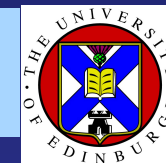


Edinburgh PPE Group



- **Group overview**

- Staff and PhD students
- Recent successes
- Infrastructure
- Support

- **PPE Activities**

- ATLAS
- LHCb
- GridPP
- Hyper-K
- Dark matter
- Detector R&D
- Outreach

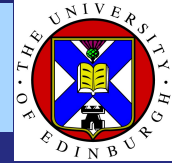
Franz Muheim
6 June 2016
PPE Group meeting

More information available
Group web pages

<http://www.ph.ed.ac.uk/particle-physics-experiment/>



PPE Group Staff



- **Academics**

- Phil Clark
- Pete Clarke
- Christos Leonidopoulos
- Victoria Martin
- Franz Muheim
(Head of Group)
- Matt Needham
- Steve Playfer
- Alex Murphy ***

- **Advanced Fellows**

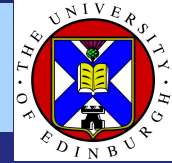
- Greig Cowan (STFC ERF)
- Corrinne Mills (DG SF)
- Paolo Beltrame (DG SF) ***

- **Honorary & visiting academics**

- Fabiola Gianotti
- Ken Peach
- Alan Walker

*** also member of Nuclear Physics group

PPE Group Staff & Students



- **14 Senior Scientists / Post docs / Technical Staff**

- Stephan Eisenhardt, Andy Washbrook
- Giorgos Sidiropoulos (engineer),
- Jon Webster (technician)
- Laurence Carson, Flavia Dias, Yanyan Gao, Ben Wynne,
- Silvia Gambetta, Daniel Craik, Marcus Ebert, ***
- Lilia Drakopoulou, Liza Mijovic, Bojan Masic (technician) ***

- **13 PhD Students**

- Francisca Garay, Haofei Luo,
- Tim Bristow, Dianne Ferguson, Paul Glaysher, Sebastian Olivares,
- Adam Morris, Xanthe Hoad, Iwan Smith, Maria Francesca Marzioni
- Konstantin Gizdov, Andres Søgaard and Alan Taylor ***
- *** new

Staff Leaving and Joining



- Leaving: Congratulations to



Wahid Bhimji → Big Data Architect at LBL, March 2015



Robert Harrington → Silicon Detector Lab
Technical Coordinator at Brown University,
May 2016

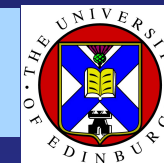


Corrinne Mills → Professor at University of Illinois, Chicago
and Fermilab, from August 2016



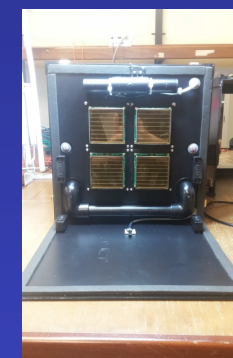
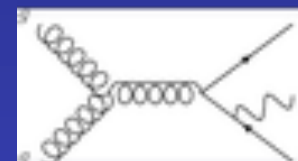
Yanyan Gao → Lecturer at Liverpool University,
from Sept 2016

Staff Leaving and Joining



- **Joining: Welcome to**

- 4 new RAs and 1 technician in the last year
- Silvia Gambetta - LHCb, Marcus Ebert - GridPP, Liza Mijovic - ATLAS, Dan Craik - LHCb, Lilia Drakopoulou - Hyper-K, Bojan Masic - tech



- 3 new PhD students joined PPE in Sept 2015
- Konstantin Gizdov, Andreas Søgaard and Alan Taylor



Recent Student Successes



- **PhD Students - submitted, viva-ed, (graduated in 2015)**

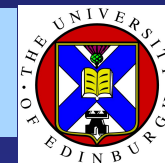
- Manuel Proissl → EY Zurich
- Ben Smart → STEP award → RA at Annecy
- Haofei Luo → Chinese Army (not yet graduated)



- **MPhys and MSc Students - graduates of 2015 and 2016**

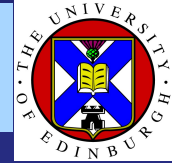
- Rebecca Carrahar (LHCb photon detectors)
- Alice Morris (LHCb) → PhD
- Alan Taylor (CLIC) → PhD
- Emmy Gabriel (LHCb), Stephen Murphy (LHCb),
Andrew Thornburry (CLIC)

