



LC-TPC in AIDA

AIDA at large:

Initial negotiations are finished. 33 « main partners », about 80 institutes in total. Only main partners get directly funds from Europe (10 M€).

Feed-back from institutes in the next few days.

Submission on Dec. 1, 2009.

LC-TPC present in mainly WP9.2 (gaseous detectors). Also of some relevance are WP3 (microelectronics) and WP8 (beam test equipment and DAQ).

WP9 breakdown :

9.1 Management

9.2 Gaseous detectors (900 k€)

9.3 Precision tracking (i.e. vertexing, telescopes) (1100 k€)

9.4 Calorimetry (900 k€)

9.5 Si tracking (300 k€)



Contents of Working Group 9.2

Gaseous Detector Facilities

- 1) Upgrade of the existing Large TPC Prototype infrastructure at DESY
 - He compressor for PC-MAG (120 k€)
 - TPC mechanics and integration (50 k€ + DESY)
 - 5T magnet for power pulsing (80 k€)
 - Pad electronics (150 k€)

- 2) Creation of an infrastructure for the production of large area Micro Pattern Gaseous Detectors
 - Upgrade of the CERN workshop mainly paid by CERN. Manpower and base materials to facilitate access to the workshop (320 k€)

- 3) Development of a common read-out system for gaseous detectors
 - TimePix2 read-out with multi-chip capability (like MUROS but 64 or 128 chips) (190 k€)

Breakdown of Working Group 9.2 EU request

	k€	Bonn	CERN	DESY	Lund	Mainz	NIKHEF	Saclay
9.2.1.1	TPC magnet improvement			110				
9.2.1.2	TPC Mechanics and integration			*				50
9.2.1.3	5T Magnet infrastructure			80				
9.2.1.4	TPC/MPGD readout (pad/strip based)		40		70			40
9.2.2.	MPGD development infrastructure		320					
9.2.3.	Readout for Pixel-Gas Detectors	50				50	70	20
	Sum	50	360	190	70	50	70	110
	Total				900			

Pending issues / Comments

- PCMAG : 120 k€ not sufficient (at least 150 needed). Assumed that DESY will be the main contractor for simplicity, but maybe KEK or Toshiba for realism? discussed later in this meeting
- TPC infrastructure : lots of possibilities (mechanical calculations, tests of new materials, cooling, UV ion disk, new cathode...) but almost no money. To be discussed among us
- 5T magnet : no input from DESY yet, certainly subcritical but good hope that DESY will help.
- TPC readout integration : Open discussion in progress with Luciano Musa and all specialists to insure S-altro to be usable by both GEM and Micromegas
- CERN workshop : mostly for SLHC, but will ease necessary R&D towards larger modules and new technics.
- TimePix2 readout : well funded, interesting also for medical applications. Interactions with a Glasgow-Liverpool TimePix telescope to be watched. To be complemented by 3D interconnection and optical chip-to-chip communication networking activity in WG3.

WP#	Type	Task	Description	WP Editors	Budget (kE)
1	MGT		Project management and communication	S. Stavrev	450
		1,1	Project management and administration	L. Serin	
		1,2	Communication, documentation and outreach		
2	COORD		Development of common software tools	F. Gaede	1100
		2,1	Geometry toolkit for HEP	P. Mato	
		2,2	Reconstruction toolkit for HEP		
3	COORD		Microelectronics and detectors/electronics integration	H-G Moser	1100
		3,1	3D Interconnection of microelectronics and semiconductor detectors	V. Re	
		3,2	Shareable IP blocks for HEP		
4	COORD		Relation with industry	S. Stapnes	300
		4,1	Coordination	P. Sharp	
		4,2	User/topical working groups (to be defined)		
5	SUPP		Transnational access DESY	I. Gregor	100
		5,1	Test beams		
6	SUPP		Transnational access CERN	H. Taureg	150
		6,1	Test beams and irradiation facilities		
7	SUPP		Transnational access European irradiation facilities	M. Mikuz	600
		7,1	Facility 1		
		7,2	Facility 2		
		7,3	Facility 3		
		7,4	Facility 4		
		7,5	Facility 5		
8	RTD		Improvement and equipment of irradiation and beam lines	E.Gschwendtner	3100
		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 data		
		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	3100
		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, budget updated 25/11/09)