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## Passive longitudinal bunch diagnostics with a dielectric Wakefield streaker at CLARA

*Wednesday, 22 May 2024 16:00 (2 hours)*

Passive streaking devices have been proposed and developed at several facilities worldwide, providing a flexible and cost-effective longitudinal bunch profile diagnostic. A passive streaker, using wakefields excited in dielectric lined waveguides, is planned to be installed in the FEBE experimental chamber at CLARA Phase-2. We present experimental tests of bunch reconstruction performed during dielectric wakefield acceleration experiments at Phase-1 of CLARA, with 100 pC, 35 MeV electron beams. These profiles have been compared to simulated beam profiles, produced using S2E simulation codes Elegant and ASTRA. Conclusions have been drawn on the operation of passive streakers, applicable to the design and operation of the future streaker at CLARA.

### Footnotes

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Europe

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