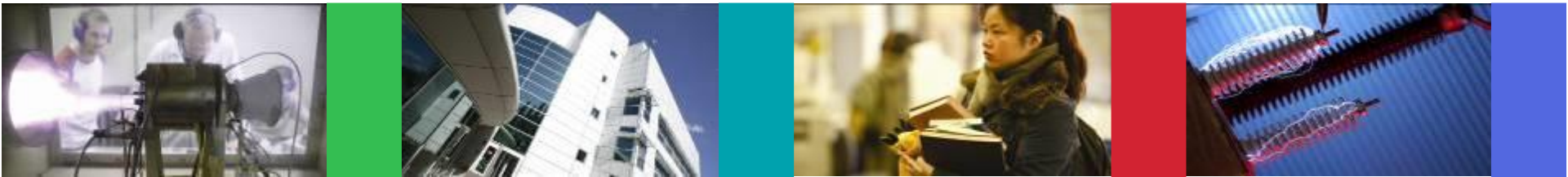




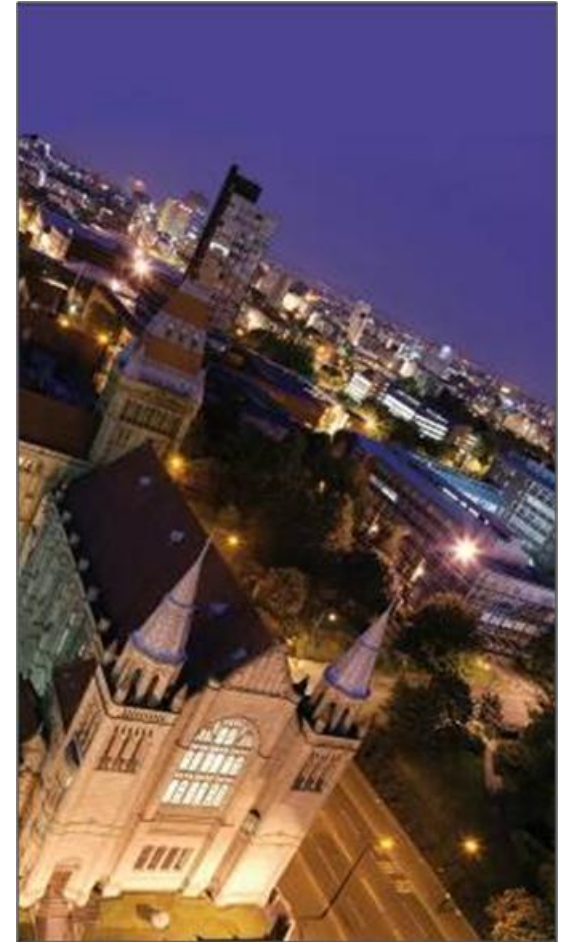
## Expression of interest to host BOOST 2020 from the University of Manchester

[jeff.forshaw@manchester.ac.uk](mailto:jeff.forshaw@manchester.ac.uk)



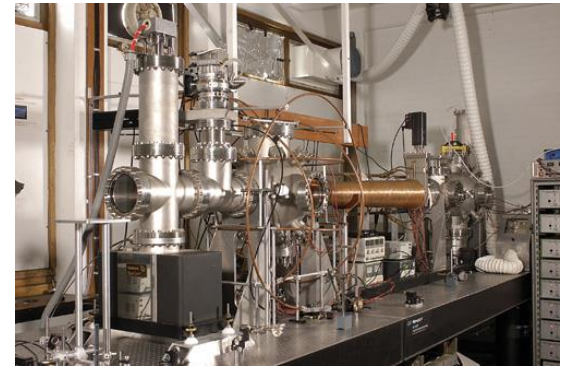
# Manchester's Academic Structure

- Faculty of Engineering and Physical Sciences
- Faculty of Medical and Human Sciences
- Faculty of Life Sciences
- Faculty of Humanities



**Nearly 40,000 students in total of which ~ 8,500 International students**

# Physics & Astronomy



- One of the largest Physics and Astronomy Schools in UK
- Discovered Graphene
- Many 'firsts' in astronomy (double pulsars etc)
- The University where Rutherford split the atom

Income ~ £30M pa

Research spend each year ~ £18M





The original Schuster laboratory was in the University main building.

