

DAQ

CALICE DAQv2 TB, proto ILD

CALICE DAQ2

- Héritage de EUDET (2009, groupe UK)
- test SDHCAL (2011) : échec
- Modif version (FW) (2012, IPNL & LAPP),
lect USB **DCC (LLR)** : succès pour SDHCAL
- **GDCC**

SW :

- Online : complète ré-écriture (2012)

« Final » version :

- ECAL in TB : Fev 2013 ✓

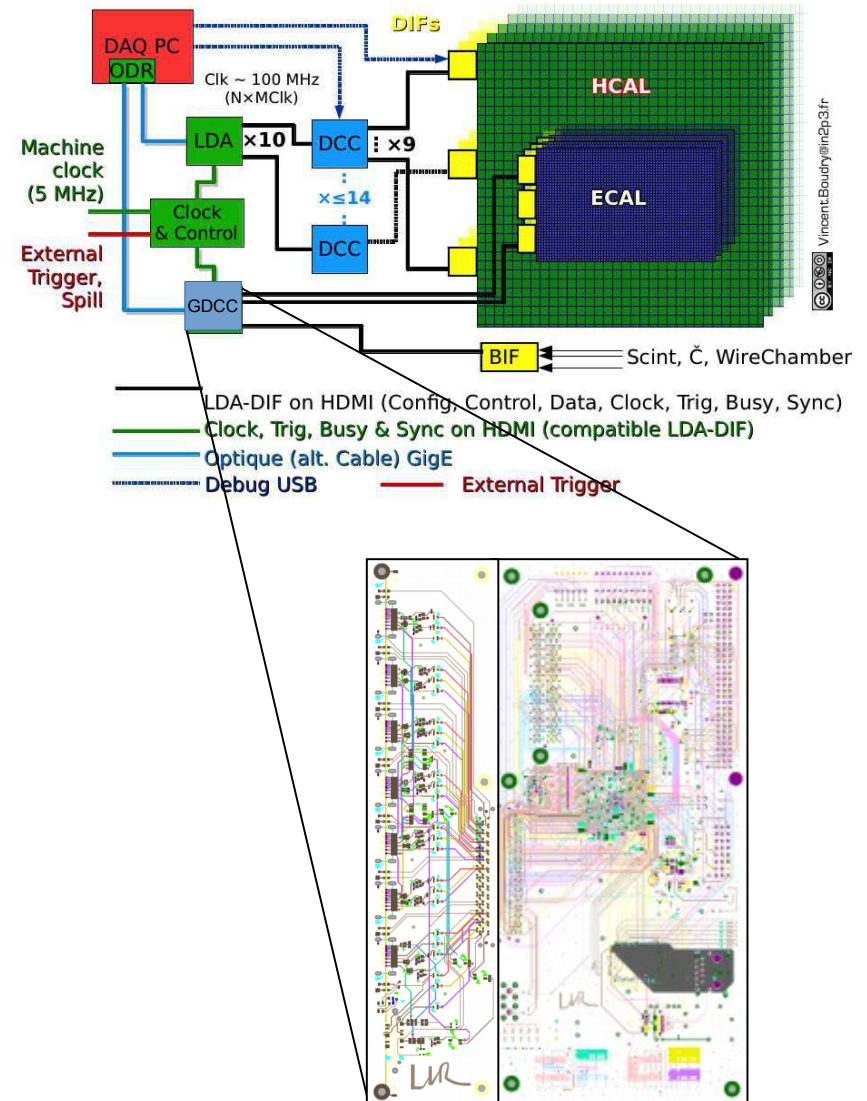
ILD :

