

User interface at the P05 Nanotomography

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Most users at the Nanotomography endstation at P05 are not very experienced in synchrotron tomography measurements, as they are coming from very different fields, e.g. Biologist, Geologist or Medics. The setup of a transmission x-ray microscope (TXM) however is often more complex with respect to sample alignment, different detector choices and varying scan parameters. An in-house developed control GUI (graphical user interface) has been set up at the instrument, allowing users to switch between different cameras, to choose different image settings (zoom, histogram etc.), to align the sample in the direct beam as well as in the TXM mode, and to start the scans with different parameters (e.g. exposure times, rotation speed...). The structure of the GUI is set up in such a way, that it is mainly self-explanatory and that all main features are covered in this one application. The structure in which it has been organized serves as an intuitive step by step guide, which reduces at the same time the risk of potential accidents drastically. In a separate Reconstruction GUI running on the DESY computer cluster, the users can start the reconstructions themselves, already right after the first scan is finished. In this way, it is possible for the user to check the reconstruction quality and adapt e.g. scan parameters or sample preparation methods.

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