History of the School

The School of Physics and Astronomy traces its origin to the original Department of Physics which was opened on 1st October 1880 when Professor John Henry Poynting took office in new laboratories of Mason Science College at Edmund Street in Birmingham. Poynting had moved from Cambridge where he had been working with James Clerk Maxwell on electromagnetism and remained the Head of Department until his death in 1914.

There are numerous ways of following the history of the School since 1880. One could follow the University's Blue Plaque trail. The School has four plaques commemorating some key scientific discoveries:

- "Weighing" the Earth (plaque 12): John Henry Poynting measured Newton's gravitational constant (G) in 1890 and in so-doing was able to determine the mass of the earth. His legacy in Birmingham continues in many ways from work on deviations from the inverse square law of gravity which could signal the universe has high dimensions that simple space-time, through to the **gravitational wave detection (http://www.sr.bham.ac.uk/gravity/)** experiments and to the Poynting Physical Society which is our ever-popular student-led social society.
- The Frisch-Peierls Memorandum (plaque 9): Otto Frisch and Rudolf Peierls were in 1940 the first to show that an airborne atomic bomb was feasible and this work was critical to the establishment of the Manhatten project. Peierls established in Birimgham one of the world-leading Schools of Theoretical Physics and our research activities particularly in the **theory of quantum matter (http://www.theory.bham.ac.uk/research/)** continue to the present.
- The Cavity Magnetron (plaque 10): John Randall and Harry Boot devised a device in 1940 that made possible airborne radar. This device is now used to provide the power in every domestic microwave oven. Manipulating electromagnetic waves is the domain of a new research group in the School studying **transformational optics and metamaterials (http://www.bhamtest1.bham.ac.uk/research/activity/physics/quantum/metamaterials/index.aspx)** .
- The proton synchrotron (plaque 11): Mark Oliphant pioneered the early days of particle physics by building a proton synchrotron in 1953. These are now integral to **high energy particle physics (http://www.ep.ph.bham.ac.uk/)** today - including the Large Hadron Collider where the School is currently playing a leading role.

Another way to trace the history of the School is through **our collection of scientific instruments (http://mimsy.bham.ac.uk/info.php?f=option8&type=browse&t=objects&s=Collection+of+Historic+Physics+Instruments)** . Many of the significant parts of the collection are on public display in the School and are catalogued as part of the University Collections. Dr Robert Whitworth maintains the collection.