

# News

- Main conclusion of meetings with National Contacts :
  - New Work Package breakdown
  - Need for more sLHC participation in 9.1, 9.2, 8.4 (some of the infrastructure in GIF ++) and WP2.  
Same remark from RECFA meeting last Saturday.  
Design sLHC person to help for 9.1 & 9.2 ?
  - Agreement that below 50 kE requested to EU, Institute is associate partner
- Email exchange with Bulgarian NC to see if INRNE & Sofia university can be seen as a consortium : probably not.
- Similar question from Greek through NTUA/GC-CERN (?) needs to investigate more
- Confirmation that Simon Canfer accepts to organize task 8.3

FP7 IA project: AIDA

<https://espace.cern.ch/aida/default.aspx>

WP#	Type	Task	Description	WP Editors	Budget (k€)	Comments
1	MGT		<b>Project management and communication</b>	S. Stavrev L. Serin	500	
		1.1	Project management and administration			
		1.2	Communication, documentation and outreach			
2	COORD		<b>Development of common software tools</b>	F. Gaede P. Mato	1100	
		2.1	Geometry toolkit for HEP			
		2.2	Reconstruction toolkit for HEP			
3	COORD		<b>Microelectronics and detectors/electronics integration</b>	H-G Moser V. Re	1100	
		3.1	3D Interconnection of microelectronics and semiconductor detectors			
		3.2	Shareable IP blocks for HEP			
4	COORD		<b>Relation with industry</b>	S. Stapnes P. Sharp	300	
		4.1	Coordination			
		4.2	User/topical working groups (to be defined)			
5	SUPP		<b>Transnational access DESY</b>	I. Gregor	100	need to increase if more user support
6	SUPP		<b>Transnational access CERN</b>	H. Taureg	150	need to increase if more user support
		6.1	Test beams and irradiation facilities			
7	SUPP		<b>Transnational access European irradiation facilities</b>	M. Mikuz	650	
		7.1	Facility 1			
		7.2	Facility 2			
		7.3	Facility 3			
		7.4	Facility 4			
		7.5	Facility 5			
8	RTD		<b>Improvement and equipment of irradiation and beam lines</b>	E. Gschwendtner H. Taureg	2600	budget sharing between WP8 & 9 only indicative today
		8.1	Test beams at CERN and Frascati			
		8.2	Upgrade of proton and neutron irradiation facilities at CERN			
		8.3	Qualification of components and common database			
		8.4	General beam and irradiation lines equipment			
		8.5	Coordination of combined beam test			
9	RTD		<b>Advanced Infrastructure for for detector R&amp;D</b>	H. Videau M. Vos	3000	
		9.1	Gas detector facilities			
		9.2	Precision pixel infrastructure			
		9.3	Granular calorimeter studies infrastructure			
		9.4	Common DAQ infrastructure			

# News

- Interest of UK group (LHCb) for alignment toolkit  
→ Pere/Frank
- Message from J. Wotschack (ATLAS/sLHC) and A. Sharma (CMS/sLHC) about interest for contributions in 9.1 for micromegas aspects.  
Need to answer if this proposal can fit in AIDA.  
→ Marcel/Henri/Hans
- Message from Paul about neutrinos interest in AIDA  
→ Hans
- No choice due to room availability for next meeting with NC Nov 9th at CERN (10h-16h). WP should be near finalisation at that time, presented by WP convener.
- Meeting with sLHC experiments Oct 15th at CERN 9h (Salle B)

# MESSAGE FROM Jorg Wotschack

The proposal addresses an upgrade of the infrastructure necessary for the development of large-area micromegas detectors for SLHC detector upgrades. The large-area micromegas detectors would be, of course, equally useful for future ILC and/or neutrino experiments, as well as for other non-particle physics related use (medical applications, large-area scanning devices, etc.).

Detectors based on the micromegas technology have been successfully operated for many years in high-rate particle physics experiments at CERN (COMPASS) and are in use elsewhere (e.g., TPC readout of T2K). However, today's micromegas detectors are limited in size, typically of the order 0.1 to 0.2 m<sup>2</sup>. For applications in the upgrade of the LHC experiments (\*) one would need detectors that are about one order of magnitude larger.

There is a rich R&D activity on micromegas detectors in Europe and elsewhere. Most of the micromegas detectors used in these R&D projects were produced at the CERN/EN-ICE workshop (R. de Oliveira) in close collaboration with the physicists performing the R&D work.

The proposed project consists of an upgrade of the existing facilities in the CERN/EN-ICE workshop to overcome the limitations that, so far, allow us not to exceed detector dimensions of about 500 mm active area in at least one dimension. The machines required to go to dimensions of about 1200 mm can, today, not be found in the specialized industry (PCB production). It is therefore proposed to ask for funding of these machines through the AIDA proposal. CERN, as main partner, would bring in the infrastructure required to accommodate and install the machines, as well as the manpower to operate them, such that they can serve the European micromegas community.

A first rough estimate of the total volume of the project is EUR 1-1.5 M, of which about EUR 500k are expected from the EU project.

## MESSAGE FROM Paul

I will not be able to attend the meeting on Monday since I am in India attending the Neutrino Factory International Design Study. We are meeting to discuss amongst other things the neutrino test beam R&D activity. When I return on Thursday I can inform you of the outcome, but the likely project we would like to do in AIDA will be [to upgrade and use the H8 testbeam at CERN. In it we would need to use the Molpurgo magnet, which we would fill with a special design of a small module of a Totally Active Scintillating Detector \(TASD\) Target, to test electron charge identification. Behind this, we would build a 2mx2mx4m spectrometer consisting of sheets of iron magnetised by a coil and with scintillator read out by photon detectors \(probably Si PMTs\). This serves as a prototype for a Magnetised Iron Neutrino Detector \(MIND\) and we would use it to test muon charge separation. This is an essential part of the R&D towards detectors for a neutrino factory and with the mini-MIND spectrometer in place it could be a resource for anyone needing muon charge identification in the beamline.](#)

One of the questions is where should this go. My initial feeling is that it should be completely inside WP8 since it would then be a monolithic activity. Otherwise, the TASD part would have to be in WP9 and the MIND spectrometer would be in WP8, which would be less elegant. Likely institutes to participate: Geneva, Glasgow, Valencia, Sofia, Brunel, but this is by no means finalised.