



# 24th International Workshop on Radiation Imaging Detectors

## Monday 26 June 2023

**Poster (incl. coffee): 1 - Ole-Johan Spiseri (14:45 - 16:15)**

**-Conveners: Marco Povoli; Ketil Roeed**

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14:45	[19] P1.1: RNDR-DEPFET detectors for single photon detection	TREBERSPURG, Wolfgang
14:46	[25] P1.2: Prototype design of readout electronics for Transition Radiation Detector in High Energy cosmic-Radiation Detection	ZHU, Jieyu
14:47	[74] P1.3: Firmware implementation of a displaced muon reconstruction algorithm for the Phase-2 Upgrade of the CMS muon system	LEGUINA LOPEZ, Pelayo
14:48	[99] P1.4: MPPC-based gamma camera with pinhole collimator to locate Cs-137 sources at high doses for the Fukushima nuclear power plant	Mr TOMODA, Takahiro
14:49	[116] P1.5: The LHCb VELO Upgrade II: design and development of the readout electronics	SRISKARAN, Viros
14:50	[131] P1.6: The Influence of Parallax Effects in Thick Silicon Sensors in Coherent Diffraction Imaging	Dr KUSTER, Markus
14:51	[141] P1.7: Development and performance evaluation of high-speed gamma imaging system for Korea Customs Service	LEE, Junyoung
14:52	[175] P1.8: A Timepix3 front-end simulator	TLUSTOS, Lukas
14:53	[203] P1.45: Spectroscopic effects of distributed-line phenomena in integrated feedback resistors for charge-sensitive pre-amplifiers	Dr CAPRA, Stefano
14:54	[17] P1-9: Status of GE2/1 for the Phase-2 Upgrade of the CMS Muon System	KIM, Seulgi
14:55	[14] P1.10: A 20 Gbps PAM4 Receiver ASIC in 55 nm for Detector Front-end Readout	CHEN, Qiangjun Prof. GUO, Di
14:56	[8] P1.11: First Results of the Upgraded ALICE Inner Tracking System in LHC Run 3	LIU, Jian
14:57	[6] P1.12: Detector challenges of the strong-field QED experiment LUXE at the European XFEL	WING, Matthew
14:58	[108] P1.13: Improvement of metal artifact and noise characteristics in computed tomography incorporated with CdTe photon-counting detector and Tin filter	LEE, Soohyun
14:59	[98] P1.14: Data Processing Engine for Mixed Radiation Field Characterization with Timepix Detectors	MAREK, Lukas
15:00	[95] P1.15: Triple-energy virtual monochromatic imaging with a photon-counting detector for reducing metal artifacts in half-beam dental CT	LEE, Minjae
15:01	[94] P1.16: The SparkPix-S ASIC for the sparsified readout of 1 MHz Frame-Rate X-ray Cameras at LCLS-II: pixel design and simulation results	Dr MELE, Filippo
15:02	[91] P1.17: Analysis of discharge events in the CMS GE1/1 GEM detectors in presence of LHC beam	CALZAFERRI, Simone
15:04	[76] P1.18: The BEAR chip prototype: Design and experimental results	ANTONY GOMEZ, Ashley

