

15th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD19)

Monday 14 October 2019

IPRD19: Opening (09:00 - 10:30)

-Conveners: Chiara Nociforo

time	[id] title	presenter
09:00	[2] Welcome address	NAVARRIA, Francesco
09:10	[3] Optimisation of a silicon microstrip telescope for UA9 crystal channeling studies	HALL, Geoff
09:30	[4] Detectors for antideuteron search in cosmic rays: current status and new ideas	DIMICCOLI, Francesco
09:50	[5] Tracking detector for high performance cosmic muon imaging	VARGA, Dezso
10:10	[6] 50 ps timing with SiGe Bi-CMOS monolithic pixel sensors	IACOBUCCI, Giuseppe

IPRD19: Muography (11:00 - 12:45)

-Conveners: Francesco Navarra

time	[id] title	presenter
11:00	[7] A portable muon telescope based on small and gas-tight Resistive Plate Chambers	BASNET, Samip
11:15	[8] Monitoring the long-term stability of civil buildings through the MRPC telescopes of the EEE Project	PINTO, Chiara
11:30	[9] Muon radiography applied to volcanoes imaging: the MURAVES experiment at Mt. Vesuvius	D'ERRICO, Mariaelena
11:45	[10] Development of Sealed MRPC with extremely low gas flow for muon tomography	CHEN, Xialong
12:05	[11] Imaging by muons and their induced secondary particles – a novel technique	GALGOCZI, Gabor
12:25	[12] Multidisciplinary applications of muon radiography using the MIMA detector	BONECHI, Lorenzo

IPRD19: Medical physics (14:15 - 16:00)

-Conveners: Romualdo Santoro

time	[id] title	presenter
14:15	[13] Positron Emission Tomography: alive and kicking after more than 65 years on stage	DEL GUERRA, alberto
14:40	[14] First characterization of a new Silicon Carbide detector for dosimetric applications	PETRINGA, Giada
15:00	[15] Evaluation and Simulation of Breast Cancer Imaging Devices	UZUN OZSAHIN, Dilber
15:20	[16] Two asymmetric detectors define a novel MBI system for the breast cancer imaging	POMA, Gaetano Elio

15:40	[17] Intercalibration and comparative tests of 3D diamond and diamond on iridium detectors for medical dosimetry	Dr KANXHERI, Keida
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IPRD19: Tracking (16:30 - 18:50)**-Conveners: Geoff Hall**

time	[id] title	presenter
16:30	[18] Explore the lifetime frontier with MATHUSLA	ALPIGIANI, Cristiano
16:50	[19] On MAPS-On-Diamond sensors and their potential as innovative devices	SERVOLI, Leonello
17:10	[20] Pixelated Resistive Bulk Micromegas for tracking systems in High Rate environment	ALVIGGI, Mariagrazia
17:30	[22] The CMS Outer Tracker Upgrade for the High Luminosity LHC upgrade	LA ROSA, Alessandro
17:45	[25] The Upgrade of LHCb VELO	KOPCIEWICZ, Pawel
18:05	[26] Development of a 300 m fully-depleted monolithic active pixel sensor in standard 110 nm CMOS technology	GIAMPAOLO, Raffaele Aaron
18:20	[27] HVMUX, High Voltage Multiplexing biasing for the ATLAS Strip Tracker Upgrade	VILLANI, Giulio
18:35	[28] The CT-PPS tracking system: performance in LHC-Run2 and prospects for LHC-Run3	OBERTINO, Maria Margherita

Tuesday 15 October 2019

IPRD19: Timing & Tracking (09:00 - 10:30)

-Conveners: Marco Maggiora

time	[id] title	presenter
09:00	[29] In-deep studies of time performance of the PICOSEC-Micromegas detector concept	SOHL, Lukas
09:18	[32] Precision Timing with LYSO:Ce Crystals & SiPM Sensors in the CMS MTD Barrel Timing Layer	MALBERTI, Martina
09:36	[36] Precision Timing with Low Gain Avalanche Detectors in the CMS MTD Endcap Timing Layer	COSTA, Marco
09:54	[37] The Micromegas chambers for the ATLAS New Small Wheel upgrade	DEDOVICH, Dmitri
10:12	[38] Upgrade of the Resistive Plate Chamber detector for the high-background environments	PIZZIMENTO, Luca

