

# Technical Board – DCAL Software

- Neils Meyer led the discussion on integration of DCAL software
- Uniform sharability of data
  - Can all DHCAL outputs integrated into one combined data set as events get built?
  - What do we need for this to happen?
  - Relevant people from ANL and UK DAQ group with NM to hammer out details → report to TB in two week time scale
- Software framework
  - The current scheme of LCIO + LCCD + Marlin + MOKKA (used by ILD) seems to be the best fit for easier integration of DHCALs
  - The analysis tools that work on the final reco output should not be restricted
    - Eg. JAVA based analysis tools can be allowed sing LCIO output

# TB Summary - Software cnt'd

- Geometry (and other conditions data)
  - A transparent propagation of conditions data (calibration, dead cell maps, cell positions, etc) to analysis level needed and taken into account in reco software design
- Common DHCAL reconstruction framework
  - Maximally common reconstruction framework for DHCAL desirable
  - A task force with reps from DHCAL groups will be formed to discuss the prospects
  - Will report back at the Tech Board Review in May at FNAL
  - Issues which should be addressed by the task force:
    - what is the reasonable level of comparison both different technologies and what is needed get there?
    - what is the preferred way of data-MC comparison?
    - What are the common aspects in reco/digi, evaluate prospects of combined framework?

# Technical Board – Beam Tests

- Ongoing Beam Tests
  - Apr. 29 – May 26 at MTBF
    - Scint/W ECAL+AHCAL+TCMT
    - FNAL seems to be willing to give a bit more duty factor if we need
    - FNAL Summer shut down to begin June 10, 2009
- Upcoming beam tests
  - June at CERN
    - GRPC 1m<sup>2</sup> plane testing
  - Mid 2009 GEM DHCAL chamber characterization
  - Late 2009 – 2010 ECAL + RPC DHCAL + TCMT @ MTBF
  - Late 2009 – 2010 1m<sup>3</sup> GRPC and  $\mu$ Megas @ CERN
    - Combined test? When and where?
  - Late 2009 – 2010 33cmx100cm GEM DHCAL unit chamber testing
  - Late 2010 – 2011 five GEM DHCAL plane testing with CALICE stack

# Technical Board Review

- Expected in the time scale of May, 2009 @ FNAL
  - Exact date will be determined in TB meetings within the next month
  - Will announced to the collaboration
- Some topics to be reviewed
  - DHCAL Software integration
  - DHCAL hardware preparedness
  - Mechanical prototype preparedness
  - Short term beam test plans
  - Mid and long term beam test plans
  - Plus other topics TB agrees to cover

2005 2006 2007 2008 2009 >2009

CALICE ECAL

CALICE TILE  
HCAL+TCMT

Other HCALs  
(RPC, GEM, etc)

LCD R&D,  
calibration

CALICE TILE

Combined Calorimeters

PFA and shower library Related Data Taking

Plans in 2005 CALICE meeting at NIU

Phase 0:  
Prep.

Phase I: LCD Detector R&D, PFA  
development, Tech. Choice

Phase II

2006 07, 08 2009 2010 2011 2012 >2013

Si/W & Scint/W ECALs

AHCAL+TCMT

RPC DHCAL

GRPC DHCAL

$\mu$ Megas DHCALs

RPC DHCAL

EUDET Mech. Prototype

GEM DHCAL

LC Detector Prototypes

Combined CALICE Stack Runs

Phase I: LCD Detector R&D, PFA development, Tech. Choice

Phase II