

Two postdoctoral positions on ATLAS in the Cambridge HEP group



24th October 2023

Dr Sarah Williams (University of Cambridge)
On behalf of the Cambridge High Energy Physics (HEP) group

Overview of the positions

Both positions close on 1 November!

1. Research associate in particle physics (KA38778)

<https://www.jobs.cam.ac.uk/job/43257/>

Postdoctoral position on ATLAS with ~50% of time on ITk assembly and commissioning process (currently module assembly) with remaining time on physics analysis and performance work.

Funded on UK consolidated grant until June 2025.

2. Research associate in particle physics (KA38770)

<https://www.jobs.cam.ac.uk/job/43248/>

Postdoctoral position on ATLAS with ~50% of time on ATLAS exploitation (focus on precision SM measurements using run 2/ run 3 data).

Funded from 1 January 2024 for 3 years in first instance.

The Cavendish Laboratory at the University of Cambridge



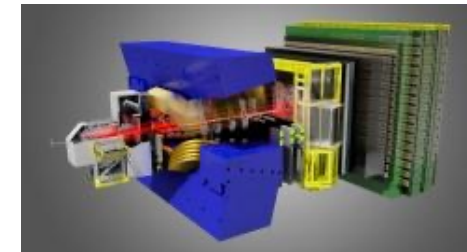
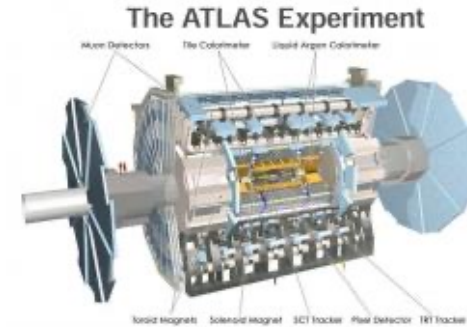
- Department of physics currently comprises ~ 60 academics, 200 postdoctoral researchers and 300 graduate students (as of summer 2022)
- Will be moving into new home in the Ray Dolby Centre in 2024.
- In addition to holding posts at the Cavendish, the holders of both positions could choose to seek an affiliation with one of the 31 colleges in the University of Cambridge (for details see <https://www.cam.ac.uk/about-the-university/how-the-university-and-colleges-work?ucam-ref=global-header>)

Cambridge HEP group

(To be skipped during flash talk- included for reference)

<https://www.hep.phy.cam.ac.uk>

- The HEP group is involved in the ATLAS and LHCb experiments at the LHC and their experimental upgrades for the HL-LHC, the MicroBooNe neutrino oscillation experiment and future long-baseline neutrino experiment DUNE at Fermilab, and future linear and circular collider activities.
- Strong involvement in interdisciplinary research through Quantum Technologies for Fundamental Science- involved in MAGIS-100 experiment at Fermilab and future AION project in the UK.
- The group has close links to colleagues in HEP theory group and in the Department of Applied Mathematics and Theoretical Physics (DAMPT), some of which are facilitated through the Phenomenology working group.

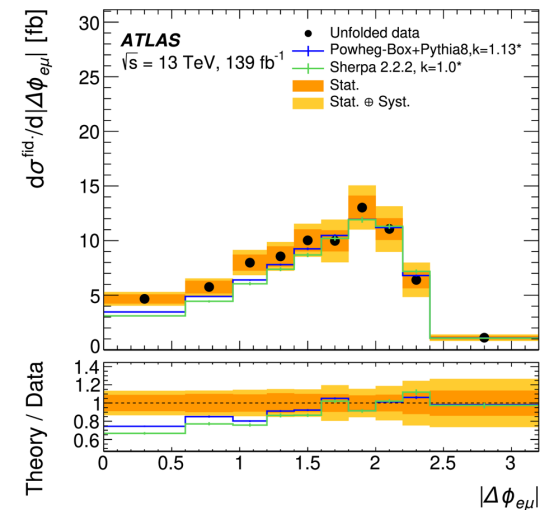
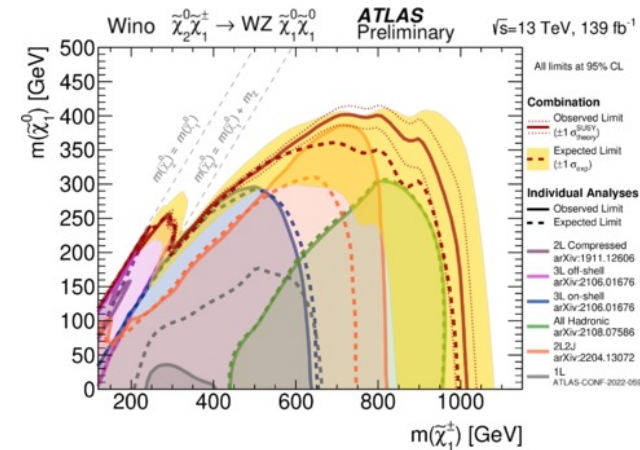


ATLAS activities in Cambridge

- 5 PIs: Prof. Tina Potter (head of HEP group), Dr Christopher Lester (ATLAS team leader), Prof. Oleg Brandt (ATLAS + ANUBIS), Dr Sarah Williams, Dr Bart Hommels plus researchers on independent fellowships, postdoctoral researchers and students

(<https://www.hep.phy.cam.ac.uk/ATLAS>)

- Strong record and continuing programme in BSM searches across SUSY/exotics/HDBS (Prof. Potter, Dr Lester, Prof. Brandt, Dr Williams) and precision SM measurements (Dr Williams).
- Key contributions to ATLAS upgrades through phase I L1Calo (contact: Dr Lester) and phase II ITk (contact: Dr Hommels).



Instrumentation activities

KA38778: ITk Assembly and commissioning (currently module assembly and QC)

- Point of contact: Dr Bart Hommels.
- Contributions to module assemble and (later) ITk commissioning.



KA38770: R+D on radiation hardness of silicon devices for future detectors

- Point of contact: Dr Sarah Williams.
- Detector R+D for future colliders following the 2021 ECFA detector R+D roadmap (<https://indico.cern.ch/event/957057/overview>)
- Proposed contributions to UK activities DRD3 (Solid State Detectors) with a focus on developing radiation-hard silicon devices for future experiments

Q+A/ FAQs

- **Could I be based at CERN?** Both posts are nominally based in Cambridge with the possibility of long-term attachment or short-term visits to CERN, where appropriate.
- **When do the posts start?** KA38778 has funds to start as soon as possible, KA38770 has an anticipated start of 1 January but to be negotiated with the candidate.
- **Do I need to already hold a PhD?** You should have, or be about to obtain, a PhD. Persons who have submitted but not yet received the award of their PhD may only be appointed to as Research Assistant (i.e. Grade 5). This can be amended to Research Associate once the PhD has been awarded.
- **Do I need prior experience with instrumentation?**

... plus I am happy to answer any additional questions you might all have either now or via email (please cc- tinapotter@gmail.com)