

# IoP Joint APP and HEPP Annual Conference

7-9 April 2025

Cavendish Laboratory, Cambridge, UK



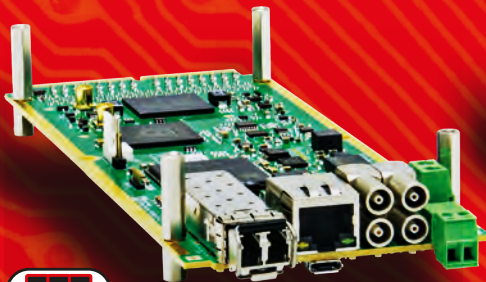
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# FERS 5200 FAMILY

## A5204/DT5204\*

64 Ch

Radiator and CERN  
picoTDC unit for SiPM



\*Coming Soon

- High energy resolution and excellent ToA/ToT performances
- Better than 55 ps FWHM on single photo-electron
- Embedded bias generator
- Spectroscopy Mode (PHA)
- Photon Counting Mode

## A5203/DT5203

64/128 Ch

picoTDC unit



- 3.125 ps LSB, 52  $\mu$ s / 210  $\mu$ s dynamic range
  - $\Delta T \sim 7$  ps RMS typ. with constant input pulse
  - $\Delta T \sim 20$  ps RMS typ. with variable amplitude input pulses and walk correction
- Time of Arrival (leading/trailing edge) and Time over Threshold measurements

## A5202/DT5202

64 Ch

Citiroc unit for SiPM



- Spectroscopy Mode (PHA) up to 100 Kcps
- Photon Counting Mode up to 20 Mcps per channel
- Timing Mode with 500 ps LSB timestamping

## Common Features



Janus open source software for board configuration and DAQ control



- Wide range of input adapters and cables
- Scalable, easy-synch: manage/synchronize up to 128 cards (8192/16384 channels) with one DT5215 Concentrator Board using optical TDlink



BOXED VERSION AVAILABLE



Easy-scalable system





# Beyond imagination

Pushing the boundaries of science,  
from imagination into reality

**Hamamatsu Photonics** collaborates on groundbreaking scientific experiments worldwide and has contributed to Nobel Prize winning achievements. Discover our range of **scientific CMOS cameras, PMTs, MPPC (SiPMs), Si Strip detectors**, and more, meticulously designed to meet diverse needs for peak performance. Leveraging our experience, we take pride in our ability to create customized solutions, tailored to your unique requirements. Driven by our passion for pushing the boundaries of human knowledge, our collaborative approach with customers enables us to turn the seemingly impossible into possible.

