Particle Physics on the Plains 2018



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Galactic Dark Matter Population as the Source of Neutrino Masses

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The extremely small but non-zero neutrino masses has no explanation in the Standard Model. We propose a new mechanism for neutrino mass generation, unrelated to the Higgs mechanism, in which neutrinos get their mass via long range interactions with dark matter. Our model predicts a location dependent neutrino mass and also implies that relic neutrinos are not present in galaxies due to having been repelled by the dark matter.

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