15:05	[72] P1.19: Use of the large area XSPA 500k detector for a time-resolved pump-probe-probe diffraction experiment at Synchrotron SOLEIL	Dr ORSINI, Fabienne
15:07	[69] P1.20: Optimizing and Characterizing the Timepix2 Hybrid Pixel Detector: Enhancing Performance and Precision for Scientific and Industrial Applications	HLADÍK, David
15:08	[67] P1.21: In vivo verification by means of charged fragments detection in carbon ion therapy treatments at CNAO	FRANCIOSINI, Gaia
15:09	[63] P1.22: Design and preliminary test results of the charge sensitive amplifier for Gain-less Charge Readout in High-pressure TPC	YANG, Yichen
15:11	[53] P1.23: Test beam studies of ALICE Forward Calorimeter prototypes	SOLHEIM, Emilie
15:12	[52] P1.24: High-speed Readout System of X-ray CMOS Image Sensor for the Time Domain Astronomy	OGINO, Naoki
15:13	[50] P1.25: Experimental evaluation of signal-to-noise ratio in counting detectors under pile-up conditions	MAGALHAES SUAREZ, Debora
15:14	[44] P1.26: X-ray single photon detection with XPOL-III	SGRO', Carmelo
15:15	[43] P1.27: The ATLAS ITk Strip Detector for the Phase-II LHC Upgrade	HERDE, Hannah Elizabeth
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15:17	[41] P1.29: Assembly and characterization of the first TRISTAN detector modules	SIEGMANN, Daniel
15:18	[33] P1.30: Test measurements of ASIC dedicated for X-ray material discrimination by using on-chip time domain integration and CdTe detector.	ZOLADZ, Miroslaw
15:19	[30] P1.31: Design and characterization of multichannel front-end electronics for detectors at HIRFL and HIAF	WAN, Shucai
15:20	[23] P1.32: System for Fast Readout and Tests of Pixel IC Operating in Single Photon Counting Mode using PCIe-based FPGA	SKRZYPIEC, Pawel
15:21	[22] P1.33: Development of a medium sized photon-counting UFXC-demonstrator at SOLEIL synchrotron	ANDRAE, Marie
15:23	[9] P1.34: Ecological transition for the gas mixtures of the MRPC cosmic ray telescopes of the EEE project	Dr RIPOLI, Cristina
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15:28	[212] P1.38: Spreading of an active region of semi-insulating GaAs detectors after radiation degradation	SAGATOVA, Andrea
15:29	[209] P1.39: Design and optimization of a MPGD-based HCAL for a future experiment at Muon Collider	STAMERRA, Anna
15:30	[204] P1.40: The Nupix-S, a silicon pixel sensor for non-interceptive real-time beam monitoring.	TIAN, Yuan
15:31	[202] P1.41: Prototype Design of the Monolithic Active Pixel Sensor for Electron-ion collider in China	Ms HE, Rui
15:32	[201] P1.42: Design of Nupix-A2, a Monolithic Active Pixel sensor for heavy-ion physics	Ms HUANG, Ju

15:33	[198] P1.43: Timing performance and efficiency of irradiated 3D-trench silicon sensors	GARAU, Michela
15:34	[197] P1.44: Test-beam timing characterisation of monolithic pixel sensors produced in modified CMOS imaging processes	BUSCHMANN, Eric
15:35	[196] P1.46: N3G Experiment: Front-End Electronics and Mechanical Advances	Dr CAPRA, Stefano
15:36	[193] P1.47: Digitizing solutions for high-resolution nuclear spectroscopy	Dr CAPRA, Stefano
15:38	[186] P1.48: A prototype Radiation Energy Measuring Integrated Circuit with an asynchronous current-pulse reset block providing analog-to-digital conversion in 28 nm CMOS	KMON, Piotr
15:39	[179] P1.49: TEMPUS – A Timepix4 readout system for photon science experiments	PENNICARD, David
15:40	[173] P1.50: Experimental analysis of small pixel effect in SI GaAs detectors via alpha particles	KURUCOVÁ, Nikola
15:41	[171] P1.51: Design and TCAD simulation of modified 3D-trench electrode sensors	YE, Jixing
15:42	[159] P1.52: Per pixel calibration of the MÖNCH0.3 hybrid pixel detector	FRÖJDH, Erik
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15:44	[147] P1.54: Imaging Performance of Wide-Field X-ray Transient Localization Experiment onboard Microsatellite KOYOH	SAWANO, Tatsuya
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15:46	[145] P1.56: Experiment of EMPiX prototype detector for MeV ultra-fast electron diffraction and microscopy	WEI, Tong
15:47	[144] P1.57: Regression-based detector gain optimization method to improve position estimation performance of high-speed gamma imaging system	LEE, Goeun
15:48	[137] P1.58: Temperature and vacuum related effects on X-rays hybrid sensor calibration	Dr ALVES JUNIOR, Antonio Augusto
15:49	[135] P1.59: Setups for eliminating static charge of the ATLAS18 strip sensors	FEDERICOVA, Pavla
15:50	[134] P1.60: Hybrid Pixel Array Detector for Time-resolved and Imaging Applications with 56,000 fps Sustainable Frame Rate	NAKAYE, Yasukazu
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15:52	[128] P1.62: Estimation of airborne background spectrum using deep denoising autoencoder	Mr LEE, Sangho
15:53	[127] P1.63: SpacePix Radiation Monitor: Data from the First Year of Operation in Orbit	STANEK, Pavel
15:54	[126] P1.64: Calibration procedures and data correction of ePix100 detectors at the European XFEL	DUARTE, Nuno
15:55	[125] P1.65: Comparison of photon-beam scans on 3D-positioning CZT with a defect-enabled numerical simulation	Mr DELCOURT, Alexandre
15:56	[124] P1.66: Track Lab: an extensible software package for fast acquisition (not only) of pixel detector data, online analysis and automation	Mr MANEK, Petr
15:58	[118] P1.67: UniCorn – a universal readout system for ColorPix-2 ASIC	JIRSA, Jakub
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16:01	[3] P1.70: R&D of Fast Timing Multi Anode MCP-PMT for Radiation Imaging	QIAN, Sen
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16:03	[21] P1.72: 50.3ps time resolution and an 11-channel time measuring chip for Topmetal detectors	FANG, Ni
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16:05	[12] P1.74: Ultra-Fast Energy Resolved Imager for 'Pseudo' Laue diffraction experiments at synchrotron facilities	ORSINI, Fabienne
16:06	[10] P1.75: Dark-field Radiography for Detection of Infectious Lung Diseases: COVID-19	Prof. PFEIFFER, Daniela
16:07	[11] P1.76: Spectral Dual-Energy and Photon Counting Detector Computed Tomography: Applications for Medical Imaging in Stroke Patients	Prof. PFEIFFER, Daniela
16:08	[149] P1.77: First simulations of Open-IMAGING PET	MOLINER, Laura
16:09	[16] P1.78: Development and validation of the KAERI-NDP system	KIM, Jinhwan