- Nv developpement SDHCAL
- NV besoins ECAL

Intégration avec AIDA ↔ Autres det LC

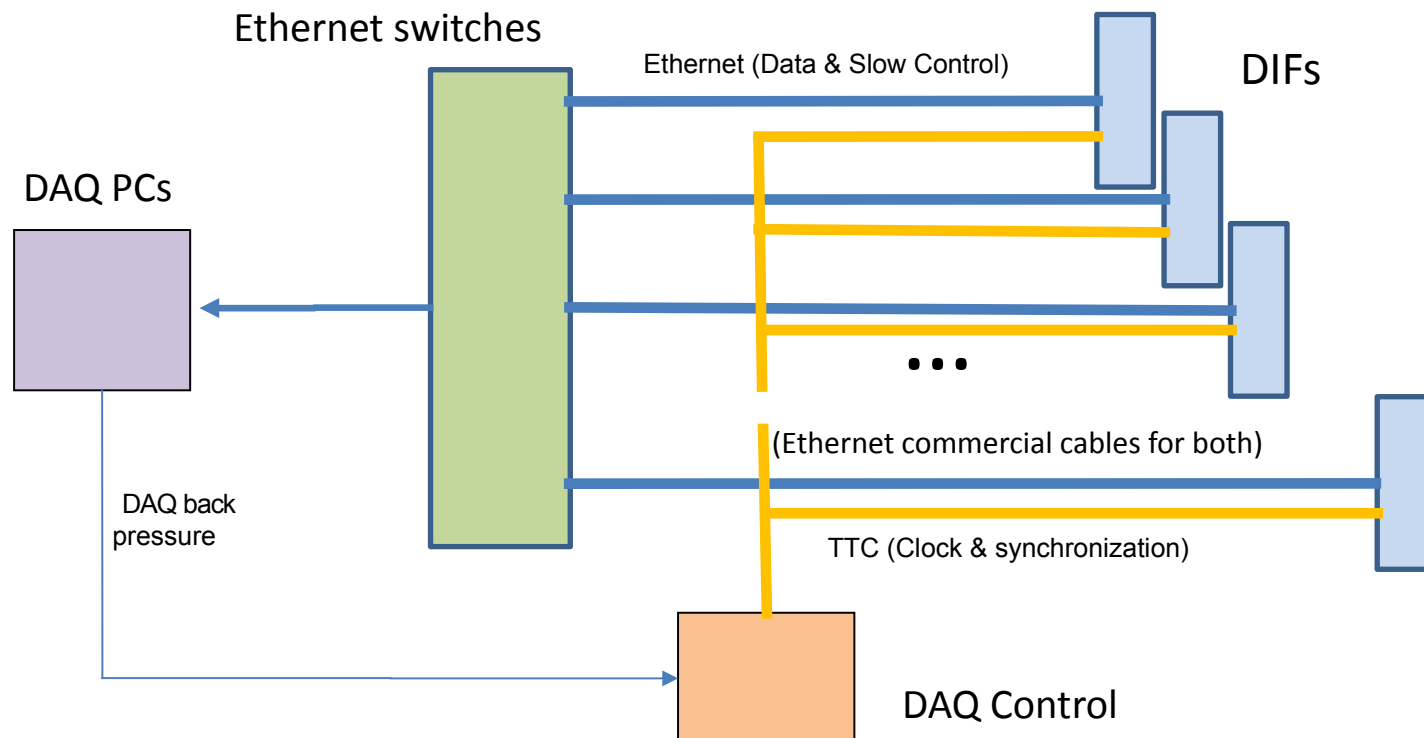
EUDET Telescope, SiTr, TPC, FCAL → H2020 ?

- Avec monitoring ? Disc ⇒ 17 fév. (AIDA2), proj automne



New SDHCAL DAQ architecture

- > only one DIF per plane (up to 432 HARDROC3 chips)
- > slow control through the new I2C bus
- > data transmission to DAQ by Ethernet using commercial switches
- > clock and synchronization by TTC (LHC Timing, Trigger and Control chips)
- > USB 2.0 for debugging



DAQ ILD

Faible bande passante

- Auto-trigger et stockage local
- Mais ⚠ bruit ☠ !
- ⇒ Monitoring

Cartes "embarquées"

