Data Acquisition Session

ECFA LC Workshop, Durham, Sep. 1st 2004

Agenda

Introduction	G. Eckerlin
Towards a costed model for LC T/DAQ detectors	P. Le Du
Electronics and Data Acquisition for SiLC	J.F. Genat
Thoughts on ECAL DAQ	P. Dauncey
Discussion	All

Boundary Conditions

ECFA Study
Physics and Detectors for a Linear Collider

- The rf technology is COLD
  - 1ms active pipeline without hardware trigger
  - 2850 bunches have to be read out and analysed in 199ms
  - some systems integrate over many bx !
- The timeline from the WWS OC
  - roughly costed detector concepts by 2005
  - CDRs by 2007
  - LOI by 2008
- At least 3 interregional detector concepts
  - SiD, medium gaseous, large gaseous, maybe more...
  - all need a DAQ for the detector and the accelerator
  - the concept will be ok for all

Consequences

ECFA Study
Physics and Detectors for a Linear Collider

- Cross check data volume and rates with latest designs
  - background beamstrahlung (simulated with BDS!)
  - event size and channel counts with latest detector designs
  - be prepared for new detector technologies
- Towards the first cost estimate
  - can we take the TDR values or do we have to update ?
  - are requirements and costs different for the 3 detectors
  - do we need a more detailed design already in 2005 ?
- Towards the CDR
  - we need to proof with a DAQ demonstrator that it works
  - get more accurate estimates on resources needed
  - filter strategies, calibration issues, controls, monitoring, ...

How to organize ourself...

ECFA Study
Physics and Detectors for a Linear Collider

- DAQ has to be a world wide effort
  - the detectors are studied on a world wide basis
  - have to get the DAQ expertise from all three regions
  - make sure no one is left aside
- How to organize the DAQ working group
  - need conveners from each study
  - one common mailing list world wide
- How to get together ?
  - do we need a session at each regional workshop (2x3 per year?)
  - does the DAQ sessions have to be broad casted (VRVS or alike)
  - do we need phone meetings ?

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