AIDA Work packages

AIDA : Advanced Infrastructure for Detectors at Accelerators (LC, SLHC, Super B-factories, HE neutrino experiments)

Total maximum 10 M€ (2.5 M€ per year over 4 years). Implies a flat spending profile to maximize the total : 2011-2014

Last try (DevDet) was not successful : not enough synergy between various components, too much coordination work packages, too many projects leading to a large number of sub-critical tasks (80 labs, most of them with less than 50 k€ over 4 years).

AIDA limited to 25-30 'full partners' (legal entities, large labs or consortia : INFN, IN2P3,…)

WP#	Type	Task	Description	WP Editors	Budget (kE)
1	MGT		**Project managemement and communication**	**S. Stavrev**	
		1,1	Project managemement and administration	**L. Serin**	
		1,2	Communication, documentation and outreach		500
2	COORD		**Development of common software tools**	**F. Gaede**	
		2,1	Geometry toolkit for HEP	**P. Mato**	
		2,2	Reconstruction toolkit for HEP		1100
3	COORD		**Microelectronics and detectors/electronics integration**	**H-G Moser**	
		3,1	3D Interconnection of microelectronics and semiconductor detectors	**V. Re**	
		3,2	Shareable IP blocks for HEP		1100
4	COORD		**Relation with industry**	**S. Stapnes**	
		4,1	Coordination	**P. Sharp**	
		4,2	User/topical working groups (to be defined)		300
5	SUPP		**Transnational access DESY**	**I. Gregor**	
		5,1	Test beams		100
6	SUPP		**Transnational access CERN**	**H. Taureg**	150
		6,1	Test beams and irradiation facilities		
7	SUPP		**Transnational access European irradiation facilites**	**M. Mikuz**	
		7,1	Facility 1		
		7,2	Facility 2		
		7,3	Facility 3		
		7,4	Facility 4		
		7,5	Facility 5		650
8	RTD		**Improvement and equipment of irradiation and beam lines**	**E.Gschwendtner**	2600
		8,1	Test beams at CERN and Frascati	**H. Taureg**	
		8,2	Upgrade of proton and neutron irradiation facilities at CERN		
		8,3	Qualification of materials and components for detector systems and common dat		
		8.4	General beam and irradiation lines equipment		
		8.5	Coordination of combined beam test		
9	RTD		**Advanced Infrastructure for for detector R&D**	**H. Videau**	3000
		9,1	Gas detector facilities	**M. Vos**	
		9,2	Precision pixel infrastructure		
		9,3	Granular calorimeter studies infrastructure		
		9.4	Common DAQ infrastructure		

(Budgets and conveners subject to change)

Potential partner countries for AIDA

Country	Names
Switzerland	Martin Pohl
Germany	Lutz Feld
Slovakia	Miroslav Pikna
Spain	Carlos Lacasta Ivan Vila
Portugal	Paula Bordalo
Netherlands	Els Koffeman
Israel	Giora Mikenberg
Czech Republic	Vaclav Vrba
Poland	Filip Zarnecki Marek Idzik
Austria	Manfred Krammer
Finland	Kenneth Osterberg Eija Tuominen
Hungary	Gyorgy Bencze
Sweden	Richard Brenner
Norway	Steinar Stapnes
Denmark	Peter Hansen
Italy	Chiara Meroni
UK	Ken Long
Belgium	Gilles de Lentdecker
Bulgaria	Jordan Stamenov
France-IN2P3 France-IRFU	Vincent Boudry P. Colas
Greece	Evangelos Gazis Theodoros Alexopoulos
Malta	Nicholas Sammut
Slovenia	Marko Mikuz

23 countries (+Dubna lab) have been invited at today's meeting

Can be :

- Full partner

- Third partner

- Associate partner

Get in touch with your national contact and/or the convener of the Work Package you are interested in

