Contribution submission to the conference Dortmund 2021

LEAP: Polarized electrons from LPA — •Felix Stehr^{1,2}, Si-Mon Bohlen¹, Jenny List¹, Gudrid Moortgat-Pick^{1,2}, Jens Osterhoff¹, Kristjan Põder¹, and Jennifer Popp^{1,2} — ¹DESY — ²Universität Hamburg

In recent years, laser plasma acceleration (LPA) has become a promising alternative to conventional RF accelerators. Polarized beams are indispensable for many experiments in particle, atomic and nuclear physics as well as in material science, where spin-dependent processes are to be studied. Theoretically, it has been shown that the interaction of multiple laser beams with a gas target can produce polarized electron beams through LPA. The LEAP (Laser Electron Acceleration with Polarization) project at DESY aims to demonstrate this experimentally for the first time. For this purpose, a LPA for the generation of polarized electron beams will be set up, as well as an electron polarimeter. The polarization of the electrons will be studied as a function of the laser and plasma parameters. The talk will give a general overview of the LEAP project and the generation of polarized beams.

| Part: | АКВР |
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| Туре: | Vortrag;Talk |
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