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# Proposal for a new type of accelerator for electrons and protons

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## Abstract

The idea we propose is based on avoiding the direct interaction between the laser and the atomic/molecular components of the thin film which the laser interacts with, in the purpose of saving the energy of the emergent laser. For this purpose the emergent laser interacts with free electrons generated by an electron source, then the laser accelerated electrons by the laser attract pulsed protons emitted by a source of ions.

The clouds of protons and electrons are stripped by an electrostatic or magnetostatic field. The resulted electrons are brought back into the cycle; the protons can be used in medical or industrial purposes.

The advantages of this equipment are the very small sizes and a small mass. This kind of acceleration is a very compact, which takes place on the meter scale.

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