

Data Reduction Pipeline

Possible Simplifying Requirements

- don't change geometry
- serial numbers for all detectors
- understand detector non-linearities before experiments
- if you do change geometry have a way to get new geometry info in a standard way
- stable beam-center (um, jets 50um). standard way to get beam center
- stable jets
- make jets/beam comparable unless you need stable to a pixel-size
- stable experimental setup
- don't switch between sparse/dense photon cases for spectrometer, and/or understand in advance
- measure detector tilts
- avoid double-beam-focus seen in SPI
- smaller pixels would mean photons don't occupy single-pixels, and we would get fooled less by hot-pixels
- gravity sensors on cameras
- more fiducial markings for geometry
- better calibrations for motor to positions
- hardware protection for cameras to avoid changes due to damage (camera replacement, bad-pixels)
- for xpp ring-center finding:
 - make t0 finding fast (need to have pump-probe time set to see radially-symmetric physics signal: to see physics signal need to look at angular integration, which requires a rough center)
 - need to put a well-known sample in exactly in the right spot
 - or use the jet solvent itself