



JuSPARC Seminar on  
WEDNESDAY, November 25 at 11:00 CET

# Anna Hützen

## **Generation of polarized particle beams at relativistic laser intensities**

The acceleration of polarized electrons, positrons, protons and ions in strong laser and plasma fields is a very attractive option for obtaining polarized beams.

Despite many advances in the understanding of the phenomena leading to particle acceleration in laser-plasma interactions, a largely unexplored topic is how an accelerator for strongly polarized beams can be realized. Recently, there has been substantial progress in the understanding of the dominant mechanisms leading to high degrees of polarization, in the numerical modelling of these processes and in their experimental implementation. Several proof-of-principle experiments, relaying on pre-polarized gas targets, are now being prepared.

This talk presents an overview on the current state of the field, and on the concepts of polarized laser-plasma accelerators and of beam polarimetry.