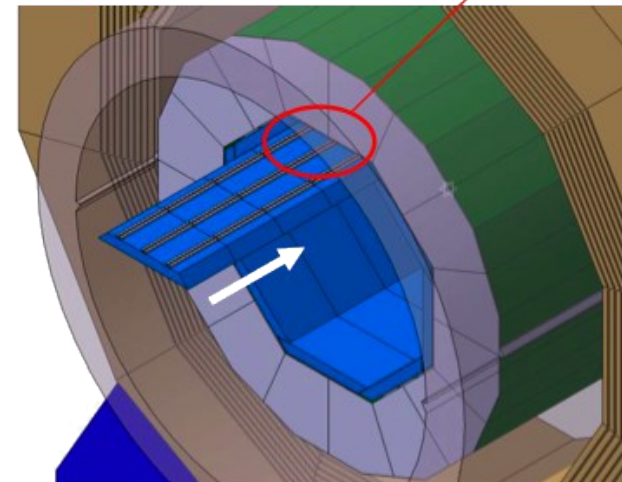
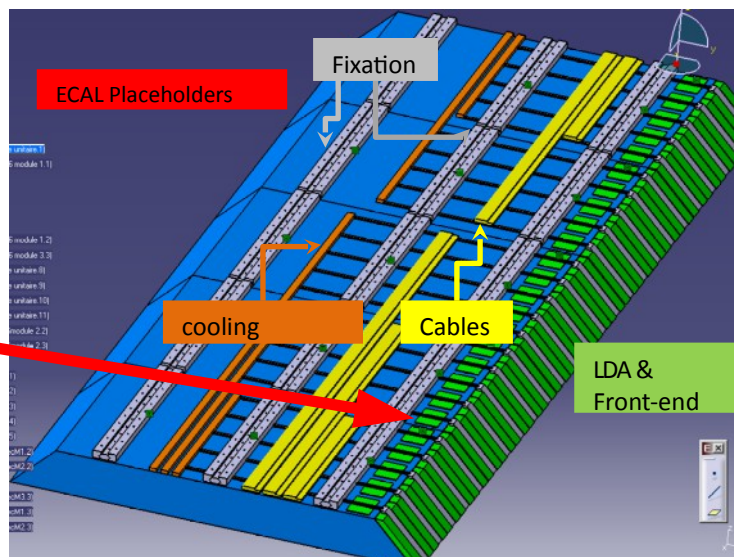
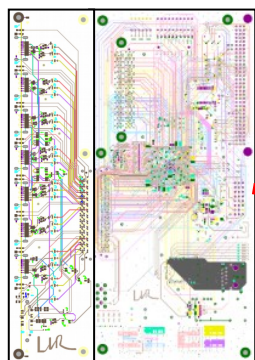
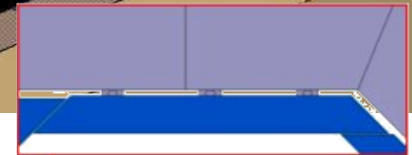