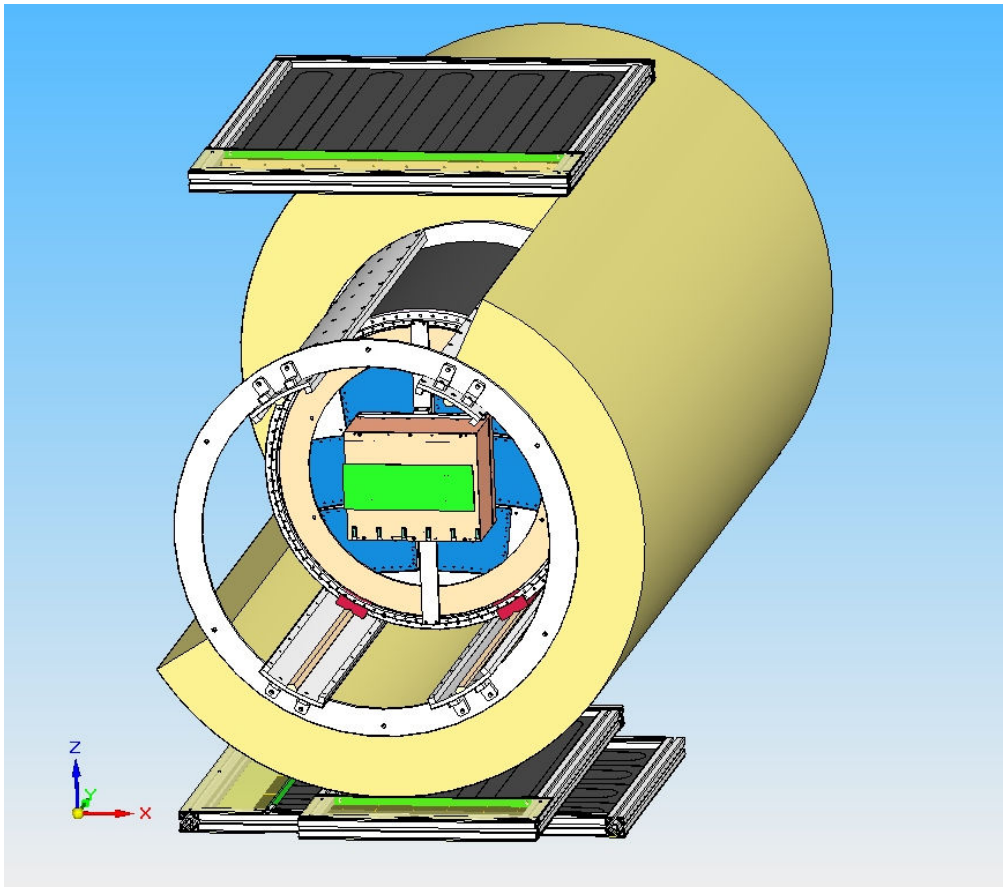
EUDET in AIDA

Improvement of the EUDET facility

- Programmable trigger logic, booking of trigger conditions, trigger readout: FPGA.

SiTPC : some development can go into WP3, but probably not TimePix2 (Readout infrastructure, optical communications between chips, 3D architecture). TimePix2 should be finished before AIDA starts (M. Campbell affirms it will be in connection with HEP needs)

Further electronic developments for standard readout.



WP9.1 Gaseous detector R&D

Some general thoughts gathered by Klaus Desch and PC
Potential participating institutes : DESY, CERN, Saclay, Bonn, Nikhef, Lund, Mainz, Prag, Athens

Bears on
-Large surface MPGD muon chambers for SLHC
-Gaseous vertex detector and planar tracking
-Engineering design for a large TPC with MPGD readout for LC

Extend TPC, Gridpix/Gossip facility at DESY
Magnet improvement : built-in He liquefactor (2 units, round trip to KEK: O(120k€))
Integrated Endplate(s) (mechanics, electronics, cooling)
Further electronics development
FPGA-based programmable cosmic (and beam?) trigger
Gas system improvements (purification, sample analysis)
Ion disk simulation with pulsed UV lamp

WP9.1 Gaseous detector R&D

Power pulsing has to be addressed for all detectors. The DESY 5T magnet could provide an infrastructure for these tests (large enough, high enough field).

Silicon tracking is merged with calorimetry (9.3)
However also a common DAQ between TPC and Si enveloppe should be developped somewhere (9.1 or 8?)

Infrastructure for production of large area MPGD prototypes (if eligible)

We have to keep in mind a possible technology choice in 2012.

More in WP 3 ?
-Multi (64-128) chip readout
-Tools for large area module construction

Proposal submission schedule

National contact meeting : October 6th

October 26th : Contents of WP finalized, first draft of WP text
& partners list
Preliminary budget breakdown for each WP

November 9th : Finalized list of partner in each WP
Iteration on budget sharing
National Contact texts
(second meeting with National contacts on Nov 9th afternoon?)

All WP contributions finalized November 23th

December 1st : Proposal submission

Laurent Serin