IPRD19: Calorimetry (11:00 - 12:45)

-Conveners: Martina Malberti

time	[id] title	presenter
11:00	[39] Upgrade of the CMS electromagnetic calorimeter for precision timing and energy measurement at the High Luminosity phase of the LHC	ARGIRO, Stefano
11:20	[40] Overview of latest developments in the CMS HGCal upgrade project	ALYARI, Maral
11:40	[41] Study of Future 3D Calorimetry Based on LYSO or LaBrCe Crystals for High Energy Precision Physics	SCHWENDIMANN, Patrick
11:55	[42] A shashlyk Electromagnetic calorimeter system for NICA-MPD	LI, Yulei
12:15	[43] Electromagnetic Data Libraries: recent evolutions and new perspectives	PIA, Maria Grazia
12:30	[44] First results on the performance of the PADME electromagnetic calorimeter	PIPERNO, Gabriele

IPRD19: Muons (14:15 - 16:00)

-Conveners: Michele Bianco

time	[id] title	presenter
14:15	[45] Commissioning and testing of real-size triple GEM prototypes for CBM-MUCH in the mCBM experiment at SIS18 facility of GSI	KUMAR, Ajit
14:30	[46] Background in the CMS muon detectors: simulation and measure with pp collision data	FASANELLA, Daniele
14:50	[47] Upgrade to the CMS Cathode-Strip-Muon System for the HL-LHC	MANGANELLI, Nick
15:10	[48] Study of the Effects of Radiation at the CERN Gamma Irradiation Facility on the CMS Drift Tubes Muon Detector for the HL-LHC	ALVAREZ GONZALEZ, Barbara
15:25	[49] Advance studies performed on triple-GEM detector built using commercially manufactured foils	GOLA, Mohit
15:40	[50] Aging Studies of Triple-GEM detectors for future upgrades of the CMS endcap muon system at the HL-LHC	FIORINA, Davide

IPRD19: Dark matter & $\nu\beta\beta$ (16:30 - 18:50)**-Conveners: Andrea Perrotta**

time	[id] title	presenter
16:30	[51] Developments of radiopure ZnWO ₄ anisotropic scintillators and improvements of their response at keV region	CERULLI, Riccardo
16:45	[52] The cryogenic electronics for Dark Side SiPM readout	CONSIGLIO, Lucia
17:00	[53] The BDX detector prototype for Dark Matter searches in a Beam Dump eXperiment @ JLAB	BONDI, Mariangela
17:15	[54] KM3NeT electronics acquisition: the new version of the Central Logic Board and its related Power Board	VERSARI, Federico
17:30	[55] Search for Light Dark Matter with NEWS-G	NIKOLOPOULOS, Konstantinos
17:50	[56] Dark Matter in CCDs at Modane (DAMIC-M): a silicon detector apparatus searching for low-energy physics processes	LEE, Steven Juhung
18:10	[57] PandaX-III: a high pressure Xenon detector for neutrinoless double beta decay search	WANG, Shaobo
18:30	[58] CUPID: a new bolometric detector for rare events experiment	TOMEI, Claudia

IPRD19: Poster session - Wine & Cheese (19:15 - 21:25)

