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# Macromolecular crystallography at beamline P11

*Tuesday 16 September 2025 17:00 (1 hour)*

DESY's MX beamline P11 has been operating since 2012 at PETRA III and offers versatile focusing options to match the beam size and desired dose with diverse samples and various kinds of experiments∗. The important upgrade of P11 hardware is planned for the near future. We will exchange the diffractometer and the sample changer for a well-proven solution from Arinax, which is presented at EMBL and ESRF. The Arinax MD3up solution, in combination with a magnetic sample changer and a more spacious dewar that fits 37 unipacks, will allow us not only to decrease the data collection time but also improve the reliability. Serial synchrotron crystallography at P11 is enabled mainly with the CFEL tape-drive setup, also capable of time-resolved experiments by the mix-and-diffuse method∗∗. Real-time autoprocessing of serial data with CrystFEL∗ ∗ ∗ has been developed within a long-term proposal. At PETRA IV, we are aiming to form a uniform bio-village at the current location of DESY and EMBL beamlines (P11-P14). Together with EMBL and Hamburg University of Applied Sciences (HAW Hamburg), DESY is currently building up a new logistics chain for MX samples.

## Footnotes

∗ Burkhardt A., et al., Status of the crystallography beamlines at PETRA III. Eur. Phys. J. Plus 131, 56 (2016)
∗∗ Beyerlein K. R., et al., Mix-and-diffuse serial synchrotron crystallography. IUCrJ 4, 769-777 (2017)
∗ ∗ ∗ White T. A., et al., Recent developments in CrystFEL. J. Appl. Cryst. 49, 680-689 (2016)

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