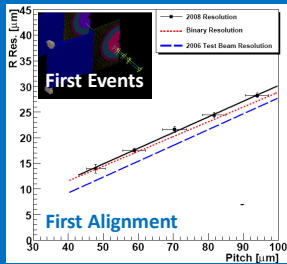


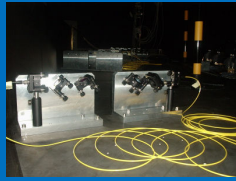
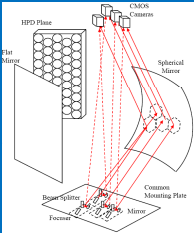
OPERATIONS : SOFTWARE

Alignment

VELO re-inserted each fill

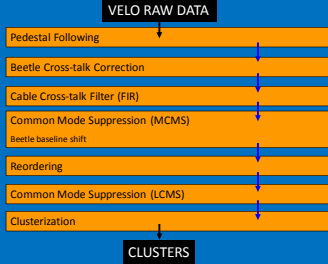


Laser alignment RICH

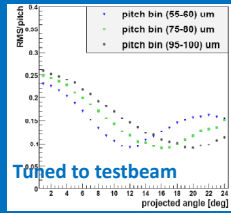


Reconstruction

7 algorithms, 1 M parameters



Simulation



Tuned to testbeam

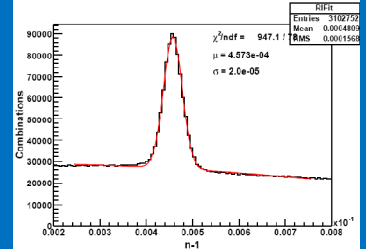
Follow VELO radiation damage

Monitoring

VELO Data Quality

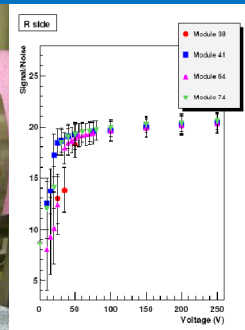
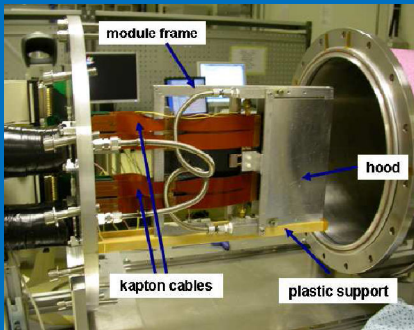


RICH refractive index

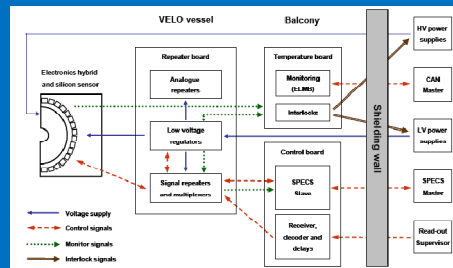
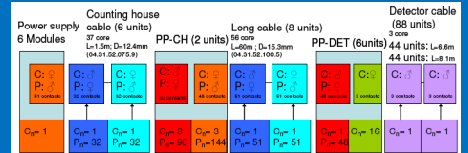


VELO OPERATIONS/REPLACEMENT: HARDWARE

Long-term tests in vacuum



H.V.



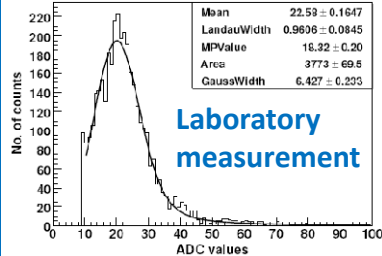
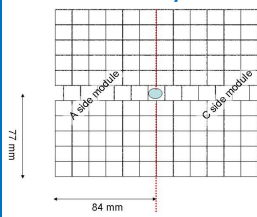
Control system

VELO R&D



3D Medipix

Strawman layout



Laboratory measurement

LHCb 40 MHz UPGRADE

RICH R&D Photon Detectors



Flat Panel PMT



Micro-Channel Plate PMT

- Particle Identification
- Vertex Resolution

Key to physics aims