Comment on "Event Excess in the MiniBooNE Search for $\bar{\nu}_\mu \to \bar{\nu}_e$ Oscillations"

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In a recent Letter, Aguilar-Arevalo *et al.* [1] has claimed that "An excess of 20.9 ± 14.0 events is observed in the energy range $475 < E_\nu^{QE} < 1250$ MeV, which, when constrained by the observed $\bar{\nu}_\mu$ events, has a probability for consistency with the background-only hypothesis of 0.5%". To the contrary we show the wrongness of this statement. Indeed, the data given in the Table II, shows that the deviation between observed data and background in the energy range $475 < E_\nu^{QE} < 1250$ MeV is approximately 1σ, which corresponds to probability $\sim 32\%$ [2] for background-only hypothesis. Actually, the above mention statement of the paper is correct for the energy range $475 < E_\nu^{QE} < 675$ MeV (see corresponding row of the Table II).

At the first glance one may assume that this mistake reflects an ordinary misprint only. Unfortunately the detailed analysis of the paper shows that this not the case (see paragraph started with "Figure 1 (top) shows..." on the page 3 as well as the last paragraph of the paper). Fortunately the above mentioned mistake does not change results given in the rest of the paper, which contains interesting results.

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[1] A. Aguilar-Arevalo *et al.,* Phys. Rev. Lett. **105,** 181801 (2010).

[2] K. Nakamura *et al.*, (Particle Data Group), J. Phys. G **37**, 075021 (2010).