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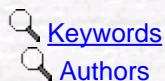
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Effects of the Left-Right Asymmetry Parameter in the End Point of the Tritium-Beta Spectrum

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Abstract: We start with a Left-Right Symmetric Model and we analyze the endpoint of the beta decay of tritium ${}^3\text{H} \rightarrow {}^3\text{He} + e^- + \bar{\nu}_e$. We applied this model to incorporate the right currents, whereby we propose an amplitude whose leptonic part contains the parameter \bullet defined as a left-right asymmetry parameter which measures the parity violation. We realized a numerical computation for the sensibility of the Mainz and Troitsk experiments for $m_{\bar{\nu}_e} = 2.2$ eV; and for the future beta decay experiment KATRIN, which will reach a sensitivity of $m_{\bar{\nu}_e} \approx 0.2$ eV. We find that the electron energy spectrum for such experiments is light affected by the left-right asymmetry parameter.

Key Words: Models beyond the standard model, Neutrino mass and mixing, Beta decay. Models beyond the standard model, Neutrino mass and mixing, Beta decay.

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