



Joint LLC Seminar

Thursday November 29, 15:15

The Rydberg Lecture Hall, Dep. of Physics

Olle Lundh

Department of Physics, Lund University

New breed of compact accelerators using laser and particle beams

Relativistic particle beams are unique tools to explore the frontiers of science, but particle accelerators can span several kilometers in length and be very expensive to build. Laser-driven plasma accelerators provide acceleration gradients that are three orders of magnitude greater than those generated by conventional accelerators, offering the potential to shrink the length of acceleration by the same factor. In this presentation, the physics of plasma acceleration will be outlined. Emerging concepts for tuneability and control, using shaped plasmas and multiple intense laser pulses will be presented, with a focus on generation and applications of ultrashort pulses of synchrotron X-rays. The feasibility for plasma acceleration at MAX IV will also be discussed.

Coffee and cakes will be served from 15.00!



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