

A Proposed Plasma Wakefield Acceleration Experiment Using CLARA Beam

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A plasma wakefield acceleration experiment has been proposed to study the key issues in electron driven wakefield acceleration. A 250 MeV electron beam from the proposed FEL test facility so-called CLARA (Compact Linear Accelerator for Research and Applications) will get energy doubling with a ~ 20 cm plasma cell. In this talk, we will discuss the feasibility of electron beam transport and define the beam parameters for the possible experiments that can be conducted using CLARA beam. The detailed particle-in-cell simulations based on these parameters will be presented.

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