

Academia meets Industry On Position-Sensitive Solid-State Detectors

Organizing Committee:

Dr. Ties BEHNKE
Marie-Laure BOURGEOIS-SCHUTZ
Catherine BRANDT
Sotiris FRAGKISKOS
Dr. Hartmut HILLEMANN
Kate KAHLE
Dr. Jean-Marie LE GOFF
Dr. Laurent Serin
Svetlomid STAVREV

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DESY

With the assistance of:



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Advanced european Infrastructures for Detectors at Accelerators

- Academia-Industry Matching Events (AIME) Concept
 - focus on strategic technology topics for HEP R&D, for which the community holds expertise
- **Process:**
 - Technology theme selection
 - Inventory of technologies addressed by HEP community
 - Review of the situation in other scientific disciplines and Industry
 - Event
 - Follow-up
- **Objective:** To foster collaborative R&D between academia and industry
 - Procurement for the physics research programme
 - Applied developments to enhance societal benefits



- Particle Physics Community
- Industry
 - Semiconductor Manufacturers
 - OEMs (Original Equipment Manufacturers)
- Representatives from Applied Research sectors
 - Life science imaging
 - Security
 - Dosimetry
 - Synchrotrons
 - Medicine
 - Spectroscopy
 - Beam Monitoring
 - Free Electron Laser monitoring

Day 1

Topical review on major technology developments

- State of the art in Position Sensitive Solid State Detectors

Particle Physics community needs

- ALICE
- ATLAS
- CMS
- LHCb
- Linear Colliders
- SuperB (last minute cancellation from speaker)

Photon Physics Needs

- Free Electron Laser

Applications

- | | |
|------------------------|-------------------|
| – Life Science Imaging | – Beam Monitoring |
| – Medicine | – Dosimetry |
| – Security | – Synchrotrons |
| – Spectroscopy | |

• Day 2

Company Presentations

Round Table:

- ✓ Toward a road map for collaborative R&D

Networking Lunch



- Booths for Academia and Industry
 - Demonstrators
 - Company presentations
- Event venue and timetable targeted to maximise exchanges among participants
 - breaks right outside the conference hall with demonstrators and posters on display
- CV postings
- Job offers
- Survey after the event and communication of the results to participants

68 attendees from 25 institutions

- Academy of Sciences of the Czech Republic
- Bulgarian Academy of Sciences
- Catholic University of Louvain
- CEA/Irfu Saclay
- CERN
- CNM-Barcelona
- CNRS - IN2P3 – LAL
- CPAN
- DESY
- IFCA (CSIC)
- INFN
- Institute of High Energy Physics, Wien
- Institute of Nuclear Physics of Poland
- KIT - Karlsruhe Institute of Technology
- Max-Planck-Institut für Physik Munich
- MRC Laboratory of Molecular Biology United Kingdom
- NIKHEF
- Oxford University
- Tomsk Polytechnic University
- University of Barcelona
- University of Bonn
- University of Cantabria
- University of Hamburg
- University of Otago
- VTT

18 attendees from 15 companies

- ALIBAVA Systems
- Amsterdam Scientific Instruments BV
- Baltic Scientific Instruments
- CAEN SpA
- Canberra
- Dectris Ltd.
- Infineon Technologies
- iseg Spezialelektronik GmbH
- KETEK GmbH
- Kromek Ltd
- Philips Digital Photon Counting
- Photek LTD
- SEMIKON Detector GmbH
- Struck Innovative Systeme GmbH
- Technology Transfer Agency Techtra Sp. z o.o.

- **15 companies registered**
 - 11 booths + Posters
 - 3 standalone posters
 - 12 company presentations scheduled for 2nd day
- **Job offers**
 - TALENT Marie Curie initial training network
 - Offering 15 early stage researchers positions (3 years)
 - Recruiting 2 experienced researchers for 2 years
- **CVs**
 - 1 CV posted

AIDA Lively Event with many interactions



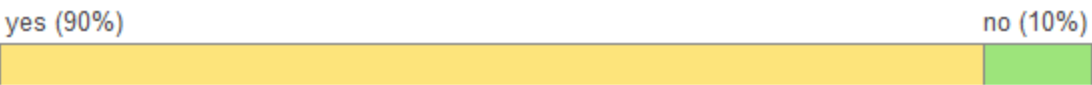
* 1. Were you directly invited to the Position-Sensitive Solid-State Detectors event by one of the organisers? ?



* 2. What was the main reason to participate to the event? ?



* 3. Did you appreciate having both reviews about ongoing scientific developments and company profile presentations? ?



* 4. Did you appreciate the event over two half-days? ?

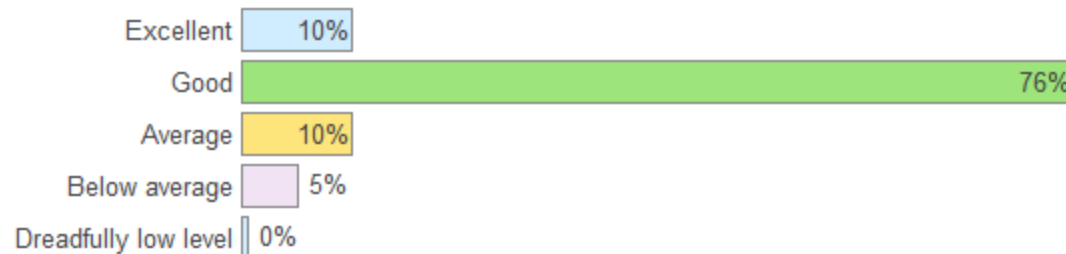


(out of 22 respondents)

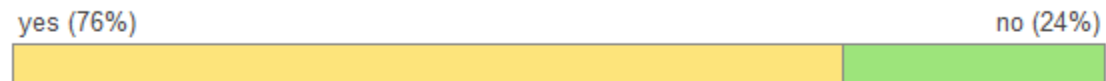


AIDA Preliminary results from survey (2)

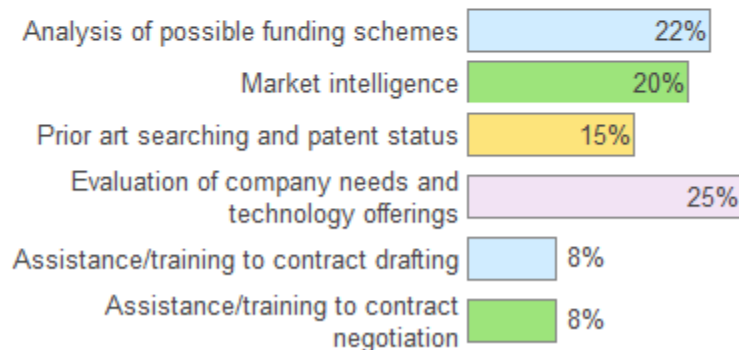
* 5. Overall, how would you rate the event? ?



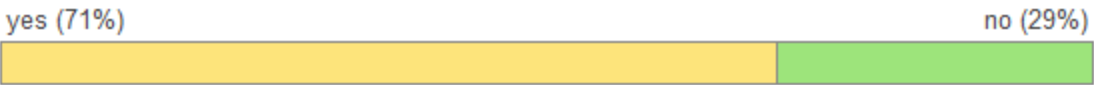
* 7. Would you appreciate a follow-up phase of the event, with information on the topic of Position-Sensitive Solid-State Detectors and access to the services listed in question 8? ?



* 8. During future events, would you be interested in additional services, e.g. ?



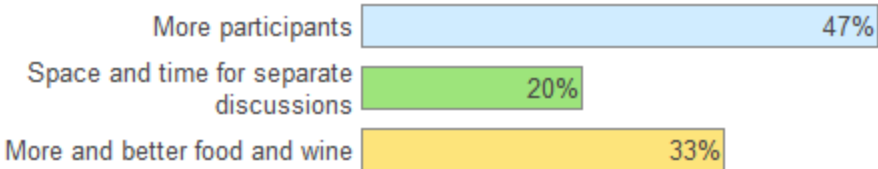
* 9. The event has been attended essentially by researchers and companies representatives; would you consider profitable to have also tech transfer professionals from the research institutions? ?



* 10. Would you attend future events even if a fee was required to help covering the costs? ?



11. What elements should be taken into account to improve the event? ?





- **From Industry to Academia:**
 - Timeline of projects missing
 - Budget estimates missing
 - Focus more on future developments, rather than on existing installations
 - Separate sessions for pixel and strip detectors
(no talk from ATLAS about strips or from CMS about pixels)
 - More demonstrators from academia were expected
- **From Academia to Industry:**
 - Invite more companies
 - More presentations on sensor developments
 - Technical presentations on companies' capability on the targeted topic, rather than general ones



- General comments:
 - More participation from other research disciplines and invite more Companies
 - Some talks were less focused
 - Ensure that speakers are fully aware of the targeted audience
 - Mix industry and academia presentations over the two days
 - Foster discussions by:
 - Keeping booths and presentations in the same place
 - Longer coffee breaks
 - Keeping dinner next to booths



- Collaborations with HEP are characterised by long development cycles with long time gaps in between
- Academia has identified pertinent areas for early collaboration with Industry
 - Pre-procurement
- Industry has:
 - offered various routes for collaboration
 - needs for better defined time-scales to meet academic demand (project management)
 - spotted IP issues with Academia (patents)
 - required Academia to take some financial risk

- **WP4 Session**

Thursday 29th 11:00, Sem 5

- Using collaborative network analysis tools to spot and trace collaborations between Industry and Academia

Thank you for your attention!