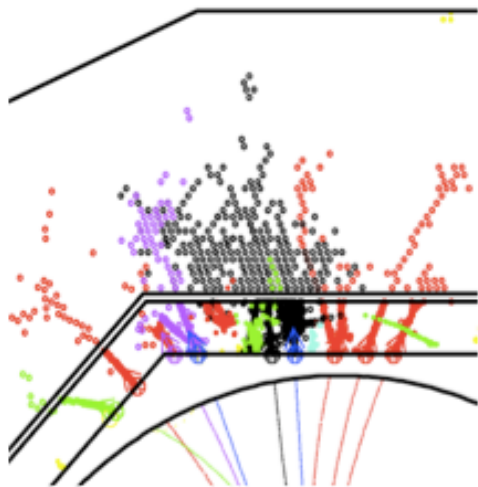


Work package 9 Task 9.5

Granular calorimeters

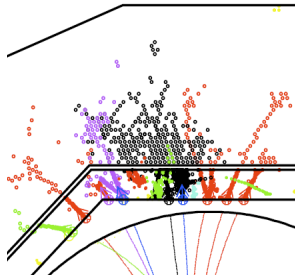
Infrastructure

R. Pöschl for and from
F. Sefkow



AIDA

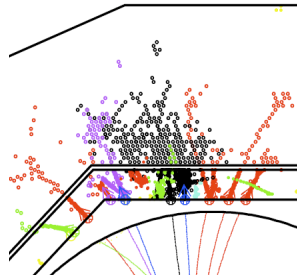
AIDA annual meeting DESY March 2012



Proposal



- WP 9: Infrastructure for detector R&D, 2.6M out of 8M
- Calorimetry 0.75M, cf EUDET: 1.99M of 7M total
- Much smaller budget, but still aim at integrating all active European partners
- Enlarged community: DHCAL effort grown after EUDET start
- AIDA is only a small part of CALICE and FCAL activities
- Proposal kept vague and general

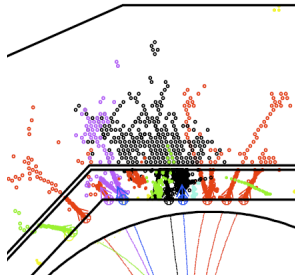


Partners



- CERN
- UCL - Louvin
- IPASCR - Prague
- CNRS
 - IPNL Lyon
 - LAL Orsay
 - LAPP Annecy
 - LLR Palaiseau
 - LPC Clemmont
 - LPSC Grenoble
- DESY
- UHEI (third party)
- MPG-MPP Munich
- Wuppertal
- TAU Tel Aviv
- UIB Bergen
- AGHUST Kracow
- IFJPAN Kracow
- CIEMAT Madrid (3rd p)

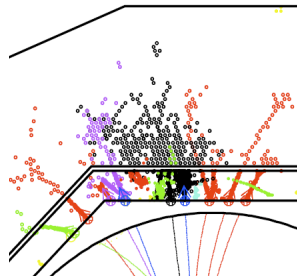
18 groups, 10k/y



Deliverables



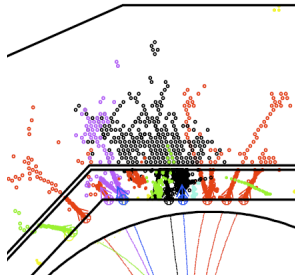
- D 9.7: Integrated infrastructure for highly granular calorimeters
 - Due month 40 (May 2014), lead DESY
- D 9.9: Adequation of Geant 4 simulation of hadronic showers in different media (report)
 - Due month 46 (Nov 2014), lead DESY
- In WP 9.1, but probably requesting input:
- D 9.8: Infrastructure performance and utilization (report)
 - Due month 46 (Nov 14), lead CSIC



Milestones



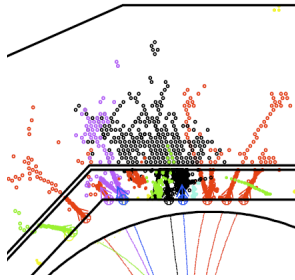
- MS 42 Gas system, control and bench structure
 - due month 24 (Jan 2013), lead CNRS-LAPP
- MS 43 3rd generation fast read-out chips
 - due month 30 (Jul 2013), lead CNRS-LAL
- MS 44 Multilayer tungsten structure with position control and monitoring for forward calorimeters
 - due month 30 (Jul 2013), lead DESY-Z
- MS 45 Calibration and power supply system
 - due month 36 (Jan 2014), lead UIB
- MS 46 Electromagnetic calorimeter of at least 18x18cm² area
 - due month 36 (Jan 2014), lead CNRS-LLR
- MS 47 Multichannel readout ASICs for luminosity detector
 - due month 40 (May 2014), lead AGH-UST



