Discussion with concepts

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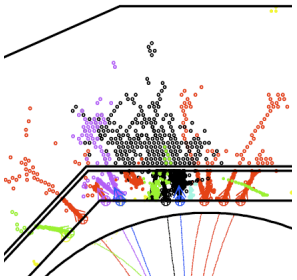
CALICE Collaboration Meeting

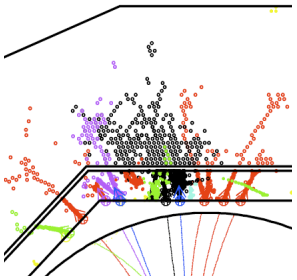
Arlington, TX, March 10-12, 2010



The Matrix

	ILD	SiD
FCAL	FCAL collaboration	
Vertex	Many Pixel R&D groups	
Tracker	LCTPC	SiD Tracker
	SiLC	
ECAL	CALICE	SiD ECAL
HCAL	CALICE	Dual Readout Crystal / Dual Readout Fiber
Coil	ILD Group	SiD Group
Muons	ILD Group	SiD Group

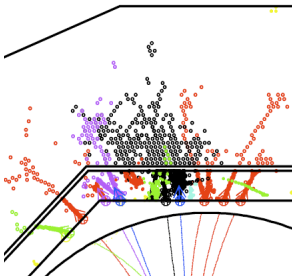
and their high energy versions



CALICE and concepts

- To avoid duplication, try a reasonable separation between R&D which is not concept-specific, and genuine concept issues
- Example: calibration study for IDAG
  - Stability, methods, transportation, test beam verification: **CALICE**
  - Lumi required, impact of imperfections on performance: **ILD**

- R&D issues:
  - Operational issue: dead channels, noise, stabiliy
  - Performance validation with test beam, detailed simulation
  - Scalable design, power management, internal support, service and signal distribution, interfaces
- Concept issues
  - Detector integration, materials, support, services
  - Jet and physics performance



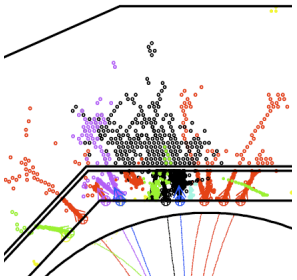
Coordnation

- Above all needed in software and detector integration

- Software: refine siumulations to become more realistic, following test beam validation
- Needs to be folded into schedule of mass production for performance, background and physics studies
- Needs to be coordinated with engineering and integration, include dead spaces, services etc

- Integration: engineering of supports and cables
- Agree on no-go zones, power management

- Keep two-way contact alive



Procedure and time-line

- Two stage procedure

- CALICE proposes candidate technologies
  - Solutions and **open issues**: "readiness of R&D"
- Involve existing review mechanisms, internal and external
  - TB and PRC reviews, spring 11 and 12
  - Do not duplicate in concepts

- Concepts must guide the R&D, CALICE must plan and remain flexible
- Concepts evaluate suitability of technologies
  - Integration and overall performance
- Final decision on "baseline maturity" and alternatives