



Contribution ID: 25 Contribution code: TUP025-WEB

Type: **Poster Presentation**

Time-resolved measurements of short-range transverse wakefields in flat corrugated structures

Tuesday 20 August 2024 20:40 (20 minutes)

Flat corrugated structures designed to generate strong wakefields are used for various purposes in X-ray FEL facilities, in particular for longitudinal and transverse electron beam shaping and for diagnostics. In this contribution we present time-resolved measurements of transverse (dipole and quadrupole) wakefield effects produced in flat corrugated structures by electron bunches with typical parameters in X-ray FELs (few tens of um long and multi-GeV energies). Measurements were done as a function of the distance between the beam and the corrugated plate, beam optics and bunch length. The measurements generally agree with analytical predictions from a wakefield model [K. Bane et al., Phys. Rev. Accel. Beams **19**, 084401 (2016)].

Footnotes

Funding Agency

Primary authors: Dr DIJKSTAL, Philipp (Paul Scherrer Institut); MALYZHENKOV, Alexander (European Organization for Nuclear Research); CRAIEVICH, Paolo (Paul Scherrer Institut); HU, Wenxiang (Paul Scherrer Institut); PRAT, Eduard (Paul Scherrer Institut)

Presenter: Dr DIJKSTAL, Philipp (Paul Scherrer Institut)

Session Classification: Poster session

Track Classification: Electron beam dynamics