Description of Work



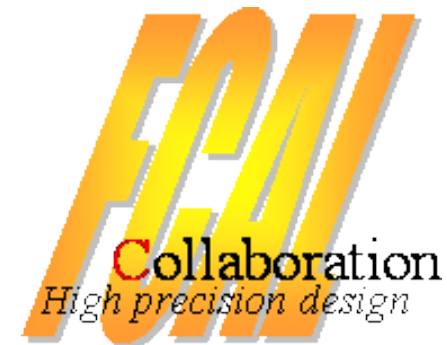
- Mechanical structure to place and move elements
 - CERN, DESY, UCL, CIEMAT
- Lumical structure, W radiator and ASICs
 - DESY, TAU, AGH-UST, IFJPAN
- ECAL extension of the EUDET module
 - IPASCR, CNRS-LAL, -LPSC, -LLR
- Hadronic structure with tungsten radiator and services
 - CERN, DESY, Wuppertal, MPG-MPP, IPASCR, CNRS-LAL, -IPNL, -LAPP, -LPC, UIB, UCL, CIEMAT

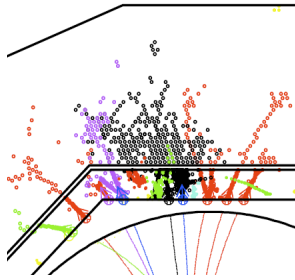


Sub-tasks



- ECAL: Daniel Jeans
 - LLR, LPSC, IPASCR
- AHCAL: Erika Garutti
 - CERN, DESY, MPG-MPP, IPASCR, UIB, Wuppertal
- DHCAL: Imad Laktineh
 - LAPP, IPNL, LPC, CIEMAT, UCL
- FCAL: Wolfgang Lohmann
 - CERN, DESY, AGH-UST, IFJPAN, TAU
- FEE: Nathalie Seguin-Moreau
 - LAL, UHEI
- TBM: Erik van der Kraaij
 - CERN, DESY, UCL, CIEMAT

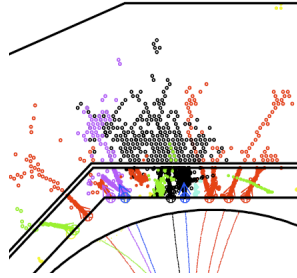




Meetings



- The sub-task structure just reflects the more global LC R&D organization, no new structures
- Projects will be followed in CALICE and FCAL
 - technical meetings as necessary
- AIDA annual meetings few months before reports
 - WP 9.5 parallel session
- Regular task leader phone meetings to stay in touch
 - milestone reports

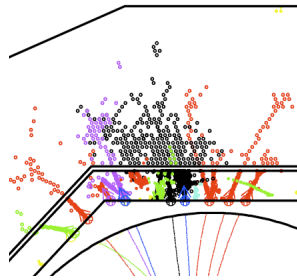


Summary



- AIDA provides (at least) a very useful platform for exchange and federation of projects
- Activities well integrated in overall T&D program of projects
- Preparation for Milestones and deliverables on the way
- Benefitted already from AIDA by TA AHCAL, Ecal (others???)

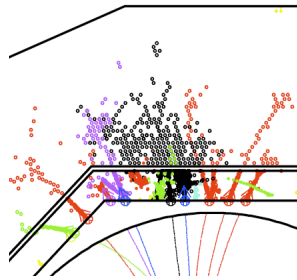
Back-up slides



Reporting

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2			2011				2012		2013			2014					
3			IM 11	IM 12	IM 13	IM 14	IM 21	IM 22	MS 42	MS 43	MS 44	MS 45	MS 46	MS 47	D 9.7	D 9.9	
4			ECAL: validation	AHCAL slab	DHCAL stack	TBM HCAL a	FCAL W design, layer prot.	Gas		ASICs	W structure	calib	ECAL	lumi ASIC	int MS	G4	
5	CERN					TBM W	FCAL				FCAL design, frame						ECAL, AHCAL, DHCAL
6	UCL				DHCAL mech												
7	IPASCR												ECAL - sensors				
8	CNRS-IPNL				DHCAL syst					FEE - I2c						DHCAL	
9	CNRS-LAL	FEE								FEE - the rest, incl ECAL PCB							
10	CNRS-LAPP							DHCAL									
11	CNRS-LLR	FEE			DHCAL anal								ECAL - sensors, integration			ECAL	
12	CNRS-LPC												ECAL - cooling, services				
13	CNRS-LPSC																
14	DESY			AHCAL		TBM design	FCAL				FCAL - integr.	AHCAL - integr.		FCAL - integr.		AHCAL	
15	UIHEI																
16	MPG-MPP																
17	Wuppertal			AHCAL								AHCAL - LED tests					
18	TAU						FCAL				FCAL - W						
19	UIB											AHCAL - adjust					
20	AHGUST						FCAL					AHCAL - power		FCAL - ASIC			
21	IFIPAN						FCAL				FCAL - W, pos control						
22	CIEMAT				DHCAL mech												





