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## Calibration of GeV wakefield-accelerated electron energies by bremsstrahlung cut-off calorimetry

*Tuesday, 8 November 2022 17:00 (2h 30m)*

We reconstruct the spectral cut-off of bremsstrahlung x-rays generated by GeV laser-wakefield-accelerated electrons with 10% accuracy using a compact, modular x-ray stack calorimeter. Unfolded cut-off energies range from 1GeV to 3GeV and increase in accuracy with increasing energy, opposite to the trend for conventional magnetic spectrometers. Consequently, bremsstrahlung cut-off calorimetry will become increasingly important for calibrating electron energies approaching and exceeding 10 GeV which otherwise require large expensive magnets for equivalent measurement accuracy.

### Acknowledgments

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