Beam Position Monitoring

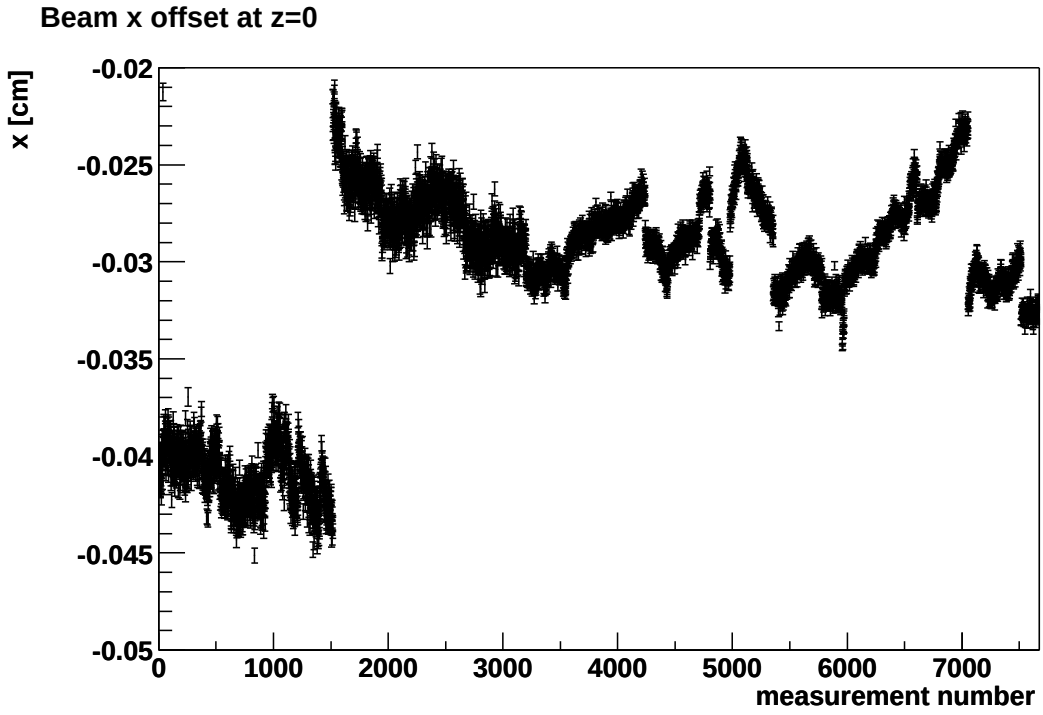
STT Meeting

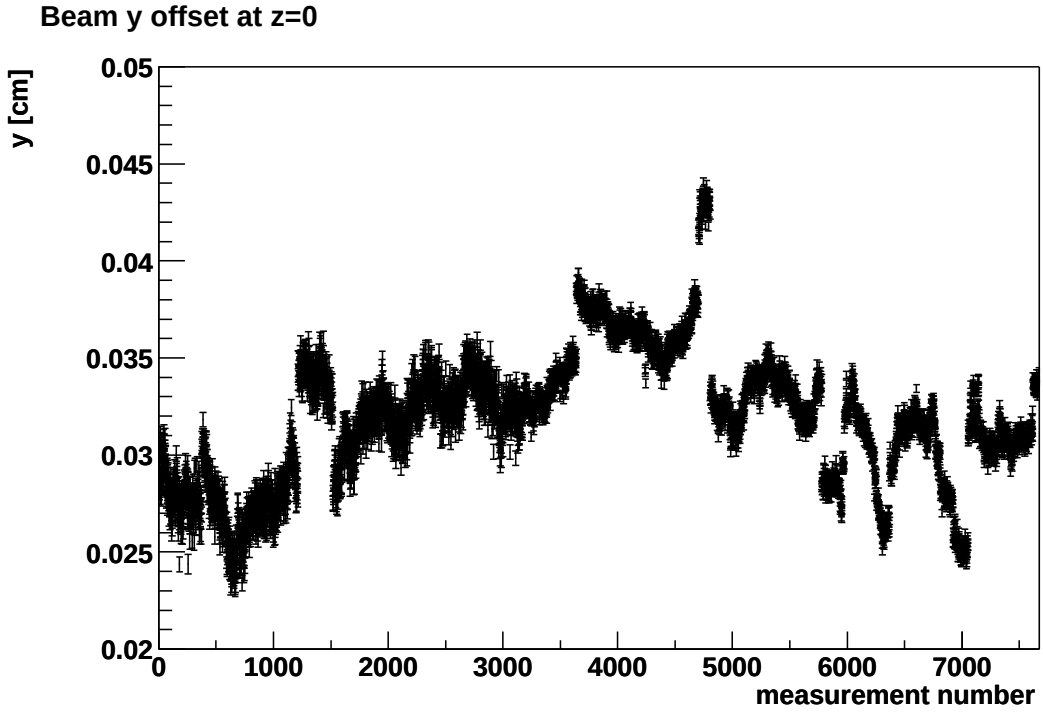
December 13, 2002

Michiel Sanders

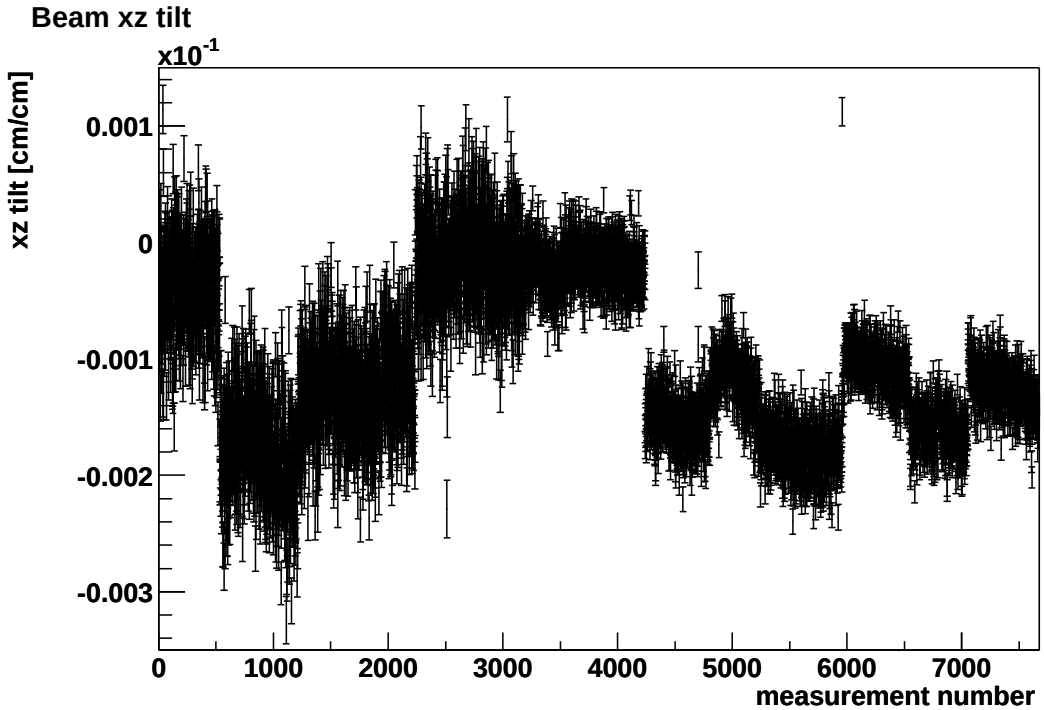
University of Manchester

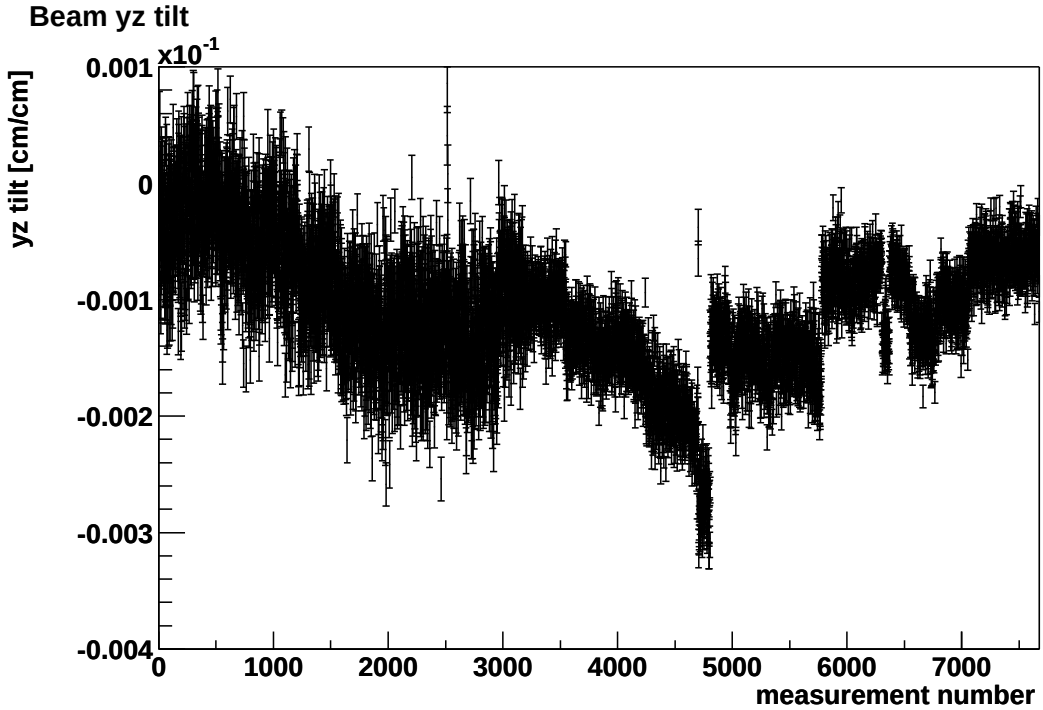
Beam Position since September 13





Beam Tilt since September 13





Beam Position / Tilt

- Numbers are based on geometry v8
- Expected change from v8 to v9 (first pass):
  * $+58$ μm in x, $+16$ μm in y
  * -220 μrad in xz tilt, $+110$ μrad in yz tilt
- Position of SMT in CFT with geometry v8:
  * $x = 42 \pm 5$ μm, $y = 53 \pm 5$ μm
  * $xz = 250 \pm 40$ μrad, $yz = 20 \pm 35$ μrad
- Position of SMT in CFT with geometry v9 ???

BeamPositionMonitor

- Work started on `BeamPositionMonitor` (set of Python scripts)

- Functionality so far:
  - Get beam parameter from 'fake' vertex examine
  - Send beam parameters on to 'fake' luminosity system
  - Get Run status information from SigEvtSys
  - Process commands from `bsm_talk.py`

- To be implemented:
  - Small changes to vertex examine to send out beam parameters
  - Send to luminosity system for real
  - Alarms / warnings to SigEvtSys
  - Start / stop vertex examine automatically
  - Write beam parameters to COOR name / value server (`COOR_NAME_SERVER_DB`)

Begin Run Procedure

- COOR reads latest beam parameter values from name server and downloads those to STT
- Question: what do I write to COOR?
  - Global beam position / tilt
  - Beam position for fixed points in z