time	[id] title	presenter
19:15	[30] Final performances of the NA62 RICH detector	LENTI, Massimo
19:20	[31] Beam-tests of CMS High Granularity Calorimeter prototypes at CERN	BONANOMI, Matteo
19:25	[33] The operational experience, challenges and performance of the ATLAS Semiconductor Tracker during LHC Run-2	SOHNS, Fabian
19:30	[34] Design and Performance Evaluation of an Adjustable-FOV PET Scanner	OZSAHIN, Ilker
19:35	[72] Discharge mitigation strategies for CMS Triple-GEM detectors	IVONE, Francesco
19:40	[71] Performance of the charged particle detectors of the PADME experiment	OLIVA, Federica
19:45	[112] Use of the Peak-Detector for gain calibration of the read-out ASIC CITIROC	IMPIOMBATO, Domenico
19:50	[35] Optical Transparent Ceramic Scintillators for High Performance Brain PET	OZSAHIN, Ilker
19:55	[59] Evolution of the design of Ultra Fast Silicon to cope with high irradiation fluences and fine segmentation	FERRERO, Marco
20:00	[60] The NA62 GigaTrack: a low mass high intensity beam 4D tracker with 65 ps time resolution on tracks	PINNA ANGIONI, Gian Luca
20:05	[61] Tracking with timing: the TIMESPOT project	MULARGIA, Roberto
20:10	[62] Vertex and Tracking Detector R&D for CLIC	WILLIAMS, Morag Jean
20:15	[63] The laser diode calibration system of the Icarus T600 detector at FNAL	BONESINI, Maurizio
20:20	[64] A UV laser test bench for gaseous detectors	PELLECCHIA, Antonello
20:25	[109] The performance of the diamond active target of the PADME experiment	OCEANO, Isabella
20:30	[110] Kilovoltage rotational breast radiotherapy with the BriXS source	SARNO, Antonio
20:35	[65] The DUNE Dual-Phase liquid argon TPC	CHARDONNET, Etienne
20:40	[66] TCAD Silicon device simulation for high level of radiation damage	PAROLIA, Shubhi

20:45	[111] Imaging performance dependence on crystal absorption properties: the CRY018 and CRY019 comparison	FALCONI, Rita
20:50	[67] The Upgrade II of LHCb VELO	KOPCIEWICZ, Pawel
20:55	[68] Innovative amplifiers for muon spectroscopy experiments at RAL	ROSSELLA, Massimo
21:00	[69] Characterisation of a prototype light detection system with a radioactive ^{241}Am alpha source in Liquid Argon at the CERN test facility	RASELLI, Gian Luca
21:05	[70] Development of a Simulation Framework for Spherical Proportional Counter	WARD, Robert James
21:10	[118] Comparison between photon detection efficiency and TPB coating stability of PMTs immersed in liquid argon	VARGAS, Danaisis

Wednesday 16 October 2019

IPRD19: Radiation hardness (09:00 - 10:40)

-Conveners: **Giullio villani**

time	[id] title	presenter
09:00	[21] Modeling Radiation Damage to Pixel Sensors in the ATLAS Detector	LARI, Tommaso
09:15	[23] Performances of highly irradiated 3D and planar pixel sensors interconnected to RD53A readout chip	CECCARELLI, Rudy
09:30	[24] Evaluation of the counting efficiency of a pcCVD diamond detector irradiated by 62 MeV/u carbon beams	SCHIRRU, Fabio
09:50	[73] Radiation induced degradation in a 150nm CMOS SPADs device	CAMPAJOLA, marcello
10:05	[74] Neutron Damage of ATLAS Endcap alignment CCDS	PAZOS, Camila
10:20	[75] Cerium-doped Fused-Silica Fibers for Particle Physics Detectors	DE GUIO, Federico

IPRD19: Neutrinos & CLFV (11:10 - 13:00)

-Conveners: **Claudia Tomei**

time	[id] title	presenter
11:10	[76] ArgonCube: scalable modular approach for large LArTPCs	KRESLO, Igor
11:30	[77] The ICARUS T600 detector as far detector within SBN program	DIWAN, Milind Vaman
11:50	[78] A comparison between scintillation light analog and digital trigger for large volume Liquid Argon Time Projection Chambers	RASELLI, Gian Luca
12:05	[79] LiquidO: Novel Opaque Neutrino Detection Technology	DUSINI, Stefano
12:25	[80] Decay tunnel instrumentation for the ENUBET neutrino beam	MASCAGNA, Valerio
12:40	[81] The Detectors of the Mu2e Experiment	GIOVANNELLA, Simona

IPRD19: n, X and IR detectors (14:30 - 16:00)

-Conveners: **Massimo Lenti**

time	[id] title	presenter
14:30	[82] Qualification of a compact neutron detector based on SiPM	SANTORO, Romualdo
14:50	[83] Development of gamma insensitive Silicon Carbide diagnostics to qualify intense thermal neutron fields	SANS PLANELL, Oriol
15:10	[84] LaBr ₃ :Ce crystals with SiPM array readout and temperature control for the FAMU experiment at RAL	BONESINI, Maurizio
15:25	[85] Use of Silicon Photomultiplier to directly detect X-ray	FIANDRINI, Emanuele
15:45	[113] Laboratory tests for MIR light detection and transport with specialty optical fibers	BENOCCI, Roberto