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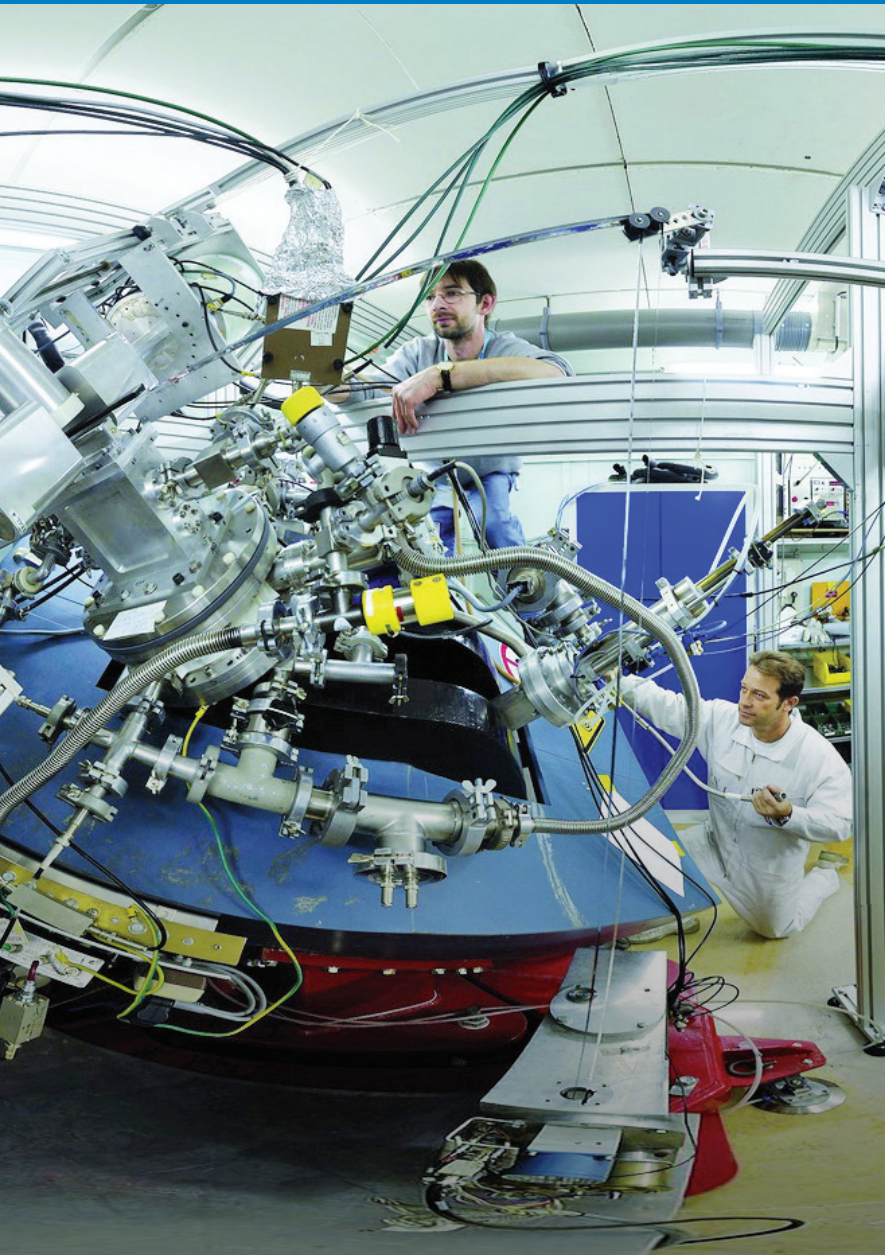
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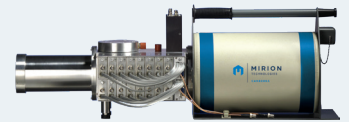


**MIRION**  
TECHNOLOGIES

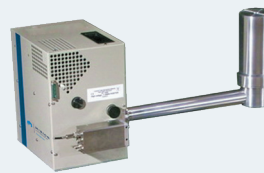
# Meet the Challenges of Nuclear Physics with Advanced Detection Technology



**Segmented Planar Detectors**  
(HPGe & Si)



**Discrete Element Array  
Detectors**



**Specialty Ultra Low Background  
Detectors (S-ULB)**



**Double-sided Strip Detectors**  
(HPGe or Si(Li))



**Clover Detectors**

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Advancing Radiation Safety.

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MKTG-3742 - 03/2025

# IoP Joint APP and HEPP Annual Conference



Monday 7 April 2025

10:30 - 11:00	<b>Registration and Refreshments</b>				
11:00 - 11:30	<b>Welcome Address</b> (Room: Ray Dolby Auditorium)				
11:30 - 12:30	<b>Plenary Talk</b> <b>Mark Thomson:</b> Particle physics today and tomorrow (Room: Ray Dolby Auditorium)				
12:30 - 12:35	<b>Sponsor Talk by Hamamatsu</b> (Room: Ray Dolby Auditorium)				
12:35 - 13:30	<b>Lunch</b>				
13:30 - 15:00	<b>Plenary Talks</b> <b>Chris Pollard:</b> Electroweak-scale physics at the LHC and beyond (13:00 - 14:00) <b>Tevong You:</b> Collider phenomenology, EFTs and future prospects (14:00 - 14:30) <b>Patricia Schmidt:</b> Gravitational waves updates (14:30 - 15:00) (Room: Ray Dolby Auditorium)				
15:00 - 15:30	<b>AGM</b> (Room: Ray Dolby Auditorium)				
15:30 - 16:00	<b>Afternoon Break</b>				
16:00 - 18:00	<b>Collider Physics - QCD 2</b> (Lecture Theatre) (16:00-17:00)	<b>Beyond the Standard Model 2</b> (Seminar West)	<b>Detectors and Instrumentation 1</b> (Seminar East)	<b>Collider Physics - Flavour 1</b> (Cluster Room)	<b>Collider Physics - Electroweak (EW) and Higgs 1</b> (Ray Dolby Auditorium)
	<b>Cosmic Messengers</b> (Lecture Theatre) (17:00-18:00)				
18:00 - 20:00	<b>Poster Session, Drinks Reception and Exhibition</b>				