Budget

CERN-own	CERN-own	12	12	81,800	48,965	15,000	15000	5,000	5000	50,000	50,000	9.5.1	9.5	755,760	AHCAL W engineering & optical test stand
UHE1	UHE1	10	9	55,000	33,000	25,000	9	5,000	0	35,000	35,000	9.5.1	9.5		AHCAL Elec (SIPM fast timing electronics (ASICs))
	Wuppertal		12		39,600	10,000	10000		5,000	9000	35,000	9.5.1	9.5		AHCAL Scalable Calo System (LED system development and tests)
Wuppertal		12		66,000											(LED driver, Design of pulser & delay, design of pulse distrib syst.)
DESY-own	DESY-own	10	10	55,000	33,000	30,000	30000	5,000	5000	35,000	35,000	9.5.1	9.5		AHCAL Meca (compact interfaces & integration)
MPG-MPP	MPG-MPP	10	10	55,000	77,000	25,000	25000	5,000	5000	35,000	35,000	9.5.1	9.5		AHCAL Teststand for Scint (Tile integration test and SIPM test)
IP-ASCR-own	IP-ASCR-own	18	18	37,800	22,680	25,000	25000	5,000	5000	28,000	28,000	9.5.1	9.5		AHCAL Adaptive PS (temperature compensated PS)
UIB	UIB	10	10	80,000	48,000	0	28000	0	5000	45,000	45,000	9.5.1	9.5		AHCAL Adaptive PS, teststand and simulations
LAL	LAL	7	7	35,000	21,000	19,000	19000	1,000	1000	20,000	20,000	9.5.1	9.5		AHCAL Elec (3 rd gen. ASIC)
LAL	LAL	12	12	80,000	38,000	28,000	28000	2,000	2000	30,000	30,000	9.5.2	9.5		DHCAL Elec (3 rd gen. ASIC)
LAPP	LAPP	6	6	27,500	16,500	0	9	0	0	15,000	15,000	9.5.2	9.5		DHCAL Gas system & control
IPNL	IPNL	12	12	81,194	48,717	0	9	0	0	27,000	27,000	9.5.2	9.5		DHCAL Elec dev (Slow Control)
LPC	LPC	2	2	10,000	6,000	0	3	3,680	3680	4,000	4,000	9.5.2	9.5		DHCAL Reconstruction
CEMAT	CEMAT	9	9	38,000	39,240	10,000	9	5,000	0	28,190	28,190	9.5.2	9.5		DHCAL Bench structure (meca)
UCL	UCL	12	12	70,800	42,480	15,000	15000	5,000	5000	43,650	43,650	9.5.2	9.5		DHCAL Bench structure (meca)
LLR	LLR	22	22	110,000	66,000	41,920	41920	5,000	5000	51,000	51,000	9.5.3	9.5		ECAL Sensors
LPSC	LPSC	9	9	50,764	30,458	0	9	0	0	27,000	27,000	9.5.3	9.5		ECAL Meca
LAL	LAL	11	11	55,000	33,000	29,000	29000	2,000	2000	31,000	31,000	9.5.3	9.5		ECAL Elec
IP-ASCR-own	IP-ASCR-own	15	15	31,500	18,900	0	3	0	0	18,000	18,000	9.5.3	9.5		ECAL Sensors
AGH-UST	AGH-UST	22	22	66,000	39,600	14,900	14900	5,000	5000	55,000	55,000	9.5.4	9.5		FCAL Elec
DESY-own	DESY-own	14	14	77,000	46,200	0	9	0	0	34,920	34,920	9.5.4	9.5		FCAL Meca + Elec + ...
IFJ-PAN	IFJ-PAN	15	15	48,750	29,250	20,000	20000	5,000	5000	55,000	55,000	9.5.4	9.5		FCAL Meca + Elec + DAQ
TAU	TAU	15	15	66,000	39,600	15,000	15000	5,000	5000	55,000	55,000	9.5.4	9.5		FCAL Meca + Elec + DAQ

