Control System for the MAX IV Transverse Deflecting Cavity Beamline

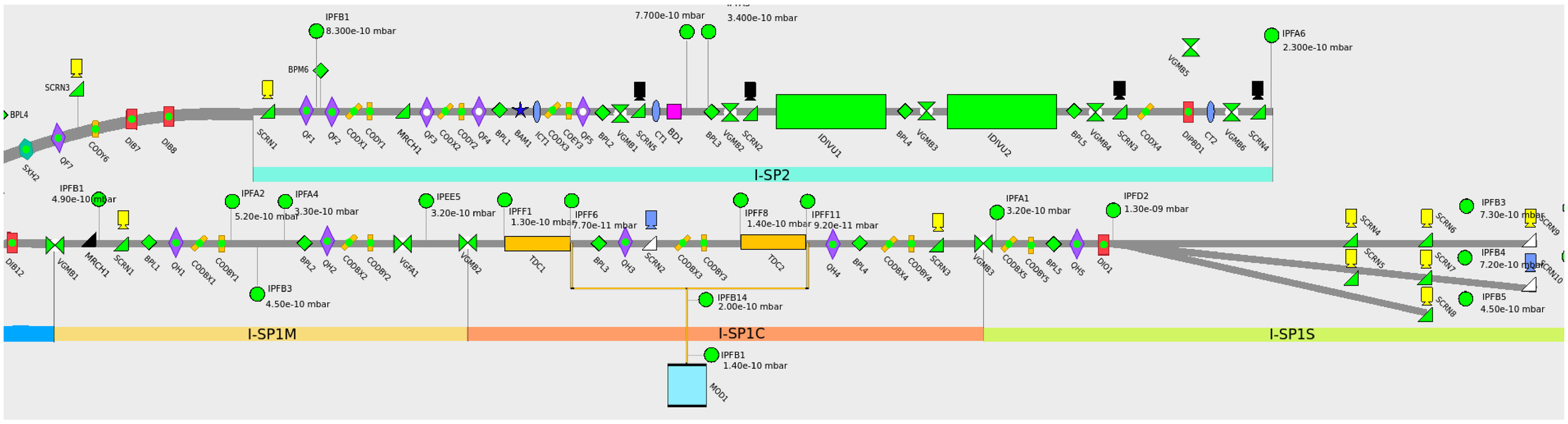
Á. Freitas, J. Brudvik, F. Holmlund, A. Johansson, N. Kraljevic, M. Lindberg, E. Mansten, R. Svärd, C. Takahashi

MAX IV Laboratory, Lund University, Lund, Sweden

Transverse Deflecting Cavity Beamline

- TANGO control system;
- Sardana for scan orchestration;
- Taurus and Silx for user interface;