New building in 1967



Photon Science Institute (left)  
Alan Turing Building (Right)



Jodrell Bank Centre for Astrophysics  
3<sup>rd</sup> Floor of Turing

Staff housed in Schuster Building +  
some in PSI + 3<sup>rd</sup> floor Turing +  
Jodrell Bank Observatory ( 30 miles away)

## Particle Physics Group

More than 100 members

- ATLAS
- LHC B
- MINOS+ & MicroBOONE
- SuperNEMO
- SBND
- DUNE
- IceCube / PINGU
- Future charged LFV experiments

EXPERIMENT

- QCD
- Beyond the Standard Model physics
- Neutrino phenomenology
- Cosmology

THEORY

**QCD theorists = Mrinal Dasgupta, Jeff Forshaw, Mike Seymour**

[Searches for new particles using cone and cluster jet algorithms: A Comparative study](#)

[M. H. Seymour \(Lund U.\)](#).

**Z.Phys. C62 (1994) 127-138**

[Detailed record](#) - [Cited by 156 records](#)

• [WW scattering at the CERN LHC](#)  
[J.M. Butterworth](#), [B.E. Cox](#), [J.R. Forshaw](#).

**Phys. Rev. D65 (2002) 096014**

e-Print: [hep-ph/0201098](#) | [PDF](#)

[Detailed record](#) - [Cited by 276 records](#)

• [Resummation of nonglobal QCD observables](#)

[M. Dasgupta \(DESY\)](#), [G.P. Salam \(CERN & Paris U., VI-VII\)](#).

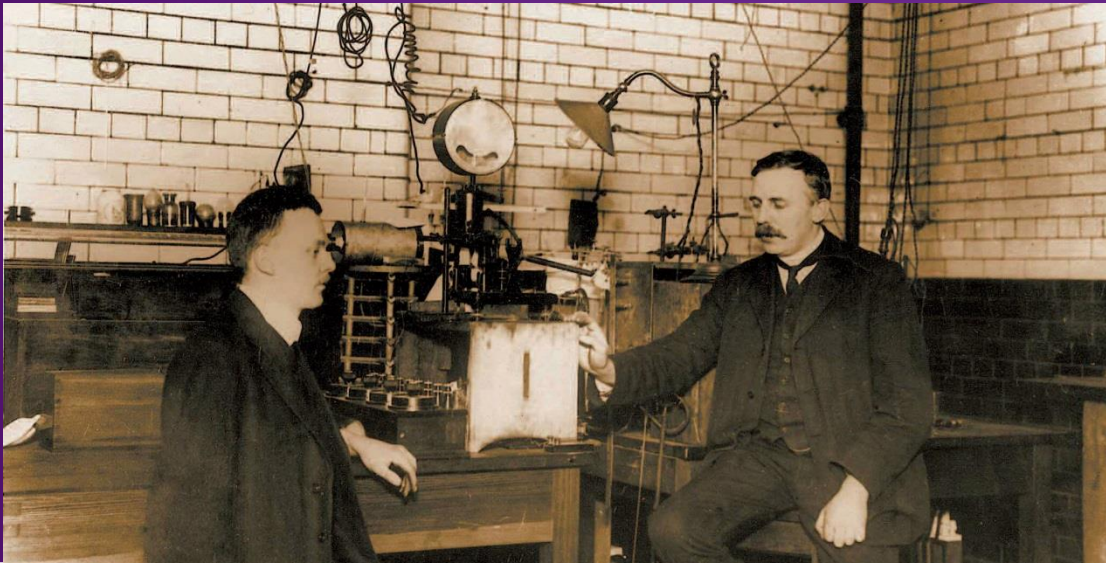
**Phys.Lett. B512 (2001) 323-330**

e-Print: [hep-ph/0104277](#) | [PDF](#)

[Detailed record](#) - [Cited by 252 records](#)

# The lecture theatres within the Schuster Lab....

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Niels Bohr – March-Sept 1912