Undergraduate & MSc Teaching



- **Undergraduate MPhys and MSc students**
 - projects available on ATLAS and LHCb data analysis and detector development
 - project available on Hyper-K, dark matter and Linear Collider
- **Summer students**
 - School offers competition for bursaries
 - 2015 - Rebecca Carrahar, Rebecca Lodin, Henry Day-Hall, David ?
 - 2016 - Sebastian Jaskiewicz, Neil McBlane, Salome Aka, Nicolas Angelides, ...
 - Lukas Arnold was a visiting "student" for 3 months on ATLAS
- **Undergraduate Teaching**
 - Muon lifetime and mass measurements
 - Testing new detectors - LAPPD
 - Analysis and computational projects

PPE Group - Infrastructure



- **Offices**

- 5301, 5302 - PhD students
- 54nn corridor, 4311 - Academics/Fellows/RAs

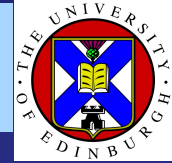
- **Conference room**

- 5202 - Audiovisual equipment for Vidyo, Skype
- Book via Google calendar - Edinburgh PPE
- Coffee and Tea facility

- **Laboratories**

- 5201 - HPD Photon Detector Test Facility
- 5203, 5203b, 5204 - Advanced Detector Development Centre
- 5207 - Teaching Laboratory - Muon Lifetimes
- 5207 - **MaPMT Photon Detector Test Facility**

PPE Group - Support



- **Admin**

- General - Tracy Brown, Gill Maddy and team
email - admin-general@ph.ed.ac.uk
- PhD students - Liz Paterson liz@staffmail.ed.ac.uk

- **Computing Support**

- Andy Washbrook (group support)
- Sean McGeever and team (School CST), see Sean's presentation

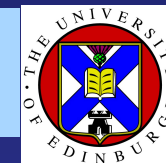
- **Finance**

- Joanna Richards and team (Finance)
email accounts - accounts@ph.ed.ac.uk

- **Procurement**

- ask us if you need something
Andy Washbrook for computers,
Jon Webster, Stephan Eisenhardt, FM for kit

PPE Group - Support



- **Travel**

- Most of us book our own travel, but you can ask General Admin - **Tracy Brown, Gill Maddy** and team admin-general@ph.ed.ac.uk
- For PhD students, ask **Liz Paterson** liz@staffmail.ed.ac.uk
- For travel reimbursed by STFC, you need to fill in **UK PP travel notice** at <https://pprc.qmul.ac.uk/~lloyd/travel/travel.php?page=login>
- Info on ATLAS and LHCb Wiki will migrate to group Wiki

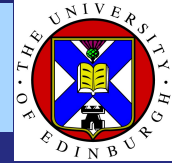
- **Travel insurance**

- You need to have **travel insurance** - provided by university, but each trip has to be arranged by sending email to admin team
- If you travel a lot you might consider taking out **travel insurance**

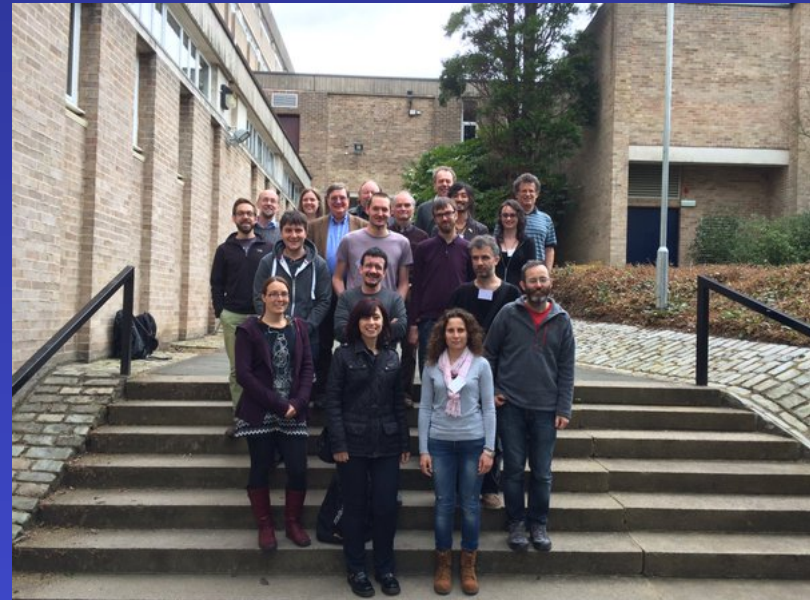
- **Travel claims**

- **eExpenses** - take receipts to accounts accounts@ph.ed.ac.uk
- Please make sure you use correct cost centre/job code combinations