# Wednesday 28 June 2023

## Poster (incl. coffee) - Ole-Johan Spiseri (16:40 - 18:10)

-Conveners: Ketil Roed; Marco Povoli

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16:43	[156] P2.4: RIPTIDE, a proton-recoil track imaging detector for fast neutrons	MUSUMARRA, Agatino CONSOLE CAMPRINI, Patrizio
16:44	[138] P2.5: Thickness-dependent characteristics of silicon-based Medipix3RX detectors at Sirius beamlines	BACK CAMPANELLI, Raul
16:45	[109] P2.6: Detection of gastrointestinal foreign bodies in pets using single grid-based dark-field X-ray imaging	Mr LEE, Jonghyeok
16:46	[105] P2.7: Development and Evaluation of Relative QA Dosimeter for Electron Beam Based on CsPbBr <sub>3</sub>	Mr YANG, Seung-woo
16:47	[87] P2.8: Effect of the shift-variant focal spot blur on the image quality in radiography	LEE, Hunwoo
16:48	[60] P2.9: Deep learning-based soft-tissue decomposition in chest radiography using fast fuzzy C-means clustering with computed tomography dataset	Mr JEON, DUHEE
16:49	[40] P2.10: Feasibility of Using 3D CZT Drift Strip Detectors for Small Compton Camera Space Missions	Ms OWE, Selina Ringsborg Howalt
16:50	[32] P2.11: A Study on the Feasibility of High-Energy X-ray CT for Inspection of AM Products	KIM, hunhee
16:51	[4] P2.12: The R&D of The Glass Scintillator for Nuclear Detection	QIAN, Sen
16:52	[192] P2.13: All-electrical control of micromechanical bolometers for THz detection	Mr GREGORAT, Leonardo Mr CAUTERO, Marco
16:53	[232] P2.14: Timepix3 multi-layer detector setup for the measurement of anomalies in angular correlation of electrons and positrons internally produced in excited <sup>8</sup> Be and <sup>4</sup> He	Dr BROULIM, Pavel
16:54	[229] P2.15: The impact of individual cosmic rays on a DEPFET spectroscopic X-ray imager for space telescopes	Dr MÜLLER-SEIDLITZ, Johannes
16:55	[228] P2.16: Development of Red/Infra-red Emitting Scintillators for an Alpha Dust Monitor	KUROSAWA, Shunsuke
16:56	[227] P2.17: Enhanced Readout System for Timepix3 Detectors in Large-Scale Scientific Facilities	BURIAN, Petr
16:57	[224] P2.18: Investigation of fast neutron interactions in semiconductor sensors with Timepix3	MIHAI, Radu-Emanuel
16:58	[220] P2.19: Angular correlation measurement and magnetic field response of <sup>169</sup> Yb for double photon coincidence imaging	Mr FENG, Boyu
16:59	[219] P2.20: Characterization of a Megapixel JUNGFRAU Detector with Novel GaAs:Cr Sensor for Photon Science Applications	PATON, Kirsty

