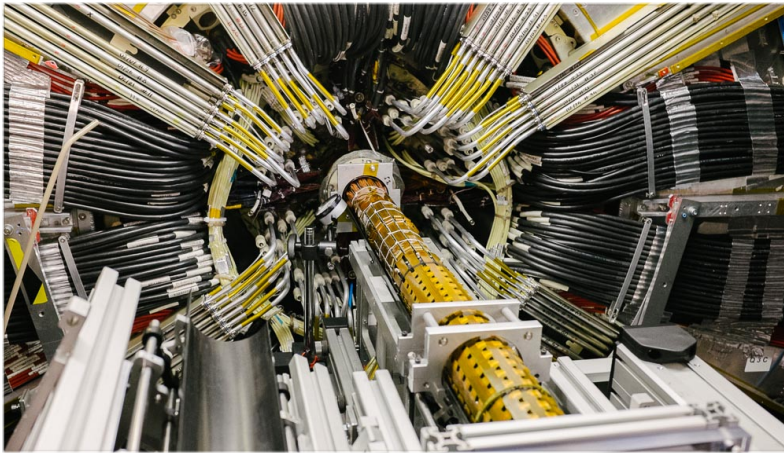




DAQ Hardware and Software development for the ATLAS Pixel Detector

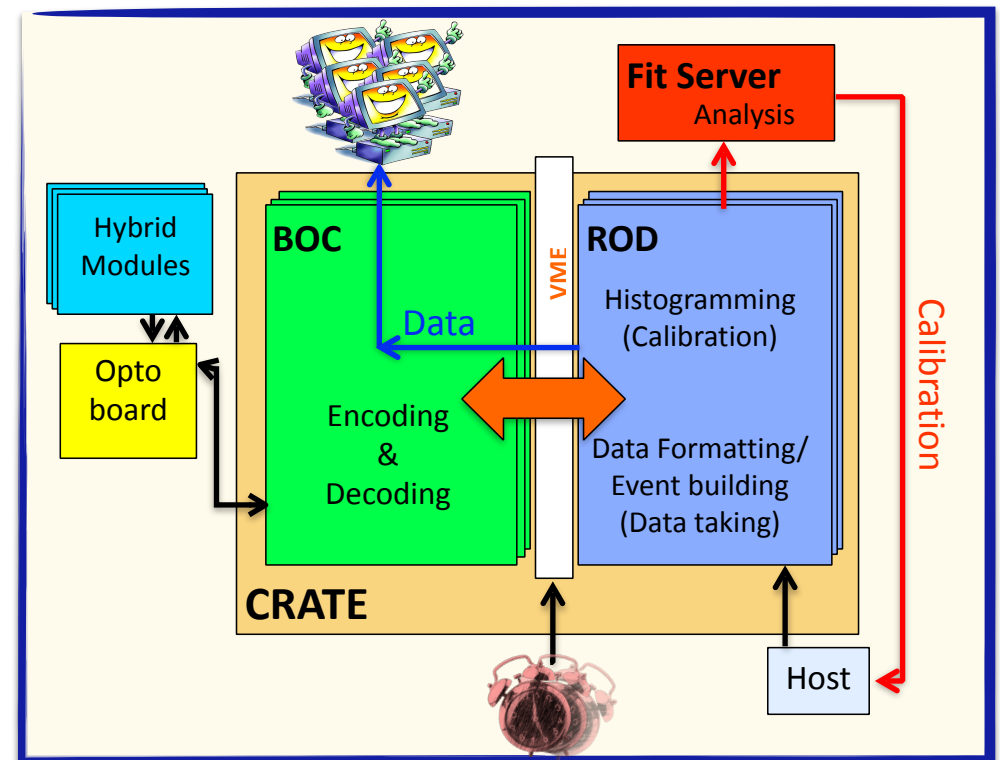


With the IBL insertion

- 12 million new pixels to be read
 - New Front End Chips with smaller pixels
- Doubled data signal bandwidth: 160 Mb/s
 - Higher energy
 - Increased luminosity
 - IBL @ 3.3 cm from the beam line
- New quarter service panel (nSQP)

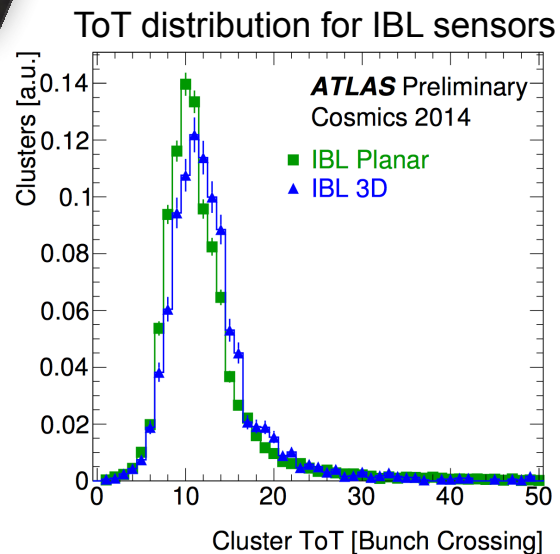
The Read-out chain

- IBL read-out chain is consist with the Pixel Detector one
- New opto-boards
- New cards production
 - New generation hardware components
 - New strong firmware development
 - New skilled software
 - New Ethernet access





DAQ Hardware and Software development for the ATLAS Pixel Detector



Calibration

- The calibration is the last step for a detector to be fully operative
- Performed on the whole Pixel detector

Calibration Results

- Narrow distributions
- Results consistent with the expectations
- Uniform behaviour overall the detector

Data taking Results

- The commissioning of the IBL detector was a success
 - Cosmic data taking
- Read-out system tested successfully up to 100 KHz
- First collisions at 900 GeV read-out
- New collisions are coming...stay tuned!!!

