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Corrugated wakefield structures at SwissFEL

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Dedicated wakefield-generating structures are capable of measuring the electron beam current profile, and of removing residual energy chirps (dechirping). Furthermore, at Free-Electron Laser (FEL) facilities they can be used to measure* or shape the photon pulse power profile. We motivate and present the mechanical design of the rectangular, double-sided corrugated structures used at SwissFEL, and compare it to similar designs employed at other facilities.

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Footnotes

• P. Dijkstal et al., Phys. Rev. Research 4, 013017 https://doi.org/10.1103/PhysRevResearch.4.013017

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