Detectors electronics Continuous and triggered streams of raw data Readout, split into Sub-Time Frames, and aggregation Local pattern recognition and calibration Local data compression **Quality control Compressed Sub-Time Frames** Data aggregation Synchronous global reconstruction, calibration and data volume reduction Quality control **Compressed Time Frames** Data storage and archival **Compressed Time Frames** Reconstructed events Asynchronous refined calibration, reconstruction **Event extraction Quality control**