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Electron acceleration in electric circuits during solar flares

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During solar flares a huge amount of energy is suddenly released in the corona. They are accompanied by enhanced emissions of electromagnetic waves from the radio up to the hard X-ray range indicating the generation of energetic electrons during flares. A large amount of the flare energy is deposited into the energetic electrons. It is not fully understood in which way such a large number of electrons is accelerated up to high energies within a fraction of a second. We present a flare model in terms of electric circuits located in the solar atmosphere. The circuit is driven by the photospheric motion. The electrons are accelerated by the DC electric field appearing in the coronal loops if the circuit is closed via the corona. The theoretically obtained results, e.g. differential fluxes of energetic electrons, are compared with RHESSI observations, e.g. the production rate of energetic electrons and their related power during flares.