IPRD19: Sponsors and Astroparticle (16:30 - 18:40)

-Conveners: **Pier Simone Marrocchesi**

time	[id] title	presenter
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16:30	[86] New CAEN R&D for power supplies and data acquisition systems	Dr GIORDANO, Ferdinando
16:50	[87] Reliability studies for the Switching Core Board of the White Rabbit Switch: FIDES and Highly Accelerated test	MUSICO, Paolo
17:10	[88] New ideas on possible detectors for Dark Matter	GUARISE, Marco
17:25	[114] JUNO detector design and construction	LOMBARDI, Paolo
17:45	[115] The Gas Pixel Detector for the IXPE mission	MANFREDA, Alberto
18:00	[89] HAWC's-Eye a novel Imaging Atmospheric Telescope	ALFARO MOLINA, Jose Ruben
18:20	[90] Beam tests of a prototype of the Radiation Hard Electron Monitor to be flown in the JUICE mission	PINTO, Marco

Thursday 17 October 2019

IPRD19: Timing and tracking (09:00 - 10:30)

-Conveners: **Maria Margherita Obertino**

time	[id] title	presenter
09:00	[91] Digitized Waveform Signal Processing for Fast Timing	Dr WHITE, Sebastian
09:18	[92] The CMS Precision Proton Spectrometer timing system: performance in Run 2, future upgrades and sensor radiation hardness studies	BOSSINI, Edoardo
09:36	[93] Hydrogenated amorphous silicon detectors for particle detection, beam flux monitoring and dosimetry in high-dose radiation environment	MENICHELLI, Mauro
09:54	[94] Low energy nuclei detection with ALPIDE detector	RICCI, Ester
10:12	[95] A multichannel front-end readout ASIC for high flux and high time resolution applications with UFSD	OLAVE, Elias Jonhatan

IPRD19: Medical physics & selected posters (11:00 - 12:45)

-Conveners: **Marco Paganoni**

time	[id] title	presenter
11:00	[116] A novel approach for lateral dose profile reconstruction with a scintillator-based system	
11:15	[96] Dosimetric approaches for flash radiotherapy beams	CIRRONE, Pablo
11:35	[97] First Prototype of a Solid-State Imaging Probe for Radio-Guided Surgery	SULAJ, Arta
11:55	[98] Characterization of monolithic GAGG:Ce for gamma imaging in Nuclear Medicine	BETTIOL, Marco
12:15	[99] Performance of the charged particle detectors of the PADME experiment	OLIVA, Federica
12:27	[100] Beam-tests of CMS High Granularity Calorimeter prototypes at CERN	BONANOMI, Matteo

IPRD19: Muons, GEM, RPC (14:15 - 15:45)

-Conveners: **Dezso Varga**

time	[id] title	presenter
14:15	[101] Upgrade of the CMS Muon Spectrometer in the forward region with the GEM technology	BIANCO, Michele
14:35	[102] Study of high time resolution MRPC with the waveform digitizer system	YU, Yancheng
14:55	[117] Find eco-gas mixtures for a coupled readout MRPC	
15:10	[103] Performance studies of RPC detectors with new environmentally friendly gas mixtures in presence of LHC-like radiation background	RIGOLETTI, Gianluca
15:30	[104] R&D studies on tetrafluoropropene-based gas mixtures with low environmental impact for Resistive Plate Chambers	BIANCHI, Antonio

IPRD19: Closing (16:15 - 17:25)

-Conveners: **Walter Scandale**

time	[id] title	presenter
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16:15	[105] Pure machine-learning analysis of the response of a plastic scintillator to charged particles	FOLLEGA, Francesco Maria
16:35	[106] The ATLAS Hardware Track Trigger design towards first prototypes	MARTYNIUK, Alex Christopher
16:55	[107] NA62 data acquisition upgrade	BORETTO, Marco
17:15	[108] concluding remarks	PERROTTA, Andrea