17:01	[217] P2.21: Fast Neutron Imaging with a p-Terphenyl Pixel Scintillation Array	KUROSAWA, Shunsuke
17:02	[214] P2.22: Alpha-ray Imaging with Alkali Copper Halide Scintillator	Mr URANO, Yusuke
17:03	[211] P2.23: SpacePix3 - response characterization and total ionising dose testing for space applications	MARCISOVSKA, Maria
17:04	[210] P2.24: Preliminary results from the Submarine Gamma Imager	Dr NTOUSKOS, Valsamis
17:05	[206] P2.25: On the possibility of Spectral Imaging for Cell Location and Cell Tracking	Prof. MENK, Ralf Hendrik
17:06	[200] P2.26: Helical sample-stepping for faster speckle-based multi-modal tomography with the Unified Modulated Pattern Analysis (UMPA) model	SAVATOVIĆ, Sara
17:07	[199] P2.27: A simulation study of instant-retrigger technology for pulse pileup correction in clinical photon-counting tomography	VRBASKI, Stevan
17:08	[191] P2.28: Distinguishing Neutron and Gamma Pulses of EJ-200 Scintillation Detector using Artificial Intelligence	Dr HOANG, Sy Minh Tuan
17:09	[190] P2.29: Radiation Portal monitor performances at low energies	Mrs LEY, Celia
17:10	[189] P2.30: Exploring coded aperture imaging with the MiniPIX EDU for high-resolution radiation belt electron pitch angle observations	REID, Riley
17:11	[185] P2.31: Chromatic detector-based spectral $\mu$ CT of iodine-perfused osteochondral samples	LONGO, Renata
17:12	[182] P2.32: X-ray computed tomography of the periodically moving object	VAVRIK, Daniel
17:13	[176] P2.33: DEVELOPMENT OF A SMALL- SIZE SCINTILLATOR-BASED NEUTRON GAMMA RAY SPECTROMETER FOR TERRESTRIAL AND SPACE APPLICATIONS	ÖLÇEK, Deniz
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17:15	[170] P2.35: Preclinical PET scanner with timing and 3D positioning capabilities based on semi-monolithic crystals	BENLLOCH, Jose M.
17:17	[162] P2.36: Detection of Secondary Neutrons in Proton and Gamma Radiotherapy Fields with the Pixel Detector Timepix3	GRANJA, Carlos
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17:19	[158] P2.38: Development of near-infrared-sensitive single photon avalanche diode prototypes for a quantum ghost imaging system	SONG, Gyohyeok
17:20	[155] P2.39: Enhancing Design, Calibration, and Characterization of Detectors at the European XFEL with the Pulsed X-ray Test System (PulXar)	LOMIDZE, David
17:21	[154] P2.40: Spectral response of the iLGAD sensors to soft X-rays	ZHANG, Jiaguo
17:22	[153] P2.41: Performance testing of gas-tight portable RPC for muography application	Mr KUMAR, Vishal
17:23	[150] P2.42: Field Test for Performance Evaluation of a New Spent-Fuel Verification System in Heavy Water Reactor	Dr KWAK, Sung Woo
17:24	[143] P2.43: Application and image characterization of the deconvolution algorithm in an indirect X-ray imaging detector with scintillators	Dr CHA, Bo Kyung Mr LEE, Hynwoo
17:25	[142] P2.44: Relative dosimeter study of therapeutic radiation beam energy based on photochromic switching film and semiconductor oxide composite for evaluating the feasibility of radiation detection capability	HEO, YEJI Dr YANG, Seung Woo
17:26	[130] P2.45: SiPM characterization for the SBC dark matter search	HAWLEY HERRERA, Hector