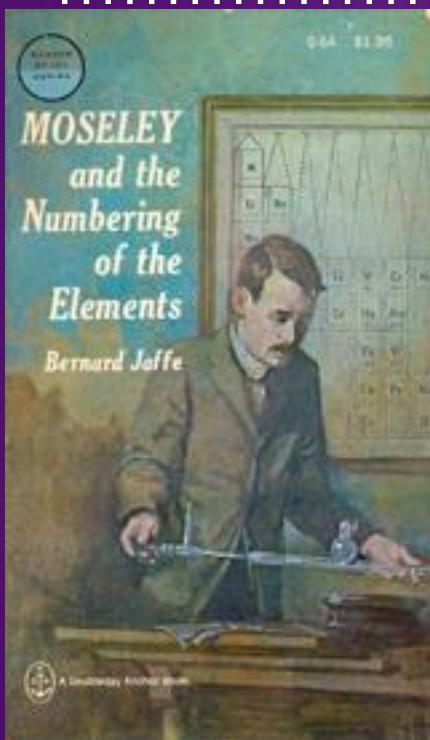
Ernest Rutherford 1907 – 1919

1911 Discovery of the nucleus – Rutherford Model of the Atom

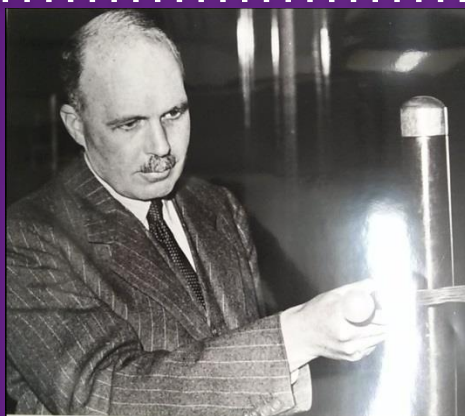
1917 Splitting of the atom (transmutation)  $^{14}\text{N} + \alpha \rightarrow ^{17}\text{O} + \text{proton}$

RUTHERFORD LECTURE THEATRE – NIELS BOHR COMMON ROOM





Henry Moseley  
Killed Gallipoli 1915



William Lawrence Bragg  
1919-1937 Langworthy  
Nobel Prize 1915

Bragg Law  
X-ray diffraction



Patrick Blackett  
1937-1953 Langworthy  
Nobel Prize 1948

Cosmic ray studies using  
automated cloud chamber.  
Plus lots more !

Lecture theatres in Schuster named after Moseley, Bragg and Blackett



## Facilities

Rooms	Capacity and Layout
Rutherford	1 x 250 seat tiered theatre
Moseley, Bragg & Blackett	3 x 150 seat tiered theatres
Foyer area	Ideal for catering and exhibitions
Eros Cafe	Small seated area

Successfully hosted several major international conferences over past few years. Most notably SUSY 2014.

New annex to Schuster building will be completed within the next 2 months....





