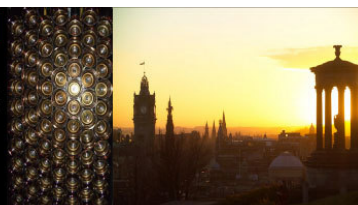


IOP Institute of Physics

ONLINE EVENT

Joint APP, HEPP and NP Conference

12-15 April, 2021



Poster Session

IOP2021 Poster Room 2 - HEP



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Room 1 – APP

No	Poster Title	Author
1	Boulby Underground Screening (BUGS) Facility	Paul Scovell
2	Surface alpha assay with an UltraLo-1800 at the Boulby Underground Laboratory	Anh Nguyen
3	Sensitivities of Atomic and Molecular Targets to Sub-GeV Dark Matter	Louis Hamaide
4	Refined Ultra-Light Dark Matter Searches with Compact Atom Interferometers	Leonardo Badurina
5	Analysis of Neutron Activation Background in the LUX-ZEPLIN Experiment	Tom Rushton
6	Exploring the sensitivity of dark matter direct detection experiments to non-standard interactions	Ellen Sandford
7	Searching for Continuous and Long-Duration Gravitational Waves with Ground-Based Interferometry	Ian Hollows
8	Development of Micromegas Charge Readout Technology for Use in a Low Pressure TimeProjection Chamber for Dark Matter Detection	Alasdair McLean
9	Calibrating IceCube track reconstructions by using DM-Ice coincidence events	Rogan Clark
10	Lowering the energy threshold of the COSINE-100 experiment to 0.5 keV for increased sensitivity dark matter searches	Robert Neal
11	Silicon Photomultipliers in the DarkSide 20k experiment	Zoe Balmforth
12	Pulsars and the interstellar medium	Vedant Subhash
13	Lighting a path out of gravitational darkness – a variable mass and light speed	Peter Lamb
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Room 2 – HEP

No	Poster Title	Author
16	The ATLAS Electron trigger performance in Run 2 and its correction in simulation	Daniela Köck
17	Search for the exclusive decays of the Higgs boson to a Z boson and a light resonance with the ATLAS Experiment	Mihaela Marinescu
18	Data-driven measurement of track reconstruction efficiency in dense environments with the ATLAS detector	Júlia Silva
19	Electron Identification at the ATLAS Detector	Joshua Puddefoot
20	Tracking and vertexing at ATLAS	Helen Maguire
21	Designing a Discriminant for Electron and Photon Triggers for the High-luminosity Upgrade of the ATLAS Detector at the LHC	Harry Cooke
22	Searching for long-lived heavy neutral leptons in hadronic decays with the CMS detector using a novel deep neural network-based displaced jet tagger	Julia-Suzana Dancu
23	Development of Mixed Field Neutron and Gamma Detectors for the Oil and Gas Well Logging Industry	James Greer
24	Development of a Cherenkov Diffraction Radiation-based Beam Position Monitor for operation at the AWAKE experiment at CERN	Collette Pakuza
25	Long-range discovery of a nuclear reactor with a kilotonne-scale water-based antineutrino detector	Robert Foster
26	New technologies and stretch goals for a kiloton scale neutrino detector	Stephen Wilson
27	The detection system of the MAGIS-100 atom interferometry experiment	Leonie Hawkins
28	Searching for Heavy Neutrinos in the ATLAS playground	Neofytos Themistokleous
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Room 3 – HEP

No	Poster Title	Author
31	Search for exclusive hadronic W boson decays with the ATLAS experiment	Júlia Silva
32	Searching for Beyond the Standard Model Physics using Tau Leptons	Mitchell Norfolk
33	Measurements of the Higgs boson inclusive, differential and production cross sections in the 4l decay channel at $\sqrt{s} = 13$ TeV with the ATLAS detector	Panagiotis Bellos
34	Feature Recognition in Water Cherenkov Detectors	Dan Martin
35	The Pandora multi-algorithm approach to pattern recognition for the DUNE far detector	Ryan Cross
36	Calibration of DUNE FD using cosmic-ray muons	Praveen Kumar
37	A study analyses the impacts of identifying ionisation deposition in the SBND detector for two main noise simulations.	Ala Zglam
38	Adding the 4pi solid angle sample into the T2K near detector fit	Yongheng Xu
39	MaCh3 Oscillation Analysis at T2K	Henry Israel
40	Electron lifetime measurement in SBND using crossing cosmic muon tracks	Vu Chi Lan Nguyen
41	Improvements in near detector fitting techniques for the proposed new Hyper-Kamiokande near detector, IWCD	Charlie Naseby
42	Using track direction to identify Neutrinos in LArTPC detectors	Alexandra Moor
43	Time-dependent CP-violation at LHCb with $B \rightarrow DCP \pi\pi$ decays	Andy Morris
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Room 4 – HEP

