# PAIR CREATION BY CHANNELED PARTICLES

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Relativistic charged particle passing through a crystal at small incident angle with respect to a crystal plane can be captured into channeling state [1-3]. The channeled particle has the transverse discrete energy levels. Due to the transition from one transverse energy level to another it can emit a photon. In higher-order of the perturbation theory, instead of the photon it can emit an $e^+e^-$ pair [3,4].

In the [3] the pair creation by the channeled charged particles was considered in semi classical approximation and in the [2] it was considered as channeling radiation and following $e^+e^-$ pair creation by photon in a crystal.

In the present paper for the first time we considered electron-positron pair creation by the channeled positron and positron in a frame work of QED. The calculation is similar to the calculation of $e^+e^-$ pairs in the recombination of the electron with the nucleus [4,5].

**References**

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