



Introductory overview

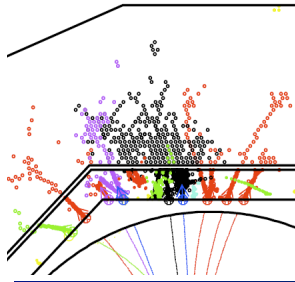


Felix Sefkow

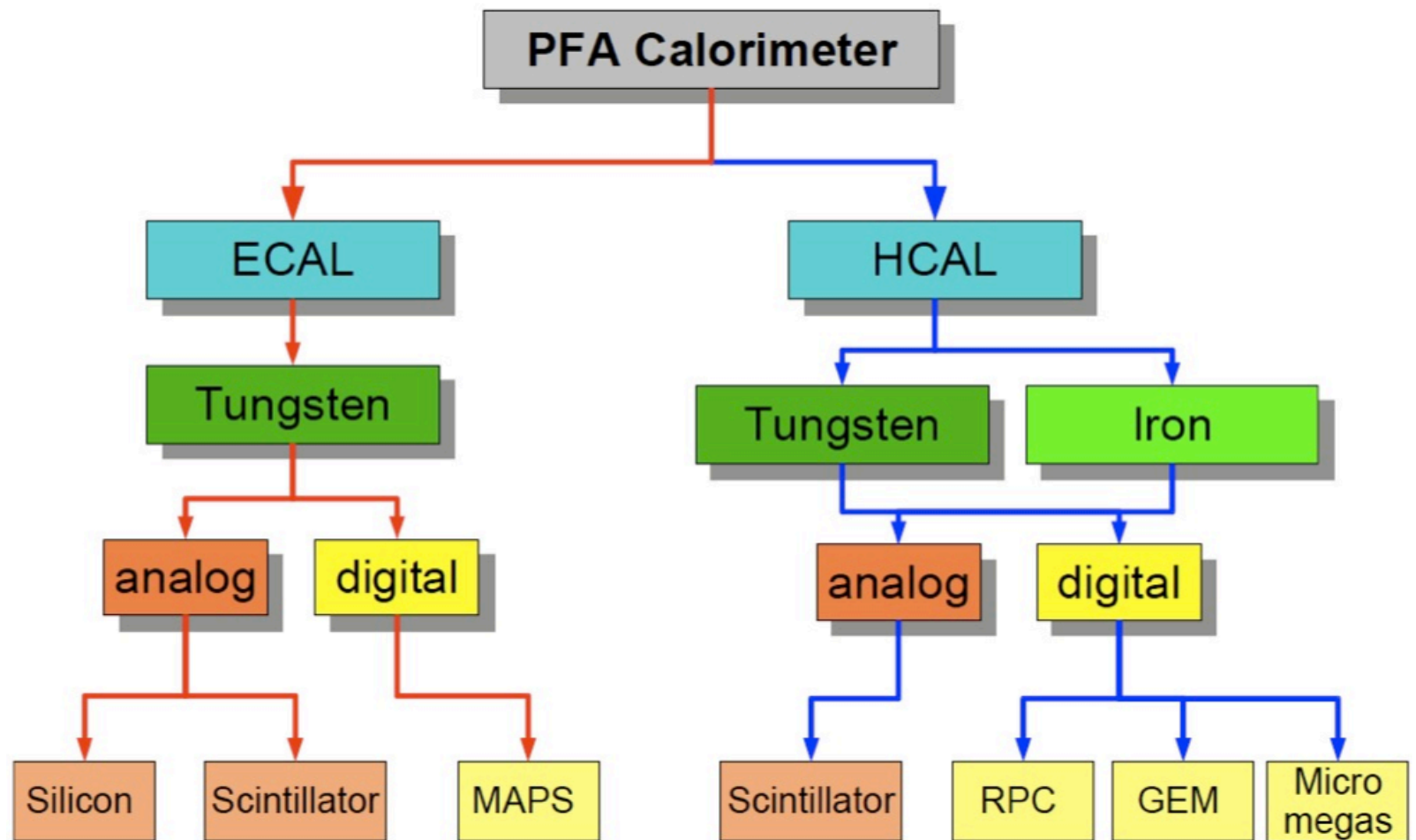


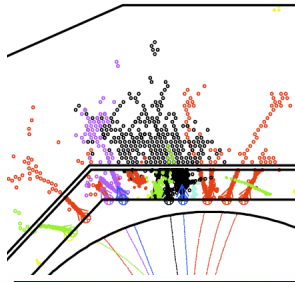
ILD meeting

Paris, January 28, 2010

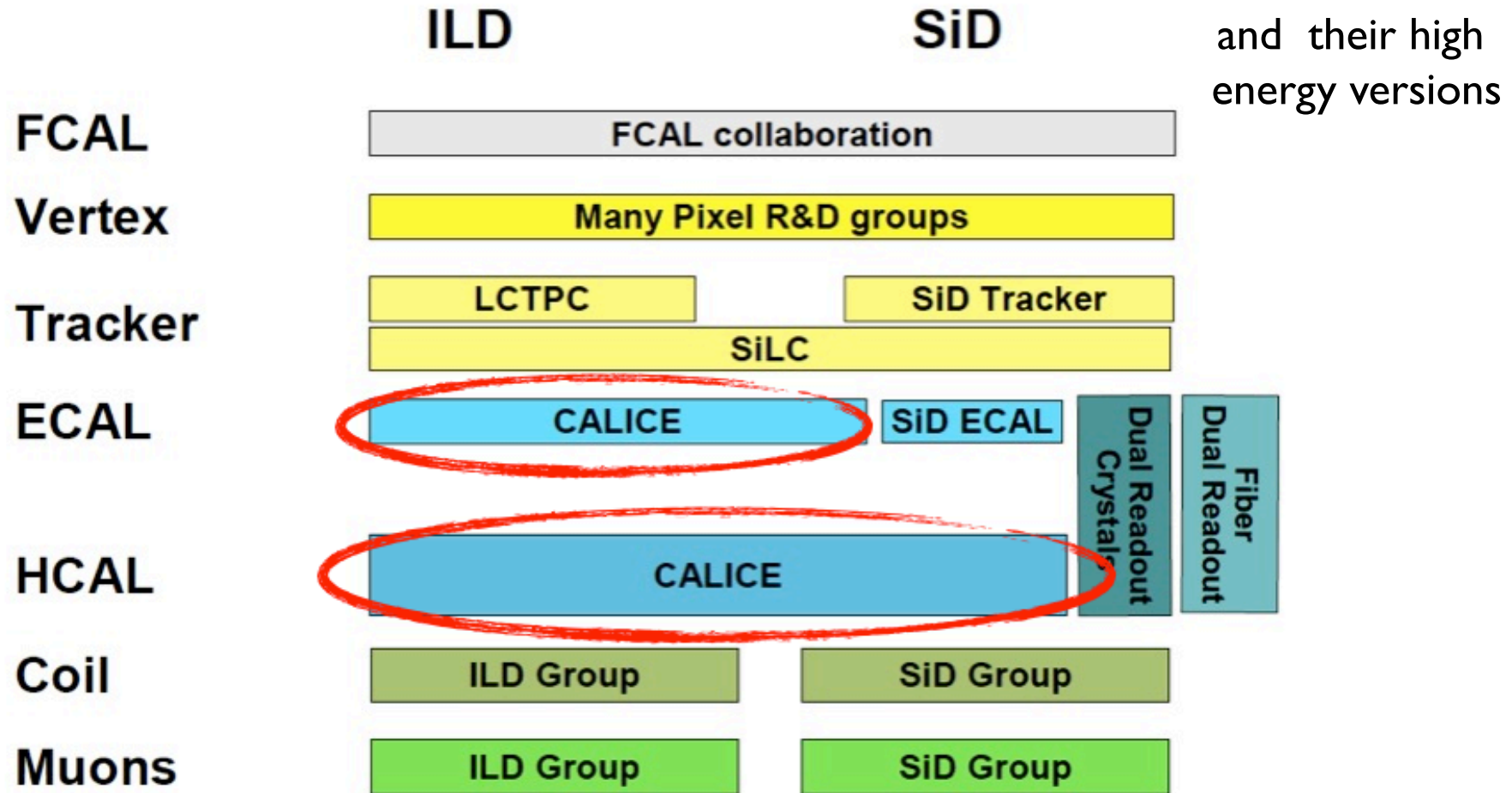


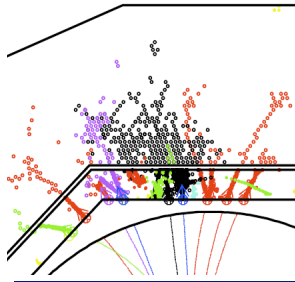
Technology tree





Cross concept, cross ILC-CLIC

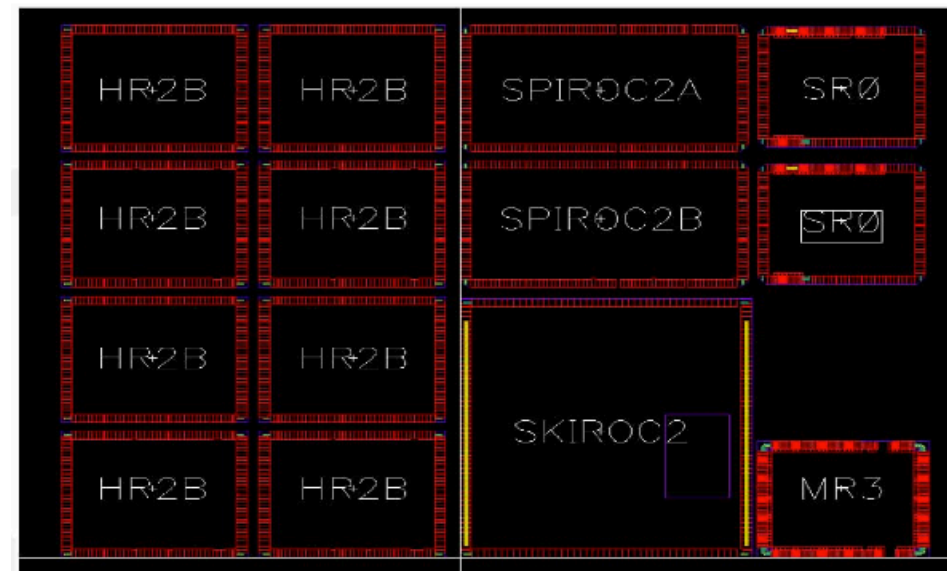




Synergies

- Electronics: Industrialized ASIC design with common building blocks
- DAQ: common hardware, firmware, software
- Mechanics: old absorbers, stage, for new readout modules, old and new readout for new absorber materials (W)
- Scint HCAL readout and Sci ECAL absorber for ECAL
- Common software and analysis frameworks

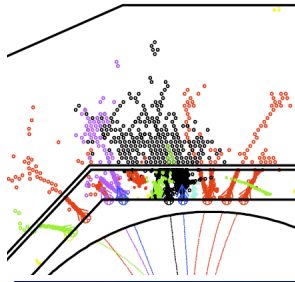
ScintE/HCAL



DHCAL

SiECAL

Recticles for Feb 2010 ASIC production run



Schedule

Report to the DESY PRC

The CALICE Collaboration*

November 1, 2009

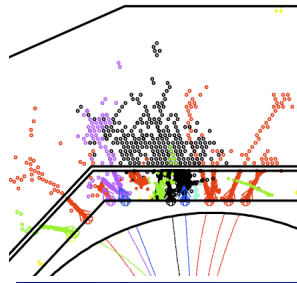
Derived in series of meetings 2009:
 Technical Board review
 Collaboration meeting
 Test beam workshop
 → Presented to PRC

Project	2010/1	2010/2	2011/1	2011/2	2012/1	2012/2
Phys. Prot. Si-W ECAL/DCHAL/TCMT	xx	xx	xx	-	-	-
Phys. Prot. W ECAL / W HCAL / TCMT		x	x	xx	xx	-
