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mardi 18 juillet 2017 à 11h00

AWAKE : The Proton Beam-Driven Plasma Wakefield Experiment

The AWAKE project at CERN is a proof-of-concept experiment for demonstrating electron acceleration in a plasma wakefield driven by a high-energy proton beam. AWAKE uses a 400 GeV proton beam to generate a plasma wakefield in a ten meter long Rubidium vapor cell. The CERN proton beam is much longer than the characteristic plasma wavelength. As the proton beam propagates through the plasma, a self-modulation instability arises which forms micro-bunches at the plasma wavelength. The micro-bunches couple to the plasma wakefield and drive gigavolt-per-meter accelerating fields in the plasma. In this talk, I will discuss the first observations of the self-modulation instability at AWAKE, as well as future plans to inject and accelerate an electron beam in the proton beam-driven plasma wakefield.

Salle 101 - Bât. 200, Orsay

Thé et café seront servis 15 mn avant le séminaire
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