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## Transverse and longitudinal optical beam diagnostics for the BESSY II booster

*Thursday, 12 September 2024 16:00 (1h 30m)*

This paper describes the optical beam diagnostics available at the BESSY II booster synchrotron. For the first time, diagnostics are established to investigate the distribution of the electron beam in all three dimension. A permanent installation of a source-point imaging system aided by a telescope optic depicts the transverse properties of the electron beam. Additionally, the bunch length is measured using a streak camera with a resolution in the picosecond range. Both systems can work in parallel and are able to observe the non-equilibrium beam dynamics over the entire booster ramp.

### Footnotes

### Funding Agency

### I have read and accept the Privacy Policy Statement

Yes

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