17:27	[121] P2.46: Neutron Radiation induced Effects in 4H-SiC PiN Diodes	GSPONER, Andreas
17:28	[115] P2.47: Patient positioning based on a helium-beam radiograph ( $\alpha$ Rad)	ZHEVACHEVSKA, Daria
17:29	[102] P2.48: Characterization of interpad "no-gain" region in the novel, trenched LGADs, from the TI-LGAD RD50 batch production using a fs-laser based TCT-SPA and TPA -TCT at the ELI Beamlines, ELI ERIC	Prof. LASTOVICKA-MEDIN, Gordana
17:30	[100] P2.49: First measurements and results of monolithic active pixel test structures produced in a 65 nm CMOS process	BUCKLAND, Matthew Daniel
17:31	[96] P2.50: Enhancing accuracy of effective atomic number mapping with deep learning-based conversion: A promising alternative to dual-energy CT	LEE, Minjae
17:32	[93] P2.51: Eliminating grid artifacts of crisscrossed antiscatter grids in CBCT for improving its image performance	Mr JEON, DUHEE
17:33	[92] P2.52: Advances in the TCAD modelling of non-irradiated and irradiated Low-Gain Avalanche Diode sensors	CROCI, Tommaso
17:34	[89] P2.53: Scintillators and image characterization of a flat-panel X-ray detector for single-exposure dual energy imaging	Dr CHA, Bo Kyung Prof. SEO, Chang-Woo Mr LEE, Minjae
17:35	[88] P2.54: Enhancing X-ray Detection Sensitivity through Hybrid Active Layers of PCDTBT and CdSe Core/CdTe Crown 2D Nanoplatelets	SON, JAIWON
17:38	[82] P2.55: Development of prototype backscatter X-ray security scanner for luggage inspection	AN, Geunyoung
17:39	[81] P2.56: Automatic inline defects inspection of lithium-ion battery cells using parallel-triple detection filtering (PTDF) algorithm	Mr KIM, Woosung
17:40	[80] P2.57: Effective noise reduction using a modified image pyramid incorporated with guided filtering for animal X-ray imaging	Mr KIM, Woosung
17:41	[77] P2.58: Study of bulk damage of high dose gamma irradiated p-type silicon diodes with different resistivities	ZATOCILOVA, Iveta
17:43	[68] P2.59: Simulation of Energy-Dispersive X-ray Spectroscopy Systems	WITHAAR, Thijs
17:44	[65] P2.60: Time-efficient scanning schemes for x-ray $\mu$ -CT with a 2D structured beam	Dr LIOLIOU, G.
17:45	[64] P2.61: Feasibility Study of One-Dimensional Imaging with an Optical Fiber for Radiation Dose-Rate Monitoring System in the Decommissioning Process	MATSUKURA, Daisuke
17:46	[62] P2.62: Ex/in-vivo imaging of small animals using MPPC-based photon-counting CT	SAGISAKA, Mayu
17:47	[59] P2.63: A novel reconstruction method of angle-limited backprojection (ALBP) for low-dose dental panoramic imaging using a long-rectangular detector	YANG, Hyesun
17:48	[58] P2.64: Design and simulation studies of the micro-pattern gaseous beam monitor of the CSR external-target experiment	WANG, Zhen
17:49	[49] P2.65: Charge reset shaping multiplexing for SiPMs using deep learning architecture	Kim, Semin
17:50	[48] P2.66: First application of sparse-view image reconstruction with total-variation minimization for SiPM-based photon-counting CT	SATO, Daichi
17:51	[47] P2.67: Stationary CT baggage scanner with a dual-layer detector and pi-angle sparsity for enhancing the detection of threats	SHIM, Jiyong
17:52	[45] P2.68: Improvement of phoswich detector-based $\beta$ + $\gamma$ -ray discrimination algorithm with deep learning	Dr Kim, Chanhoo

17:53	[38] P2.69: Signal and noise analysis of a metal oxide transistor-based flat-panel detector	OH, Seokwon
17:54	[37] P2.70: Analysis of absorption signal and noise in thin phosphor detectors for high-energy transmission radiography	KIM, Ho Kyung YOO, Seungjun
17:55	[36] P2.71: Detective quantum efficiency of double-layered detectors for dual-energy x-ray imaging	SHIN, Hubeom
17:56	[31] P2.72: Eye Lens Dosimetry with Dosepix	Mr BEISSER, Florian
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17:59	[26] P2.75: Introduction of CRYTUR's GAGG+ single crystal scintillator for imaging applications	ZAPADLIK, Ondrej
18:00	[20] P2.76: A comparative study for pile-up correction based on deep neural networks	Mr KIM, Wonku