

Cockcroft Institute Seminar

Current Design Status for the PSI-XFEL

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Walton Rooms A & B, The Cockcroft Institute

Abstract

Building on the success of the Swiss Light Source, the Paul Scherrer Institute is planning a X-ray Free-electron Laser facility to provide a tool for science and research in Switzerland. The project is currently in the design phase and the proposal will be submitted to the Swiss government in late 2010. The design is based on a high-brightness electron beam source to aim for a compact size of the facility. The hard X-ray beam operates as a SASE FEL in the wavelength range between one and seven Angstrom with an electron beam energy up to 6 GeV and an in-vacuum undulator with a period of 15 mm. In addition the PSI-XFEL offers also two soft X-ray beamlines to extend the wavelength range up to 7 nm. A seeding option for at least one of the two beamlines is foreseen. This presentation gives an overview over the PSI-XFEL project with an emphasis on the FEL performance as well as a discussion of the seeding options for the soft X-ray FEL beamline.