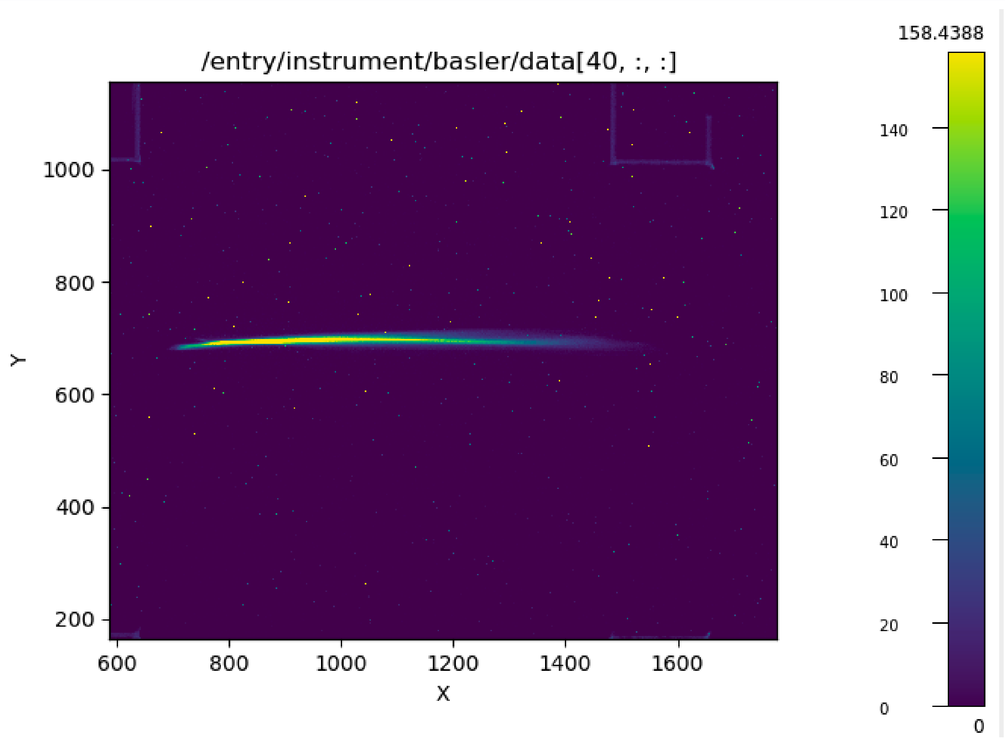
Synoptic



Transverse Deflecting Cavity Beamline

Transverse deflecting cavity online:

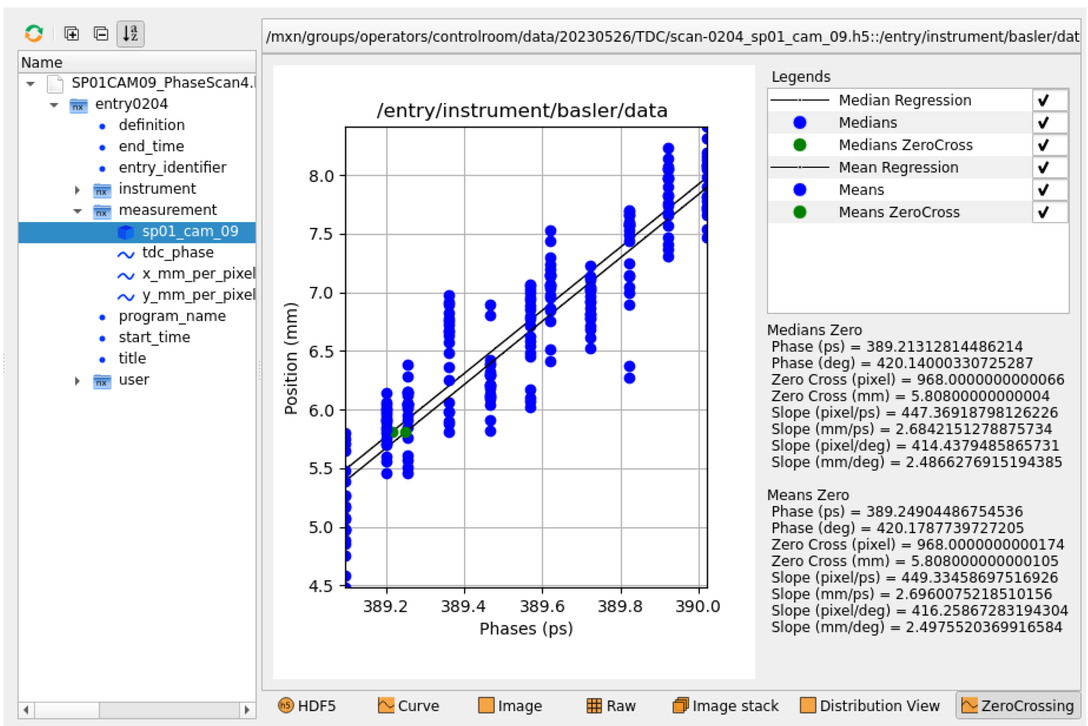
Image Viewer



Phase scan

- Step-scanning using Sardana;
- Modulator phase moves in degrees;
- Basler camera frame acquired and averaged;

