Bunch Profile Reconstructions based on THz Spectroscopy at EuXFEL.

N. M. Lockmann, Ch. Gerth, B. Schmidt, S. Wesch **Deutsches Elektronen-Synchrotron DESY, Hamburg, Germany, EU Contact:** nils.maris.lockmann@desy.de





[1] P. Peier et al., "Coherent Radiation Diagnostics for Longitudinal Bunch Characterization at European XFEL", Proc. of FEL2014, Basel, Switzerland, pp. 925-928

[2] S. Wesch, "Echtzeitbestimmung longitudinaler Elektronenstrahlparameter mittels absoluter Intensitäts- und Spektralmessungen einzelner kohärenter THz Strahlungspulse", Dissertation, Universität Hamburg, 2012. [3] S. Wesch et al., "A Multi-Channel THz and Infrared Spectrometer for Femtosecond Electron Bunch Diagnostics by Single-Shot Spectroscopy of Coherent Radiation", Nucl. Instrum. Meth. A. 665, pp. 40-47, 2011. [4] N. M. Lockmann, Ch. Gerth, B. Schmidt and S. Wesch "A non-invasive THz spectrometer for bunch length characterization at European XFEL", Proc. of IPAC'19, Melbourne, Australia, May 2019, pp. 2495-2497. [5] B. Schmidt et al., "Longitudinal Bunch Diagnostics using Coherent Transition Radiation Spectroscopy", arXiv:1803.00608, 2018.

[6] N. M. Lockmann, Ch. Gerth, B. Schmidt and S. Wesch THz Spectroscopy with MHz Repetition Rates for Bunch Profile Reconstructions at European XFEL", Proc. of FEL19, Hamburg, Germany, Aug 2019.







