

Accelerating Electrons with Protons in Plasma - the AWAKE Project

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The construction of ever larger and costlier accelerator facilities has its limits, and new technologies will be needed to push the energy frontier. Plasma Wakefield acceleration is a rapidly developing field and is a promising candidate technology for future high-energy accelerators. The AWAKE collaboration is pursuing an approach to accelerate electrons to the TeV energy regime in a plasma. To verify this novel technique, a proof-of-principle demonstration experiment is being carried out using 400 GeV proton beams from the Super Proton Synchrotron at CERN. First results from the experiment will be presented, as well as ideas on future applications of this technology.