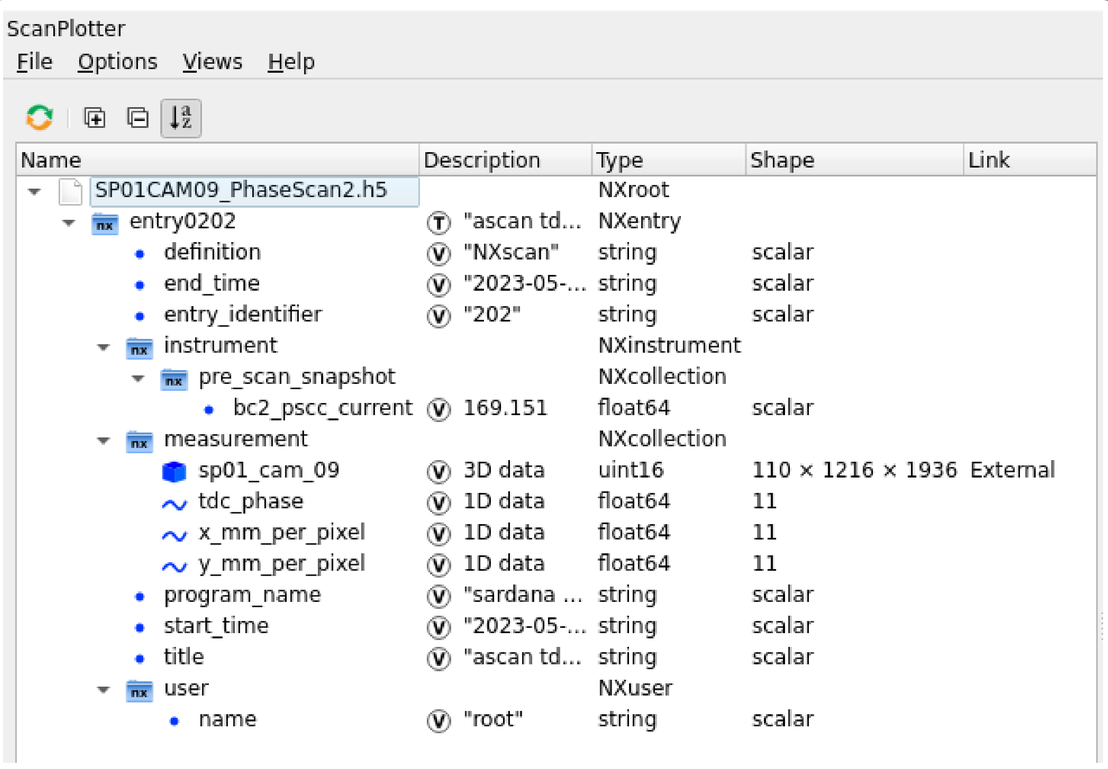
Zero-Cross interface



Data Recorder

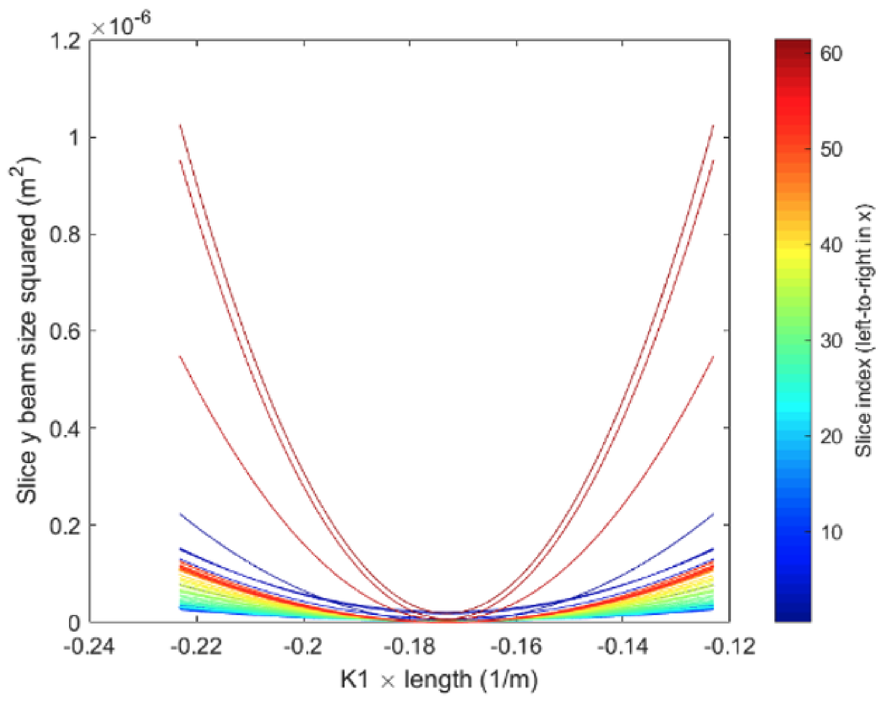
- Timescale HDB++ archiver for slow data;
- H5 file structure for scanned data with configurable snapshot;

H5 File Structure



Emittance Measurement

Quadratic fits to vertical beam size squared versus the product of quadrupole strength and length



Contact: aureo.freitas@maxiv.lu.se