Tech. Prot. DHCAL	x	x	xx	xx	xx	xx
Tech. Prot. AHCAL	x	x	x	x	xx	xx
Tech. Prot. Si-W ECAL	-	x	x	xx	xx	xx
Phys. Prot. DECAL	x	x	x	x	x	x
Tech. Prot. Sc-W ECAL	-	-	-	-	-	x

Table 2: The table indicate the envisaged testbeam activities until the end of 2012. The symbol – means “No activity planned”, The symbol x means “Test of small units can be expected”, The symbol xx means “Large scale testbeam planned”.

- Full information:

https://twiki.cern.ch/twiki/pub/CALICE/CaliceCollaboration/CALICE_PRC09.pdf



Remarks

- Reality will look different, we always had to adjust, and we will need flexibility also in the future. Projects are not independent.
- *In general*, technological prototypes will not be completed, tested and analyzed by 2012.
- The case for baseline options will rest on combining information from physics and technology prototype, and maybe even from different options or sub-detectors (e.g. power pulsing).
- The program is geared towards establishing two ECAL and two HCAL baseline options by 2012.
- Yet, there will be open issues and on-going projects beyond 2012.

Back-up

Test Beam Roadmap: First Generation

- Completion of the test beam program for the first generation prototypes
 - Digital HCAL with RPC readout: 2010 at FNAL (total of 14 weeks including setup) running with TCMT, potentially also with SiW ECAL (contingent on funding)
 - Digital HCAL with GEM readout: Replace a few RPC layers with GEMs in the prototype: 2011 at FNAL
 - Constraint: AHCAL movable stage has to leave US by 04/2011 for tax reasons
 - ▶ Possible continuation of tests at CERN
 - Analog HCAL with Tungsten absorbers: 2011 at CERN, with existing layers
 - Digital ECAL, test foreseen for 2012 at CERN

Test Beam Roadmap: Second Generation

- Program for the second generation prototypes
 - SiW ECAL:
 - First tests in electron beam with a single ASU expected in 2010
 - Tests of complete prototype in 2011, together with SDHCAL
 - SemiDigital HCAL with RPCs and / or MicroMegas:
 - 1 m² layers in 2010 at CERN
 - 1 m³ physics prototype in 2011 at CERN
 - Analog HCAL
 - First module tests 2009 at DESY
 - Layer test (horizontal test) in 2010
 - Vertical test with electrons in 2011

A common feature: All prototypes will use power-pulsed electronics:
Special requirements on the time structure of the test beams!

... and the schedule is contingent on the funding situation.