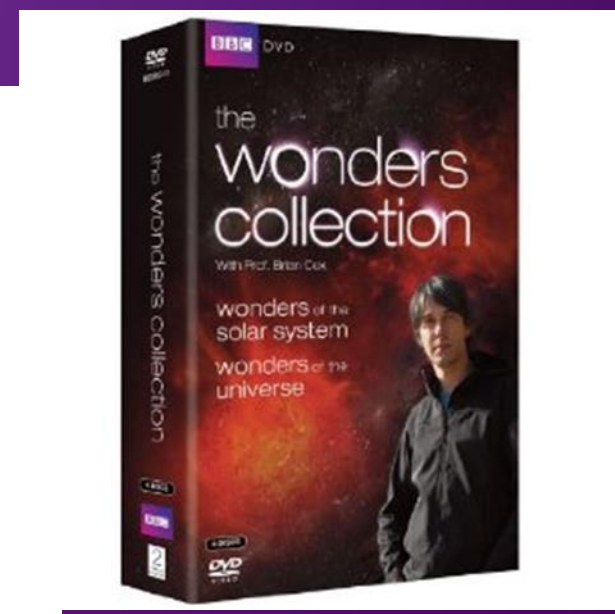
# OUTSTANDING OUTREACH

**Public Engagement at JBO – new Discovery Centre opened April 2011**

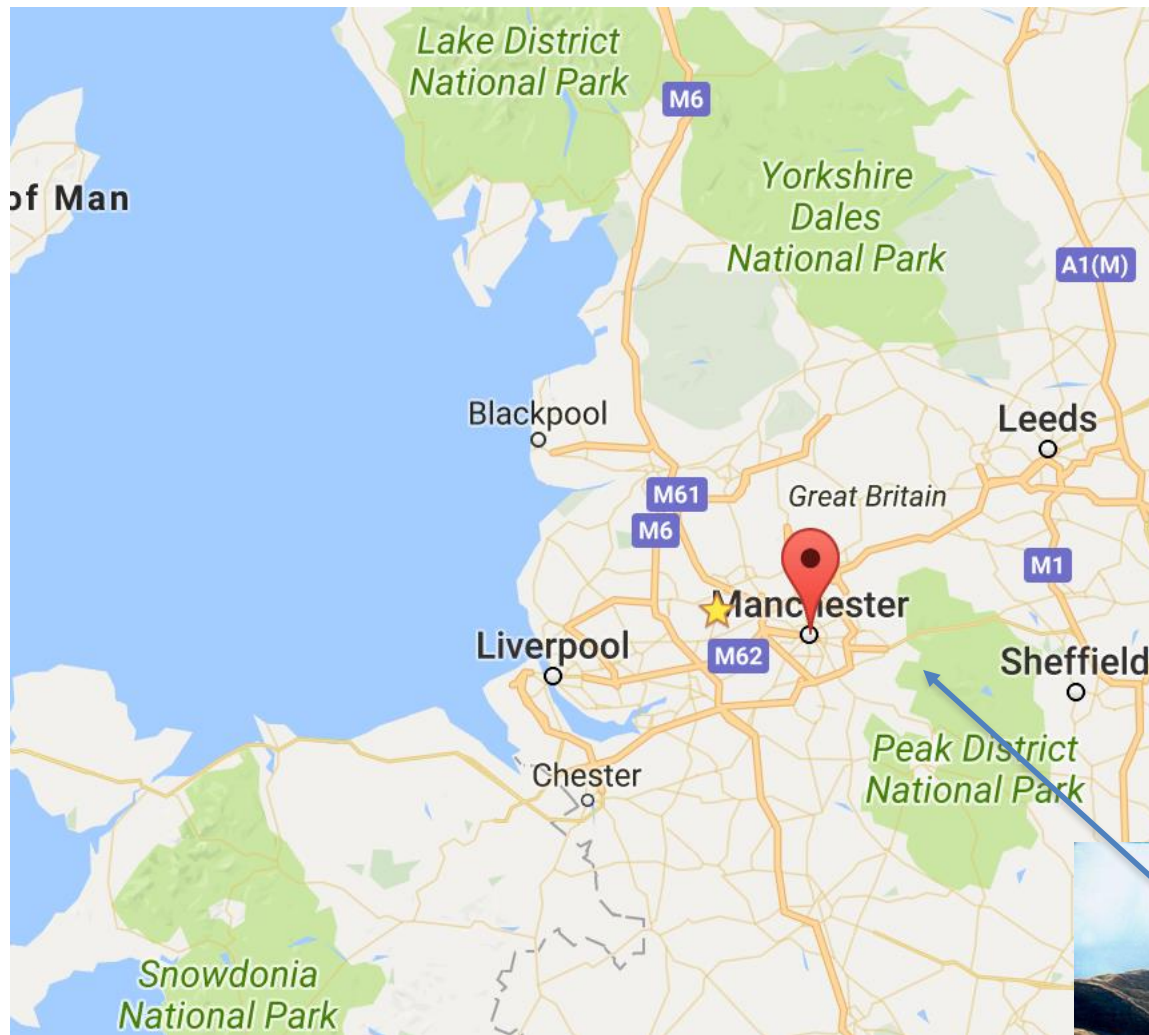
Director : Dr Teresa Anderson

Teresa elected Chair of the Uk Associate of Science and Discovery Centres

<http://sciencecentres.org.uk/>



Teresa Anderson, Tim O'Brien, Jeff Forshaw, Brian Cox and many other staff, students, and postdocs.



**Close to outstandingly beautiful countryside**



50 miles

**Manchester International Airport = direct flights to USA**







1 mile

**Walking distance to vibrant city centre**





alamy stock photo