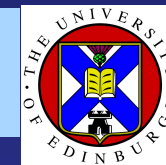
PPE Group - Support



- Meetings, workshops, conferences
 - We regularly organise meetings, support by School admin team
Lyndsey Ballantyne - email l.ballantyne@ed.ac.uk
- Recent meetings
 - Hyper-K UK meeting
at JCMB, Edinburgh
16 & 17 May 2016



PPE Group - Support



- Recent meetings

- ATLAS TDAQ workshop
at Pollock Halls
30 Nov-3 Dec 2015



- Upcoming meeting

- Heavy Flavour 2016 - Quo Vadis?
11-15 July 2016
at Ardbeg distillery on Islay

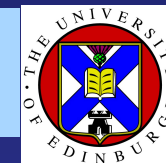


PPE Group - Roles



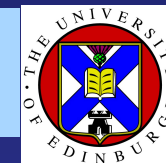
- **Research groups and CERN specifics**
 - Registration and renewals via project leader:
Victoria → Phil for **ATLAS** and Franz for **LHCb**
 - Need Home Institute Declaration - forms
 - Pete is **GridPP** group leader
 - Matt is **Hyper-K** group leader
 - Alex is **LUX/LZ** group leader
- **Seminars organiser**
 - Greig Cowan
 - please send him names of possible speakers
- **PhD recruitment**
 - Christos Leonidopoulos
 - Have recruited 5, possibly 6 new PhD students in sept 2016

PPE Activities



- **ATLAS**
 - Victoria has been appointed as Higgs prospects convenor
 - Christos will be appointed as trigger menu coordinator
 - ATLAS results, see talk by Corrinne
- **Dark Matter**
 - PRL paper on Improved Dark matter Limits with LUX 2013 data
 - Axion searches, see talk by Maria Francesca
- **Hyper-K**
 - PPE group (Matt, Greig, Steve, Paolo) have joined Hyper-K
RA (Lilia) has recently started
- **LHCb**
 - has published over 300 papers!
 - LHCb upgrade is funded - RICH Photon Detector Test Stations
 - See talk by Silvia

PPE Activities



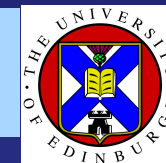
- **A look back at 2015**

- Consolidated Grant (CG) is the major grant for PPE group, pays for RA salaries, kit, travel, ...
- Old CG is £2.6M from Oct 2012 to Sept 2015/16
- New CG was submitted in early 2015, outcome at end of 2015
- New CG award is £3.0M from Oct 2015/16 to Sept 2019
- This is a huge success - Thanks again to all who contributed!

- **Current focus - take 1**

- ATLAS and LHCb are taking again
- Expect lots of data to be analysed
- Will hopefully find some bumps and asymmetries

PPE Activities



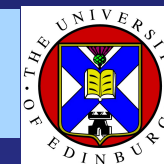
- **Current focus - take 2**

- **LHCb upgrade** - Edinburgh has set up a test centre for RICH photon detectors and will work on upgrade triggers
- **Hyper-K** project has started, plan is to develop neutrino long baseline activity
- **Dark Matter** LUX is taking data and LZ is under construction
- **ATLAS upgrade** prepare major bid for phase 2 - construction of inner tracker

- **Future Plans**

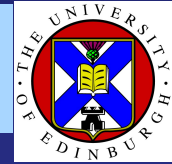
- Electron-Positron Collider (ILC, CLIC)
Ask **Victoria** if you are interested
- Future Circular Collider
Ask **Christos** if you are interested

PPE Activities



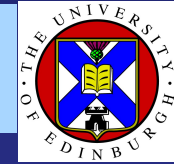
- **GridPP**
 - Data Storage
 - Ask **Pete, Marcus** and **Andy Washbrook** if you are interested
- **Detector Development**
 - ATLAS and LHCb Upgrade, Hyper-K
 - Excellent facilities in **Advanced Detector Development Centre (ADDC)**
 - Have started working with new types of photon detectors - LAPPDs
 - Ask **Stephan et al.** if you are interested
- **Higgs Centre of Innovation (HCI)**
 - HCI Building on Blackford Hill will be ready in a year
 - HCI includes CERN Business Incubator → Opportunities for people wishing to start their own company

PPE Activities



- **MSc Teaching**
 - Currently School has MSc in Mathematical and Theoretical Physics
 - Works well and brings in money (from overseas students)
 - Plan to set up **MSc in experimental particle and nuclear physics**
- **Group web pages**
 - **Andy, Christos** and **Matt** are migrating web pages
- **Outreach – take 1**
 - Peter Higgs web page <http://www.ph.ed.ac.uk/higgs> maintained by **Victoria Martin** and **Alan Walker**
 - **Particle Physics for Scottish Schools (PP4SS)**
please join **Alan** when he is asking for volunteers, it is fun!
 - Successful **Teacher's weekend** 28 and 29 Nov 2015

PPE Activities

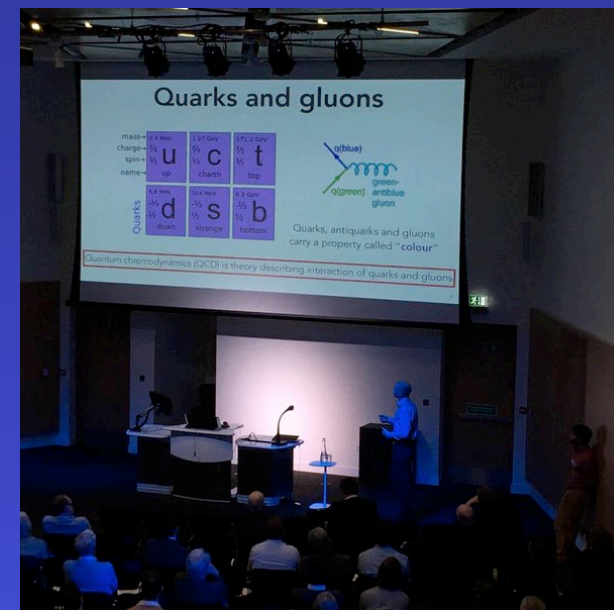


- Outreach - take 2

- Antimatter matters - Royal Society exhibition, 4 -10 July 2016
<https://royalsociety.org/events/summer-science-exhibition/exhibits/antimatter-matters/>

- Twitter

Greig and Victoria tweeting at the SUPA annual meeting



Final Comments



- **Regular PPE group fixtures**
 - PPE academics meeting 1st Monday each month
 - All group PPE meeting twice per year
 - Should we have these more often?
 - Next meeting will be Monday 19 December, 3 - 5 pm followed by Christmas dinner
 - Group members are usually going to lunch at 12 noon in School Coffee room 4318
 - Bring you own food or buy it on Campus or Magnet Cafe
 - Sometimes we go to Swann building 7th floor or student union
 - Should we have regular group coffee?
 - facilities for coffee and tea in 5202



Ailsa was a PhD student with
a STEP award at Edinburgh
from 2009 to 2013

South Oxfordshire
Crematorium



Dr. Ailsa Sparkes
28th February 1986 – 23rd February 2016

Saturday 12th March 2016 at 11am

Backup slides



PPE Group Staff



- In total ~40 staff and PhD students
- 7 Academics (CF = Chancellor's Fellow)



Phil Clark



Peter Clarke



Christos
Leonidopoulos CF



Victoria Martin



Franz Muheim

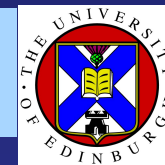


Matt Needham CF



Steve Playfer

PPE Group Staff



- Advanced Fellows



Greig Cowan
STFC ERF



Corrinne Mills
DG SF

- 3 Honorary Fellow/Professors



Alan Walker

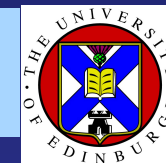


Ken Peach



Fabiola Gianotti
Director General
of CERN

Institute for Particle and Nuclear Physics



- **School of Physics and Astronomy**
 - Head of School - **Arthur Trew**
 - School is made from four institutes: IPNP, ICMCS, IfA and EPCC
- **Institute for Particle and Nuclear Physics (IPNP)**
 - Head of Institute - **Luigi del Debbio** (since Aug 2014)
 - 3 Research groups - PPE, Particle Physics Theory (PPT) and Nuclear Physics (NP)
- **Joint IPNP Activities**
 - Postgraduate PPE & PPT recruitment - **Christos, Jenni Smillie**
 - Higgsteria - **Victoria, Alan Walker** (p.w.higgs@ed.ac.uk, ...),
 - Higgs MOOC - **Christos, Luigi del Debbio**
 - Colloquium and seminar
 - Particle astrophysics - **Alex Murphy** is part of PPE Consolidated Grant