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UNIVERSITÄT BERN

Seminar über Ultrafast Science and Technology

Referent: S. Borrelli, M. Bednarzik, C. David, E. Ferrari, V. A. Guzenko, G.L. Orlandi,, C. Ozkan-Loch, E. Pratt and R. Ischebeck, Paul Scherrer Institute PSI, Villigen Switzerland

Titel: Wire Scanner on a Chip

Wire scanners are commonly used for high resolution beam profile and emittance measurements. However, their resolution is limited to few microns by the resolution of the position encoder, wire vibrations and the wire diameter. We propose to overcome the latter two limitations leveraging on nanofabrication techniques, to electroplate metallic strips on a thin membrane via e-beam lithography. This novel design opens up a pathway to sub-micrometer resolution beam profile monitors, which is a huge stride for future free electron lasers, as well as various advanced accelerator concepts, including dielectric laser accelerators. We show measurements performed with relativistic electron beams in the injector of the X-ray free electron laser SwissFEL.

Zeit: Donnerstag, 02.11.2017, 11:15 Uhr

Ort: **Hörsaal B116**, Gebäude exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz