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Session 1: Detector overview

June 29, 2009 8:40

- 1.1 Hans Borner (invited) The Neutron, a Tool and an Object for Nuclear and Fundamental Physics Studies
- 1.2 Michael Campbell (invited) 10 years of the Medipix2 Collaboration
- 1.3 Gene Weckler History of Non-CCD Digital Imaging Detectors

Session 2: Sensors I (Si & GaAs)

June 29, 2009 11:00

- 2.1 Cinzia Da Via 3D silicon detectors – status and applications
- 2.2 Juha Kalliopuska Alternative fabrication process for edgeless detectors on 6" SOI-wafers
- 2.3 Lukas Tlustos Characterization of GaAs(Cr) Medipix2 hybrid pixel detectors
- 2.4 Bohumír Zařko Development and evaluation of semi-insulating GaAs detectors in hot plasmas diagnostics

Session 3: Pixel ASICs

June 29, 2009 14:00

- 3.1 Ariane Frey (invited) DEPFET Active Pixel Sensors for Future e^+e^- Colliders
- 3.2 Andrew Blue A review of MI3 produced Active Pixel Sensors
- 3.3 Beat Henrich The Adaptive Gain Integrating Pixel Detector (AGIPD): A detector for the European XFEL. Development and status update.
- 3.4 Xavier Llopert Medipix3: a 64k pixel detector readout chip working in single photon counting mode with improved spectrometric performance
- 3.5 Peter Kvasniřka Performance and Spatial Resolution of DEPFET Detectors as Seen in Beam Test and Laser Test Studies

Session 4: Applications I

June 29, 2009 16:40

- 4.1 Frank Jansen Space Situational Awareness Satellites and Ground Based Radiation Imaging Detector Technology
- 4.2 Florian Bayer X-ray polarimetry with the Timepix
- 4.3 Julia Jungmann Photoelectron & Ion Imaging Using CMOS Pixel Detectors

Session 5: Tracking with pixel detectors

June 30, 2009 8:40

- 5.1 Erik HEIJNE First steps towards a vector detector for MIP particles using 3D stacked silicon pixel technology
- 5.2 Claude Leroy Measurement of the reliability of pattern recognition for tracks and traces generated by individual quanta of ionizing radiation in a Medipix2 silicon pixel detector
- 5.3 Jan Jakřbek Tracking of Strongly Ionizing Particles with a Timepix Detector
- 5.4 Lawrence Pinsky Penetrating Heavy Ion Charge and Velocity Discrimination with a TimePix-based Si Detector
- 5.5 Joost Melai A photon-sensitive integrated Micromegas detector

Session 6: Applications in high energy physics

June 30, 2009 11:00

- 6.1 Carmelo D'Ambrosio The Ring Imaging Cherenkov Detectors of the LHCb Experiment Carmelo D'Ambrosio on behalf of the LHCb Collaboration
- 6.2 Peter Cwetanski Commissioning of the ATLAS Transition Radiation Tracker with Cosmic Rays and single LHC beams

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| 6.3 | Zdenek Dolezal | ATLAS Silicon Microstrip Tracker Operation |
| 6.4 | Iskander Ibragimov | Results from the Commissioning of the ATLAS Pixel Detector with Cosmics data. |

Session 7: Sensors II (CdTe)

June 30, 2009 14:00

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| 7.1 | Michael Fiederle
(invited) | Processing and evaluation of CdTe Pixel detectors using Medipix2 |
| 7.2 | Roman Grill | Chemical diffusion in CdTe:Cl |
| 7.3 | Eduard Belas | Reduction of impurity concentration in CdTe using electromigration of mobile elements |
| 7.4 | Marc ARQUES | Dynamic X ray direct conversion detector using a CdTe polycrystalline layer coupled to a CMOS readout chip |

Session 8: Detector systems

July 1, 2009 8:40

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|-----|-----------------------------|---|
| 8.1 | Marijke Keters
(invited) | Silicon Radiation Detectors – The viewpoint of an industrial silicon detector foundry |
| 8.2 | Jan Visser | A Gigabit per second read-out system for Timepix quads |
| 8.3 | K. Gan | Radiation-hard ASICS for SLHC optical data transmission |
| 8.4 | Aldo Mozzanica | A single photon resolution integrating chip for microstrip detectors. |
| 8.5 | Pedro Rato Mendes | Characterization and performance of monolithic detector blocks with a dedicated ASIC front-end readout for PET imaging of the human brain |

Session 9: Applications II

July 1, 2009 11:00

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|-----|---------------------|---|
| 9.1 | Anton Tremsin | High resolution Bragg edge transmission spectroscopy at pulsed neutron sources: proof of principle experiments with neutron counting MCP detector |
| 9.2 | Wasi Faruqi | Improvements in CMOS detectors for Electron Microscopy at 300 keV |
| 9.3 | Irakli Sikharulidze | Low energy electron microscopy imaging using Medipix2 detector |
| 9.4 | Andrei Nomerotski | Imaging Mass Spectroscopy with fast silicon pixel detectors |
| 9.5 | Jan Thim | Investigation of Charge Sharing in X-Ray Imaging using Sub-pixel Spatial Resolution with Dislocated Multiple Images |

Session 10: Scintillators

July 1, 2009 14:00

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|------|------------------------------------|--|
| 10.1 | Christian Broennimann
(invited) | New Opportunities with Single-Photon Counting Pixel and Microstrip Detectors for Scientific Applications |
| 10.2 | Khalid Alzimami | Investigation of the Potential Use of LaBr ₃ :Ce Scintillators for Scintimammography Imaging |
| 10.3 | Vivek Nagarkar | Growth and Characterization of Vapor-Deposited LaBr ₃ :Ce Films |
| 10.4 | Jiri Mares | 'Gamma spectroscopy of wide bandgap scintillation materials using hybrid photomultipliers' |

Session 11: Photodetectors

July 1, 2009 16:00

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|------|--------------------|---|
| 11.1 | Farhad Taghibakhsh | Silicon Photomultiplier for Positron Emission Tomography Detector with Depth of Interaction Encoding Capability |
| 11.2 | Hiroyuki Sekiya | A novel imaging device based on UV scintillators and a large area gas photomultiplier |
| 11.3 | Satoru Iwaki | Low-power Wide-dynamic-range Readout System for a 64-channel Multi-anode PMT of a Scintillation Gamma Camera |

Session 12: Imaging

July 2, 2009 8:40

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|------|-------------------------------|--|
| 12.1 | Gabriella Carini
(invited) | Imaging detectors the Linac Coherent Light Source |
| 12.2 | Anthony Butler | Processing of Spectral X-ray Data Using Principal Components Analysis |
| 12.3 | Peter Bartl | Evaluation of X-ray phase-contrast imaging using a photon-counting and spectroscopic detector |
| 12.4 | Ondrej Jirousek | Strain analysis of trabecular bone using time-lapse X-ray microtomography |
| 12.5 | Daniel Vavrik | Radiography in Engineering Practice |
| 12.6 | Tung-Hsin Wu | Attenuation Correction of Emission PET Images with Average CT: Interpolation from Breath-Hold CT |

Session 13: Applications III

July 2, 2009 11:00

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|------|--------------------------------|---|
| 13.1 | Anatoly Rozenfeld
(invited) | Silicon detectors in radiotherapy: present and future. |
| 13.2 | John Vallerga | Centroiding algorithms for high speed crossed strip readout of microchannel plate detectors |
| 13.3 | Ulrike, Dr. Ankerhold | Radiation protection dosimeters in pulsed fields - what is the problem? |

Poster session 1.1: Detectors and sensors

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|--------|-------------------|--|
| 1.1.1 | Anton Tremsin | Plastic Microchannel Plates with Nano-engineered Films |
| 1.1.2 | Diana Adliene | X-ray radiation impact on the structure of porous silicon fabricated by vapor phase chemical etching |
| 1.1.3 | Aldis Silenas | Graded-gap AlxGa1-xAs detector for high-energy electron beam dosimetry |
| 1.1.4 | Mária Martišíková | Test of amorphous silicon detector in medical proton beams |
| 1.1.5 | Guocai SUN | Epitaxial GaAs for X-ray detection |
| 1.1.6 | Suk-Hee Jung | Design of a hybrid digital X-ray detector for high efficiency imaging |
| 1.1.7 | Elena Martin | Radiation Hard Pixel Sensor with SOI technology |
| 1.1.8 | Marten Bosma | Development of edgeless high-Z sensors for endless medical detectors |
| 1.1.9 | oh hyeon Hwang | Thermal annealing of lead oxide film for application of X-ray detector |
| 1.1.10 | Min Woo Kim | Integration of Flat Panel X-ray detector for high resolution diagnostic medical image |
| 1.1.11 | Vasilij Kozlov | Improved purification and TiBr single crystal growth for the detector applications |
| 1.1.12 | Jozef Huran | Study of wide band gap nanocrystalline silicon carbide films for radiation imaging detectors |
| 1.1.13 | Gene Weckler | Large CMOS Imagers, an alternative to Amorphous Silicon Flat Panels |
| 1.1.14 | Anna Fröjdh | Processing and characterization of a MEDIPIX2-compatible silicon detector with 220 um pixel size |
| 1.1.15 | Suk Hee Jung | Detector design of hybrid method for high efficient digital x-ray imaging |

Poster session 1.2: Detector tests and characterization

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|-------|-----------------------|---|
| 1.2.1 | Andrew Blue | Radiation Tolerance for a Large Pixel Detector for XFEL |
| 1.2.2 | Hee Seo | Compton-edge-based Energy Calibration for Double-sided Silicon Strip Detectors in Compton Camera |
| 1.2.3 | Franca Cassol Brunner | Study of the charge sharing effect in the photon-counting pixel detector XPAD3-5 |
| 1.2.4 | Jan Jakůbek | Precise Energy Calibration of Pixel Detector Working in Time-Over-Threshold Mode and Its Consequences |

1.2.5	Eva Gimenez	Characterization of a 3D Medipix2 detector with a micro-focused synchrotron beam
1.2.6	Jihène Bouchami	Study of the charge sharing in silicon pixel detector by means of heavy ionizing particles interacting with a Medipix2 device
1.2.7	Anna Bergamaschi	Characterization of thick silicon microstrip sensors for hard X-rays applications
1.2.8	Julien Marchal	Performance of Pilatus detector technology for long-wavelength Macromolecular Crystallography
1.2.9	Erik Fröjdh	Spectral response of a silicon detector with 220 um pixel size bonded to MEDIPIX2
1.2.10	Young-bin Kim	X-ray Detector possibility evaluation using new structure Liquid Crystal Modulator
1.2.11	Patrick Takoukam Talla	A modified Spectrum Reconstruction Method for the Charge Summing Mode of Medipix3
1.2.12	Young Soo Kim	Characterization of Avalanche Photodiodes for Single Photon Counting CMOS Image Sensors
1.2.13	Viktor Bočarov	Compact digital spectroscopic unit for underground measurements of Rn activities

Poster session 1.3: Applications

1.3.1	Carlos Granja	Response Characterization of Pixel Detector TimePix to Heavy Ions
1.3.2	Michal Platkevicius	Spatial and Time Coincidence Detection and Spectroscopy of Decay of Radioactive Ions with Timepix Detector
1.3.3	Jaroslav Urbar	Medipix cosmic ray tracking device on BEXUS-7 stratospheric balloon flight
1.3.4	Pavel Cermak	Background capabilities of pixel detectors for double beta decay measurements
1.3.5	Ulli Köster	Thermal-neutron-induced charged-particle emission-channeling-measurements with Medipix detectors
1.3.6	Martin Kroupa	Coincidence Imaging System with Electron Optics
1.3.7	Clara Troncon	The ATLAS Insertable B-Layer Detector (IBL)
1.3.8	Andrea Gutiérrez	Investigation of fast neutron detection efficiency of ATLAS-MPX devices exposed to ^{252}Cf and $^{241}\text{AmBe}$ sources aiming at the evaluation of average neutron energy in mixed radiation fields
1.3.9	Hamish Silverwood	The Canterbury-CTU Neutron Camera
1.3.10	Daniel Turecek	The Remote Control of the ATLAS-MPX Network and Visualisation of Measured Data
1.3.11	Nilgun Demir	Simulation for argon based gas detectors
1.3.12	Jin Hyung Park	Explicit Modeling of Timing Characteristics in Compton Camera Simulation with Geant4
1.3.13	Aldo Mozzanica	An advanced X-ray pixel detector for high frame rate applications
1.3.14	Raul Esteve Bosch	A High Performance Data Acquisition System for a 16-Head PET Scanner
1.3.15	Zdenek Vykydal	USB Lite - Miniaturized Readout Interface for Medipix2 Detector

Poster session 2.1: Imaging

2.1.1	Bohumír Zařko	First testing of recently developed portable X-ray CT mini system with monolithic semi-insulating GaAs detectors
2.1.2	KyungMin Oh	Application of hall effect sensor for fusion imaging system, PET-MRI.
2.1.3	Frank Nachtrab	Quantitative Material Analysis by Dual-Energy Computed Tomography for Industrial NDT Applications
2.1.4	Jin Hyoung Bai	Signal and noise performance of PIN photodiode and charge sensitive preamplifier for high energy gamma-ray detection
2.1.5	Chae Lee	Feasibility Study on TOF-PET with Fill Factor improved SiPMs
2.1.6	Kwang Hyun Kim	Track Type Digital Radiography System for High Energy X-ray and Gamma-rays
2.1.7	Ji Yeon Hwang	New design of a gamma camera detector with reduced edge effect for breast imaging
2.1.8	Vladimir Tichy	Lobster Eye as Optics for Small Space X-ray Telescope

2.1.9	Jan Jakůbek	Imaging and Tomography of Thin Samples using Reflected X-ray Beam
2.1.10	Jiri Dammer	The Scope of Detector Medipix2 in Micro-radiography of Biological Samples
2.1.11	Susanne Burtzclaff	Evaluation of detector specifications for refracted beam imaging
2.1.12	Daniel Vavrik	Transferability of the Beam Hardening Correction Function
2.1.13	Frantisek Krejci	X-ray phase-contrast imaging using single absorption coded aperture
2.1.14	Ivan Jandejsek	Digital Image Correlation based on X-ray Dynamic Defectoscopy Data

Poster session 2.2: Scintillators, dosimetry

2.2.1	Alla Reznik	Avalanche amorphous selenium photoconductor for radiation imaging applications
2.2.2	Glenn Tyrrell	Measurements on caesium iodide and oxysulfide optical components for digital radiation imaging
2.2.3	Khalid Alzimami	Investigation of the Possibility of Improving Spatial Resolution in SPECT with the Combination of LaBr ₃ :Ce Based Detector and 3D OSEM Reconstruction Algorithms
2.2.4	Angelica Cecilia	Characterization of LSO:Tb scintillator films for high resolution X-ray imaging applications
2.2.5	Bo Kyung Cha	Characterization and imaging performance of nano scintillator screen for high resolution X-ray imaging detectors
2.2.6	Bo Kyung Cha	The sensitivity and spatial resolution dependent on the microstructures of CsI(Tl) scintillation layer for X-ray imaging detectors
2.2.7	Ivan Valastyan	LSO based dual slice helical CT and PET demonstrators
2.2.8	Jong Yul KIM	Fabrication and characterization of pixelated Gd ₂ O ₂ S:Tb scintillator screens for digital x-ray imaging applications
2.2.9	Yoon-suk Kim	Characteristic comparison of α -PbO and β -PbO photoconductor for Digital X-ray Detector
2.2.10	Anatoly Rozenfeld	Three-dimensional dosimetry imaging technique of I-125 plaque for eye cancer treatment
2.2.11	Tung-Hsin Wu	Gel Dosimetry in Computed Tomography: Comparison of Multi-detector Row and Flat-panel Detector Cone-beam System
2.2.12	TzungChi Huang	A Novel Application of Normoxic Polymer Gel dosimeters for near Real-time 3D Dose Verification
2.2.13	Juergen Roth	Time-resolved Dose Measurements with Silicon Diodes in Pulsed X-Ray Fields
2.2.14	Oliver Hupe	Time-resolved dose measurements with ionisation chambers

Poster session 2.3: Cadmium Tellurides

2.3.1	Anna Bulycheva	Spectrometric performance of CZT ring detectors
2.3.2	Volodymyr Babentsov	Dislocation induced electronic levels in semi-insulated CdTe and CdZnTe
2.3.3	Marek Bugár	IR Transmittance of CdTe After a High-Temperature Annealing.
2.3.4	Jan Procházka	Photoluminescence of In-doped high-resistivity CdTe
2.3.5	Bohdan Nahlovskyy	Detailed study of the electrode preparation technique on the cadmium telluride
2.3.6	Laura Marchini	Characterization of CZT crystals grown by the Boron Oxide Encapsulated Vertical Bridgman technique for the preparation of X-ray imaging detectors.
2.3.7	Roman Grill	Electrical behavior of Cd _{1-x} Zn _x Te detectors at high temperature
2.3.8	Dominic Greiffenberg	Characterization of Medipix2 assemblies with CdTe sensor
2.3.9	Jan Franc	Factors limiting lifetime of charge carriers in semiinsulating CdTe under high radiation flux
2.3.10	Jan Franc	Evaluation of the quality of semiinsulating CdTe for radiation detectors by measurement of lux-ampere characteristics
2.3.11	Markus Dambacher	Measurements with Coplanar Grid (Cd,Zn)Te detectors and development of the GMCA (Gamma analysis digital filter and Multi Channel Analyzer)

- 2.3.12 Jan Franc Simulation of electric field profile in semi insulating Au/CdTe/Au structure under flux
- 2.3.13 Herbert Wolf The effect of internal electric fields on the diffusion of highly mobile dopants in $\text{Cd}_{1-x}\text{Zn}_x\text{Te}$