The EuPRAXIA Consortium is preparing a conceptual design for the world's first multi-GeV plasma-based accelerator with industrial beam quality and dedicated user areas.

Do you want to become part of this endeavor?

Join us for your

# PhD Thesis on Electron beam instrumentation for Plasma Wakefield Accelerators

Instrumentation is is of particular importance for novel accelerating schemes. It allows benchmarking models of the accelerator with measurements, stabilizing the operation through feedbacks, diagnosing problems, and ensuring the safe operation of the accelerator.

Do you have a strong motivation for experimental research on the forefront of accelerator physics, are you an open-minded person who enjoys working in an international team?

In this thesis, you will design an instrument to measure and optimize the longitudinal phase space of the electron beam. To this aim, we are proposing to use an accelerating structure at several hundred GHz, such as to maximize the curvature in phase space. The longitudinal phase space is transformed to the transverse space and imaged on a profile monitor.

You will work on the design of instrumentation suitable for the planned EuPRAXIA accelerators. You will then perform first tests of this device in SwissFEL, a free electron laser based on a radio-freuqency accelerator, located at the Paul Scherrer Institute in Villigen.

You will be part of the Laboratory of Particle Accelerator Physics at EPFL, and of the Electron Beam Instrumentation Group at PSI. We offer an attractive salary starting at 52'700 CHF gross per annum, and a stimulating multicultural working environment.

To apply, send a motivation letter, CV, and the contact information of at least two referees willing to write a reference letter to Esther Hofmann, recruiting.lpap@epfl.ch

For more information, feel free to contact Rasmus Ischebeck, rasmus.ischebeck@psi.ch, +41563105535

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