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Update on PALLAS project

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The prototyping of accelerator based on laser-plasma technology (PALLAS) project is aiming to build a laser-plasma injector accelerator (LPI) test facility with the objective to deliver within a few years electron beam of 150-250 MeV, >30 pC, <1 mm.mrad emittance beam at 10 Hz with control and stability comparable with RF accelerator. The project developments are structured around advanced laser control [1], plasma target development [2,3] and electron beam characterization [4].

An update on the project progress will be given focusing on two aspects. Firstly, the recent numerical and experimental results in plasma targetry for localised ionisation injection target with two different approaches will be presented and discussed. Secondly on the control command aspect, the recent development for automated data acquisition using Tango Controls will be reported. Finally beamline commissioning plan for 2024 will be detailed.

[1] S. Feister et al. HPLE (2023), G. Kane et al. EAAC (2023),

[2] P. Drobnik et al. Phys. Rev. Accel. Beams 26, 091302 –Published 21 September (2023)

[3] P. Drobnik et al. arXiv:2309.11921 (2023)

[4] C. Guyot et al. to be submitted (2023)

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Classification de Session: Installations

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