UNIVERSITY OF BIRMINGHAM

# ATLAS Experiment Upgrade Technician

## University of Birmingham - School of Physics and Astronomy

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| **Location:** | Birmingham | **Placed On:** | 16th August 2022 |
| **Salary:** | £25,506 to £27,399 with potential progression once in post to £31,718 (Band 500) | **Closes:** | 1st September 2022 |
| | | **Job Ref:** | 80237 |
| **Hours:** | Full Time | | |
| **Contract Type:** | Fixed-Term/Contract | | |

Apply

**Position Details**

College of Engineering and Physical Sciences, School of Physics and Astronomy

Location: University of Birmingham, Edgbaston, Birmingham UK

Full Time / Fixed Term contract up to 2 years

**Overview**

The college of Engineering and Physical Sciences requires a Technician for the ATLAS Experiment Upgrade at the Birmingham, Edgbaston campus. The technician will provide technical support to all aspects of the particle physics group's research, primarily in constructing, testing and installing apparatus for experiments on the Large Hadron Collider (LHC) at the CERN laboratory near Geneva.

**Main Duties:**

To be part of a the technical team that will provide high level technical support for all aspects of the particle physics group's experiments and outreach activities, particularly for the ATLAS (LHC) Experiment upgrade.

• This will involve using judgement to break down tasks and devise solutions in the preparation of equipment and following procedures to diagnose faults. Regular contact will be required with senior academic and research staff in the Birmingham group and possibly also at other academic institutes.
• Occasional consultations with external suppliers to devise methods for construction tasks and to diagnose and solve faults with complex equipment.
• The role may also include responsibility for ensuring that health and safety procedures are followed and making risk assessments.

The main scientific activities associated with this post are as follows:

• ATLAS tracker upgrade: Assisting in the assembly (gluing and ultrasonic wire bonding) of hybrid silicon detectors and associated electronics for an upgrade of a major detector component of the ATLAS experiment at the CERN Large Hadron Collider.

• Detector Testing and Quality Control: providing technical support for the full suite of testing and readout including thermal cycling as part of ATLAS detector quality control.
• Testing sensors in a particle beam: With physicist colleagues, preparing and mounting detector components to be tested in the Birmingham medical physics cyclotron. Maintaining the basic infrastructure for these tests and ensuring efficient operation.

**Person Specification**

Essential criteria

- HNC or higher qualification in a technical subject, involving mechanical, electrical or electronic techniques.
- Very sound grounding in a wide range of technical skills and the strong motivation to develop these further.
- Ability to foresee technical problems in finely specified equipment and to suggest solutions.
- Basic general computing knowledge.
- Willingness to travel for short periods within the UK and abroad to attend meetings and assist in hardware installation.

Desirable criteria

- General skills in basic mechanical and electrical construction, electrical assembly, electronics design and construction, use of test equipment and provision of design and test documentation.
- Experience in meeting precise specifications to high standards.
- Experience with CAD or PCB layout work.
- Interest in high energy physics research.
- Outgoing nature, able to interact well with a wide range of colleagues from professors to undergraduates, also including external contacts in academia and industry.

Informal enquires to David Charlton - d.g.charlton@bham.ac.uk

#### Advert information

**Type / Role:**

Academic or Research
Professional / Managerial / Support Services

**Subject Area(s):**

Engineering & Technology
Mechanical Engineering
Electrical & Electronic Engineering
Property & Maintenance

**Location(s):**

Midlands of England