

nanoBPM relocation

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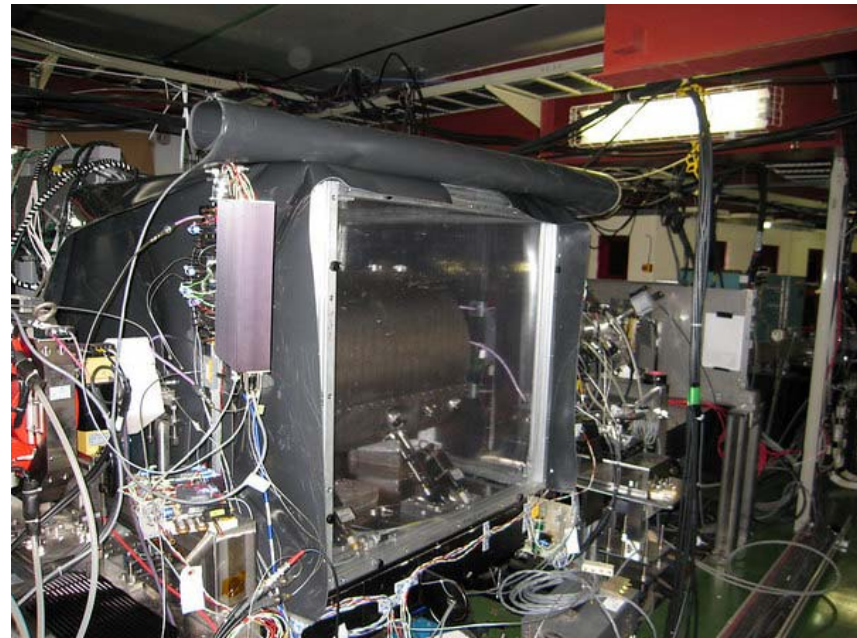
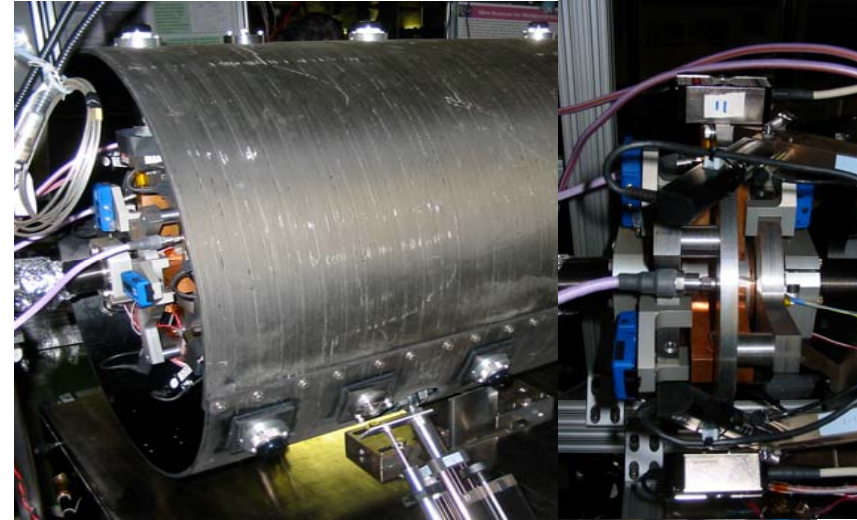
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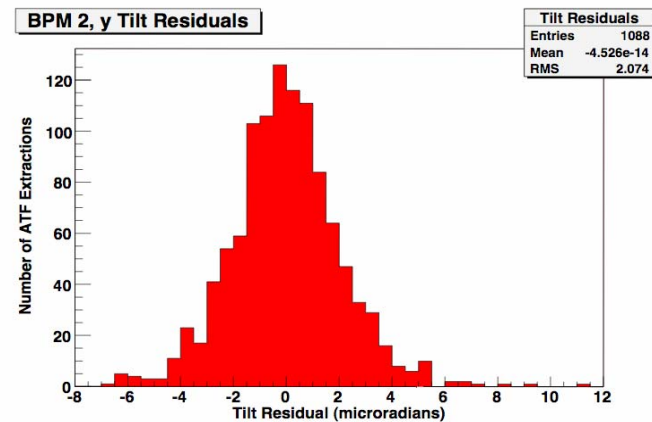
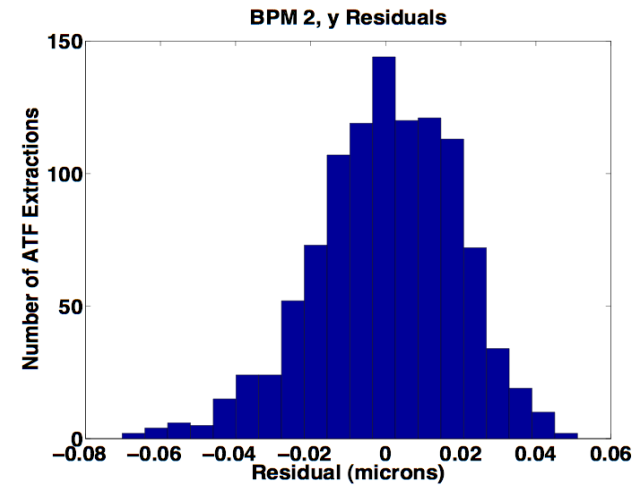
Relocation of NanoBPM

- Still interest in continuation of nanoBPM in ATF2
 - Need for BPM test stand
 - Processing electronics and algorithms
 - First/early pulse calibration
 - Automation and readout
 - BPM stabilization, thermal, mechanical
 - Thermal monitoring and control
 - Position (nanoGrids)
 - Triplet stabilisation with wrt to other BPM systems
 - Mona Lisa



NanoBPM program in ATF2

- Resolution performance verified
 - Vertical 15.6nm
 - Angular vertical 2.1 μ rad
 - Stability over multiple hours
- Longer term plans
 - Calibration systems
 - Long term stability
 - Full exploitation of BPM monitoring systems
 - Electronics noise not dominant
- Multibunch
 - ILC like beam structure
 - Extraction of beam positions



NanoBPM location in ATF2

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

- Either location A or B reasonable for nanoBPM
 - Optics as yet not checked
 - Low dispersion important
- Proximity to laserwire IP could be beneficial to subtract beam motion from laserwire measurements
- Cross check of ATF Q-BPMs
- Independent test stand, not essential to ATF2 operation but similar enough to Q-BPMs

Summary

- Continued support for nanoBPM being discussed
 - UK groups will continue (dependent on funding) to be active on nanoBPM and possibly new UK designed BPM prototypes in ATF2
 - Position of US groups not so clear, will be discussed next year
 - Livermore (S. Walston, J. Gronburg)
 - Berkeley (Y. Kolomensky) Caltech (T. Orimoto)
 - SLAC (D. McCormick, J. May, T. Smith)
 - Program must be clarified with international collaborators
 - Discussion started
 - Relationship with new ATF2 Q-BPMs
 - Test stand for development of calibration and readout options for ATF2 Q-BPMs