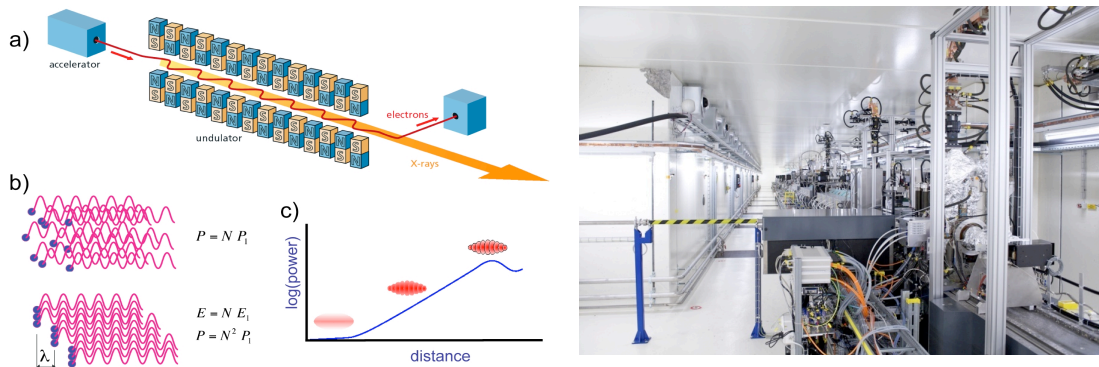


Student 'Praktikum': SwissFEL Science and Technology (2 credit points)

Bruce Patterson, PSI (056 310 4524)
Sven Reiche, PSI (056 310 5119)
Thomas Schietinger, PSI (056 310 3274)

November 14-15, 2012
Paul Scherrer Institut, Villigen

The 2 day Praktikum will provide an introduction to and hands-on experience with the SwissFEL X-ray Laser Project. Test measurements will be made at the 250 MeV Test Injector.



The Praktikum will consist of three parts:

- A) **Introduction to X-ray Free Electron Lasers:** lectures and exercises will provide an overview of the principle of operation of an XFEL and a summary of its applications in physics, chemistry and biology.
- B) **Beam characterization at the 250 MeV Injector:** We will divide into small working groups, each of which will setup the accelerator from scratch, tuning the drive laser, the accelerating cavities and the magnets, to reach a particular working point. We will then characterize the electron beam quality, *e.g.*, by making a so-called “quadrupole scan”.
- C) **Report:** Background material for the Praktikum report will be studied in advance, and the majority of the data analysis will be performed on site. Successfully performing the Praktikum earns 2 Credit Points.

Overnight accommodation is available at the PSI guest house.

For further information and registration, please contact Bruce Patterson, PSI:
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