

- Meeting start at 14.15
- Welcome and round table (A.Oja)
 - Last meeting's review Goals for this meeting:
 - work on detector roadmap
 - added value of the alliance
 - R&D for future detectors: FP7 and funding opportunities
 - COST proposal
- LHC upgrade roadmap introduction (J.Kalliopuska)
 - Upgrade timeline
 - Present tracker and orders
 - Estimates for the upgrade
 - Partner profiles

 - Discussion about numbers of the upgrade, challenges and partner profiles
 - Notes of the discussion are updated to the
 - Partner profiles:
 - Packaging capabilities to be included
 - The LHC upgrade roadmap file will be circulated
 - Technology transfer from small labs to bigger foundries
 - more cost efficient to do the evaluation in small scale
 - Demonstrate 200 mm fabrication with adequate material first
- Supply chain management (T. Pöyry)
 - Tasks:
 - Master thesis
 - COST funding
 - working in different work packages
 - Goals to find out new R&D openings from the alliance
- COST introduction (? and J.Kalliopuska)
 - enhance industrial partners also if they do R&D in project
 - 100000 euros per year
 - continuous call and evaluated twice a year
 - 50 applications accepted annually
 - Promote young researchers
 - impact on European level
 - Impact in wide field of technologies
 - Christofer Fjöröd selected to complete the proposal and coordinate it.
 - Tuukka Pöyry will help him with the proposal
 - Research infrastructures should be used instead of Big-Science

Presentations of new partners

- ON Semiconductor:
 - Roznov, Czech,
 - 100 mm lab converted to 150 mm
 - 150 mm CZ silicon crystal pulling fab, dicing, polishing, etc – no MCZ
 - 40000 m2 clean rooms
 - 10000 wafers per year
 - Half of ATLAS pixel sensors delivered
 - Large scale processing for detectors

- CEA LETI
 - Grenoble
 - Mostly dedicated to nanoelectronics
 - complete 200 mm line, no 150 mm line
 - three partial 100 mm lines

- Canberra
 - 150 mm wafer processing
 - Lack of ion implanter
 - ALICE deliveries:
 - 1100 DSD
 - 650 pixels
 - 400 drift detectors

- Silex
 - MEMS foundry, stockholm, 100 employees
 - 150 and 200 mm wafers
 - Main product bulk TSVs
 - high volume production

- Discussion on Funding opportunities
 - We should include packaging to the alliance to cover the hybridization requirements
 - Lobbying for European calls in the alliance
 - EU infrastructure
 - Problem in shearing knowledge in semiconductor industry
 - Catrene (old Medea) – business to business program
 - ENIAC supports R&D activity – 60% from EU, 30% national and 30% own money from industry partners – 3D integration and large area detectors
 - ENIAC call 3 under preparation -> project funding within a year
 - FP7: Health in quantum imaging
 - Nothing is targeted in FP7 call for sensor development

16.9.2009

FP7 Capacities

- Commission is expecting only one proposal per topic
- supports the infrastructure activity not detector development directly
- DevDet Consortium
 - 87 institutes
 - 21 countries
 - 48 months
 - 38 M€ total budget from 11 M€ EC contribution
 - Manpower 3263
 - Flavour physics, neutrino facility and sLHC are the driving forces
- AIDA application
 - Reduce cost 10%
 - Promote better the accelerator requirements
 - Include network WP towards industry
 - road mapping of needed detector technologies in 5-10 years
 - topics:
 - silicon sensors
 - opto- and electronics
 - 3D integration and packaging
 - SiPM
 - power distribution
 - micro pattern gas detectors
 - Discussion
 - problems in SLHC are cooling, power distribution systems and their reliability
 - Not many problems with sensors and electronics
 - Helps industry to prepare for the market survey
 - Next week the new work package will be prepared and the industry is contacted in October and the proposal is circulated in the alliance

Group works

- R&D group
 - detector demonstrator could be f.e. RELAXED project, where the technical challenges are similar to SLHC
 - Important to get the whole module work reasonably
 - In HEP applications, the read outs get damaged by the high energy particles
 - Round table for Technology list of partners: Christofer Fjörö's notes to be added!
 - Discussion about ATLAS 3D collaboration
 - Possible COST application for the demonstrator
 - Discussion about benefits of 3D detector design compared to the thin planar design
- Industry group
 - 40000 wafers is an interest for industry
 - technology for the wafer fabrication exist, except for 200 mm wafers
 - Material and process need to be evaluated for 200 mm

- Silix work on 200 mm, but not on radiation detector
- There is no industrial offering for packaging
 - workshop should be organized on hybridization at CERN
- Industry requires long notice to do development, f.e. thin wafer fabrication
- National funding should be used for the process development
- The work need to shared in the development phase
- Are there arguments from CERN to go for 200 mm wafer fabrication?

Next meeting 25-26.11.2009