# IoP Joint APP and HEPP Annual Conference



Tuesday 8 April 2025

09:00 - 10:30	<b>Plenary Talks</b> <b>Mariana Carrillo Gonzalez:</b> Formal theory developments (09:00 – 09:30) <b>Ashlea Amanda Kemp:</b> QTFP physics impact (09:30 - 10:00) <b>David Marsh:</b> Axion experiment and theory (10:00 - 10:30) (Room: Ray Dolby Auditorium)				
10:30 - 11:00	<b>Morning Break</b>				
11:00 - 12:00	<b>Plenary Talks</b> <b>Sally Shaw:</b> WIMPs and wellbeing: setting limits without exceeding your own (11:00 - 11:30) <b>Sheila Kanani:</b> EDIA plenary (11:30 - 12:00) (Room: Ray Dolby Auditorium)				
12:00 – 12:05	<b>Sponsor Talk by CAEN S.p.A.</b> (Room: Ray Dolby Auditorium)				
12:05 – 12:35	<b>AGM</b>				
12:35 – 13:30	<b>Lunch</b>				
13:30 - 15:00	<b>Analysis and Reconstruction Methods: 1</b> (Cluster Room) (13:30 – 14:30) <b>Accelerator Innovations</b> (Cluster Room) (14:30 – 15:00)	<b>Terrestrial Dark Matter Searches: 1</b> (Ray Dolby Auditorium)	<b>Detectors and Instrumentation 2</b> (Seminar East)	<b>Neutrino Physics: 1</b> (Lecture Theatre)	<b>Beyond the Standard Model: 2</b> (Seminar West)
15:00 - 15:30	<b>Afternoon Break</b>				
15:30 – 16:00	<b>Plenary Talk</b> EPPSU ECR Session (Room: Ray Dolby Auditorium)				
16:00 – 18:00	<b>STFC Town Hall Meeting</b> (Room: Ray Dolby Auditorium)				
19:00 - 22:00	<b>Conference Dinner</b> (Churchill College Dining Hall)				

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Wednesday 9 April 2025

09:00 - 10:30	<b>Plenary Talks</b> <b>Sean Paling:</b> Latest news from Boulby (09:00 – 09:30) <b>Daive Vadacchino:</b> Lattice QCD and BSM update (09:30 - 10:00) <b>Anne-Marie Magnan:</b> Long-lived particles at accelerators (10:00 - 10:30) (Room: Ray Dolby Auditorium)				
10:30 - 11:00	<b>Morning Break</b>				
11:00 - 12:30	<b>Analysis and Reconstruction Methods: 2</b> (Cluster Room)	<b>Terrestrial Dark Matter Searches: 2</b> (Ray Dolby Auditorium)	<b>Detectors and Instrumentation : 3</b> (Seminar East)	<b>Neutrino Physics: 2</b> (Lecture Theatre)	<b>Collider Physics - Flavour: 2</b> (Seminar West)
12:30 - 13:30	<b>Lunch</b>				
13:30 - 15:00	<b>Plenary Talks</b> <b>Andreas Korn:</b> LHC upgrades: machine, detectors, and sustainability (13:30 - 14:00) <b>Patrick James Dunne:</b> Neutrino experimental updates (14:00 - 14:30) <b>William Barter:</b> Quark and lepton flavour physics (14:30 - 15:00) (Room: Ray Dolby Auditorium)				
15:00 - 15:30	<b>Afternoon Break</b>				
15:30 - 16:30	<b>Plenary Talks</b> <b>Ellis Owen:</b> Multimessenger Update (15:30 - 16:00) <b>Adam Brown:</b> Dark matter direct searches (16:00 - 16:30) (Room: Ray Dolby Auditorium)				
16:30 - 17:00	<b>Closing Address</b> (Room: Ray Dolby Auditorium)				