No	Poster Title	Author
46	The CERN Water Cherenkov Test Experiment (WCTE) and R&D of Future Water Cherenkov Technologies	Lauren Anthony
47	Fast neutron spectroscopy: The nitrogen-filled Spherical Proportional counter	Ioannis Manthos
48	High Luminosity LHC local optics correction using Machine Learning Techniques	Hector Garcia Morales
49	Calibration of the Hyper-Kamiokande inner detector	Pablo Fernandez
50	Optical calibration design for the Hyper-Kamiokande Outer Detector	Celeste Pidcott
51	Screening for Radioimpurities in Gd ₂ (SO ₄) ₃ ·8H ₂ O for Super Kamiokande	Matthew Thiesse
52	Precision measurements of photosensor components for the Hyper-Kamiokande Outer Detector	Soniya Samani
53	A novel DAQ platform for big detector arrays in particle physics experiments	Yuri Venturini
54	Group energy with no fixed dimensions	NARAYAN PRASAD Agarwal
55	New explanation for beta decay beyond the Standard Model	Gh Saleh
56	Application of Modified Planck's Equation and Modified Theory of Special Relativity in Measuring the Mass of a Thought	Sushrut Sood
57	A close link relationship between oscillating frequency and mass	Vedant Subhash
58	Exploring Symmetries with Neutrinos and Hyperons	Christopher Thorpe
59	Heavy light inflaton and dark matter production	Abigail Keats
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Room 5 – NP

No	Poster Title	Author
61	Spectroscopic Quadrupole Moments of ^{107}Ag Using Coulomb-Excitation with Miniball	Annie Dolan
62	Evidence for the decay of a microsecond seniority isomer in ^{155}Hf	Betool Alayed
63	First particle tracks with the Outer Barrel of the new ALICE Inner Tracking System	James Iddon
64	Imaging ability of the Compton camera imaging system (GRI+) for thyroid phantom filled with $^{99\text{m}}\text{Tc}$	Hamed Alshammari
65	Generation and Validation of a Theoretical Signal Database for the Segmented Inverted-coaxial Germanium (SIGMA) Detector	Ahmed Alharbi
66	Nuclear packages Simulation, evaluation, analysis, and improvement using compounds of Lead target and high proton beam energy	Abdessamad Didi
67	Ion Trapping Developments at Edinburgh University, Towards Precise Mass Measurements of Light Exotic Nuclei at TITAN	Callum Brown
68	Study of Nuclear reactions at astrophysically relevant energies using the CRYRING Array for Reaction Measurements (CARME)	Jordan Marsh
69	Measuring Neutron Polarization using the CLAS detector at Jefferson Lab	William Booth
70	Validating heterogeneity-based radiomics metrics in PET using noise-equivalent count rate, Monte Carlo simulation & 3D-printed patient-specific tumour phantoms	George Needham
71	Investigating the Strangeness of Neutron Stars	Shazeab Ayub
72	Many Proton Knock-Out From Nuclear Targets Using Real Photon Beams	Rhidian Williams
73	WallPEPT: Radioactive particle tracking in tall industrial machinery	Dawid M. Hampel
74	Time-like Compton Scattering at the Electron-Ion Collider	Kayleigh Gates
75	The Search for Exotic Mesons in the Three Pion Reaction Channel with CLAS12	Robert Wishart

Room 6 – NP

No	Poster Title	Author
76	Measurement of particle and fluid mechanics with positron emitting tracers	Thomas Leadbeater
77	Simulated Response for the DESPEC Gamma Array at FAIR-0.	Muhammad Majid Rauf Chishti
78	The Multi-Grid detector: results obtained at the V20 beamline at HZB	Alexander Backis
79	Future Upgrade of the ALICE Inner Tracking System Based on Ultra-thin, Wafer-scale Bent Monolithic Active Pixel Sensors	Matthew Buckland
80	In-beam spectroscopy of ^{94}Ag	Xesus Pereira-Lopez
81	Systematic measurements of proton-decay energies in the $A=146-167$ range	Shiyamjith Nathaniel
82	Collinear Laser Spectroscopy of Chromium Isotopes	Ross Mathieson
83	Yrast State Lifetime Measurements in $^{94,96}\text{Pd}$ Using the DESPEC@GSI Experimental Setup	Shaheen Jazrawi
84	A portable neutron spectrometer: first measurements and applications	Tanya Hutton
85	Plombox - development of a low-cost CMOS device for environmental monitoring	Adriana Dias
86	University of Birmingham - Tool for Isotope Production (UoB-TIP)	Ross Allen
87	Quark Jet Enhancement with jet charge in pp and Pb-Pb with ALICE	Jonathan Colburn
88	Measurement of fission product gases using a high-resolution beta-gamma coincidence detection system	Matthew Goodwin
89	Investigation of 3N forces from atomic mass data	Stamatina Alexandropoulou
90	$d^*(2380)$ hexaquark: from Photoproduction to Neutron Stars	Mikhail Bashkanov
91	Undergraduate experiments with ^{44}Ti and half-life measurement of the ^{44}Sc second excited state	Stuart Pirrie
92	CLAS12 Time of Flight Efficiency Determination	Rhidian Williams
93	Search for dibaryon with CLAS12 collaboration	Matthew Nicol