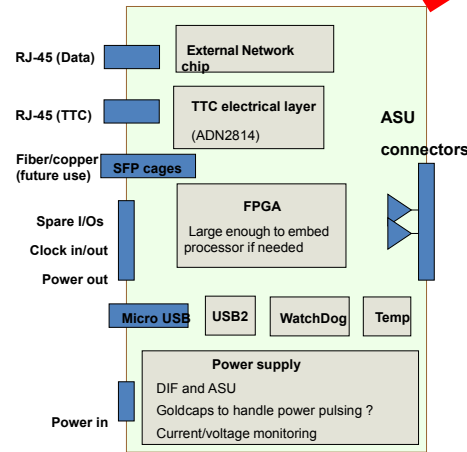
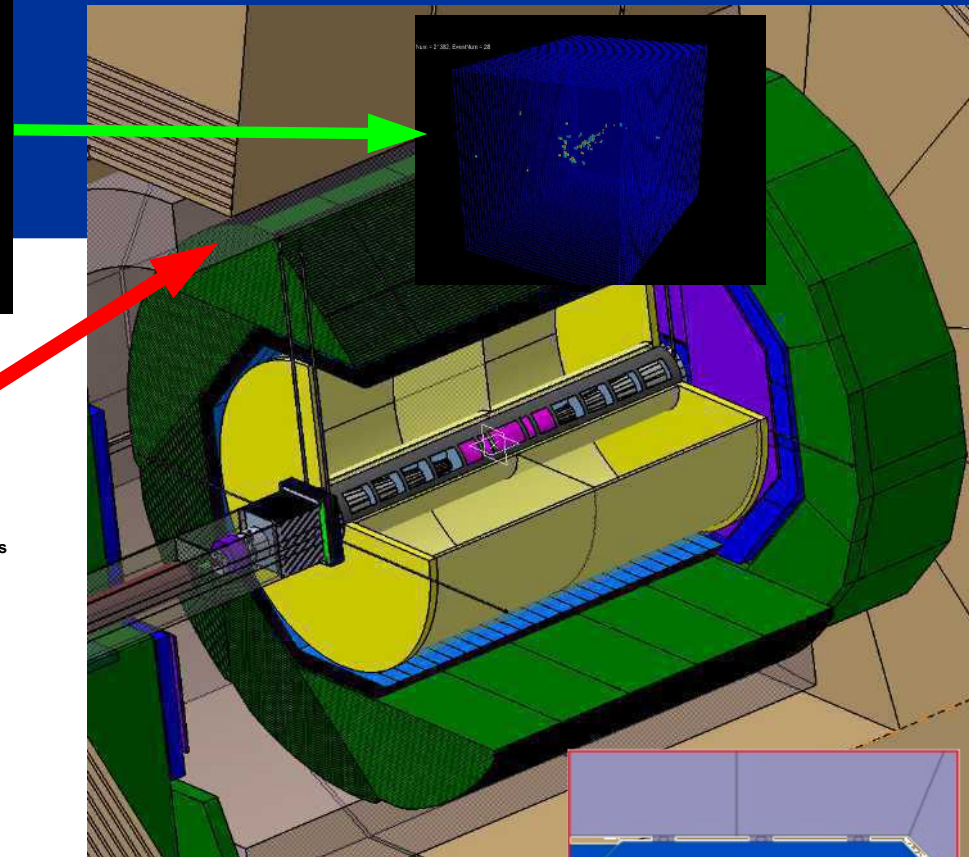
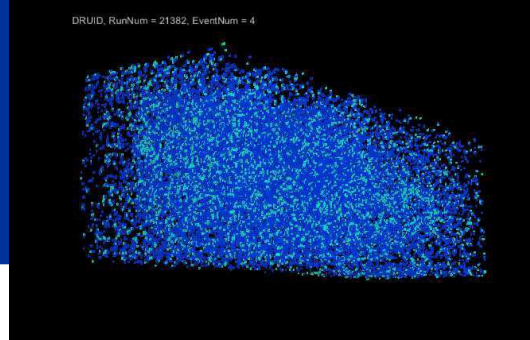
- Spatial (- enviri)

