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Neutral Fermion pair production by Sauter-like magnetic step

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In this talk, we discuss recent results on neutral fermion pair production from the vacuum by an inhomogeneous Sauter-like magnetic field. We find exact solutions of the Dirac-Pauli equation in this field and calculate differential and total quantities characterizing vacuum instability. Special attention is paid to cases where the gradient of the magnetic field varies either gradually or abruptly over a spatial coordinate.

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