - e$ scattering cross section affecting the shapes of the electron recoil spectra. Spectral fit of the solar neutrino data leads to the limit of $\mu_{\nu}^{eff} < 2.8 \cdot 10^{-11} \mu_B$ (90% C. L.). Finally, this result has been used to constrain the elements of the magnetic moments matrix in the mass and flavor bases.

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