Faibles espaces:

- 5 cm ext SDHCAL
- ~3 cm ext. ECAL

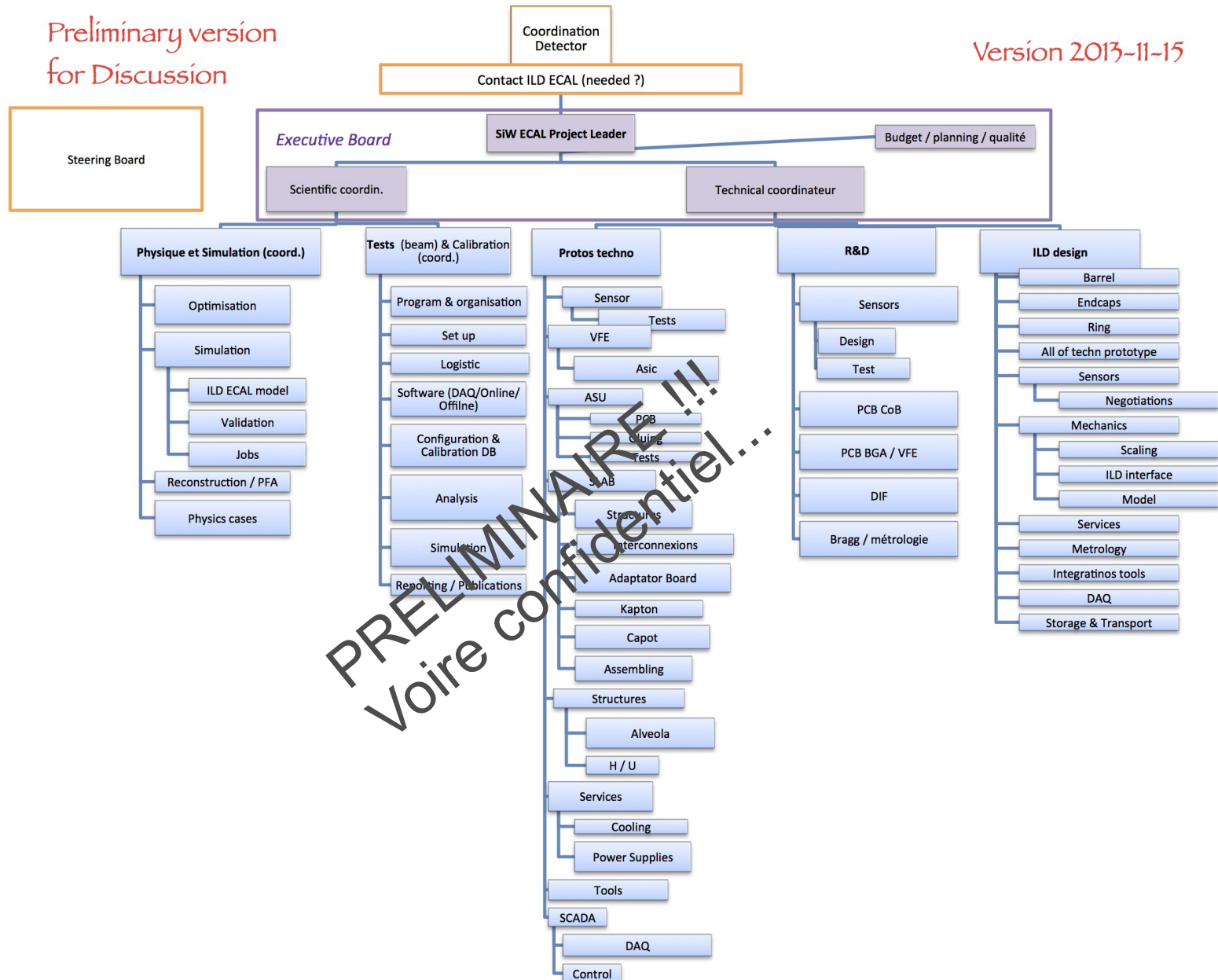
Redondance

Concentration (ECAL)



ECAL organisation

Organisation → sub-collaboration



Topic	project	Prototype		R&D		ILD (almost) Everything × 3 BARREL / ENDCAP / RING		Industrialisation ?	1 Coord per Project
	resp/coord (Present status)	LLR		??					
Mechanical Model	(LLR)	LLR				Scaling	LLR / LPSC / ??		
						ILD interface	??		
Sensors Design	(LLR/Kyushu/Tokyo/LPNHE)	x		several options		LLR / TU / Kyushu		Final Design	
Electric test						Kyushu			
Laser test		LLR		Rad		Kyushu / Tokyo ?			
Beam tests		PHIL							
VFE Test	(Omega)	SK2	Omega LAL / LLR	SK2B ADC	Omega LPSC	SK3		Omega	
ASU PCB	(LPNHE)	LLR LLR/Tokyo		PCB_COB PCB_BGA	LAL LLR / TU	PCB (design, prod, test, aging)			
Gluing		LPNHE				?			
Tests (electric, cosmic, aging)		LLR				?			
Transport						?			
Final DIF/ASU						?			
SLAB	(LAL)								
Structure (U)		LLR		→	LLR	? / ? / ?			
Interconnection		LAL		→	LAL	?			
Adapt Board		LLR		x		?			
Kapton		LAL		→	LAL	?			
Shielding		LLR		→	?	?			
Assembly		LAL		→	LAL	?			
Cosmic tests		LAL				?			
Rad test				Glue		? / ? / ?			
Storage/Transport									
Modules	(LLR)								
Structure		LLR		LLR		? / ? / ?			
Metrology (FBG)		LLR		LLR		? / ? / ?			
Services	(LPSC)			Power-Pulsing		Cooling	LPSC		
PS (PP)						LV	??		
						HV	??		
Tooling	(???)					Module mounting	?		
						Module rotation	?		
SCADA	(LLR)			DIF		DIF			
DAQ		LLR		?		?			
DIF		MAN/LLR		?		?			
Online Data quality Control		LLR/LAL		?		?			

Needed ?

Missing now

1 supervisor per
topic