RUTHERFORD BULLETIN

28 January 1980 No. 2

Lady Appleton Unveils Portrait

The Portrait of Sir Edward Appleton, discoverer of the Ionosphere, was unveiled by Lady Appleton at the Rutherford and Appleton Laboratories on Monday, 21 January, in the presence of a distinguished party of guests.

Sir Geoffrey Allen (SRC Chairman) opened the ceremony by introducing Sir Granville Beynon, saying that he was pleased to be present at the ceremony to commemorate the bringing together of the two Laboratories.

Sir Granville spoke of his pleasure at being present on this occasion. Sir Edward Appleton and he worked closely together in scientific research and had been friends for 28 years; they thought alike and had travelled the world together. Without doubt, Sir Granville said, Sir Edward was the Ionosphere, and had lived it day in day out for most of his life.

A great scientist, he was also a great man, interested in the careers of his young colleagues; a man of warmth, with a great sense of humour and an excellent after-dinner speaker. To Sir Edward he owed more than he could express.

Though Sir Granville had opposed the move of the Appleton Laboratory from Ditton Park, he was certain that in Professor John Houghton we have the best possible Director. He was sure that the Laboratory would continue to hold pre-eminence in physics, not only in the atmosphere but also in outer space. He wished Professor Houghton every success.

Sir Granville then asked Lady Appleton to perform the unveiling ceremony.

Lady Appleton thanked Sir Granville for his address. The occasion was a delightful surprise she said, but not one for speeches from her. She too had been concerned that the identity of the Appleton Laboratory should not be lost, but having seen the Laboratory and met its new Director she was convinced that hope existed for a happy union of the old and new. It was a great pleasure for her to be asked to unveil the portrait and she was happy to do so.

The Portrait of Sir Edward Appleton, FRS, being admired by Lady Appleton, after its unveiling.

After the unveiling, Professor Houghton presented Lady Appleton with a smaller version of the portrait as a memento. He assured her that he too was concerned that the ethos, tradition and distinguished past of the Appleton Laboratory must be preserved. The sense of past was essential to what could be offered in the future. On behalf of the Laboratories he thanked Lady Appleton for performing the ceremony.

Lady Appleton was on a day's visit to the Chilton site and after the ceremony continued her tour.

The portrait, a photographic copy of the painting by Sir William Hutchinson hangs in the building R1 Coffee Lounge.

INTERNAL Events

HEP SEMINARS
CONFERENCE ROOM R61 - 1100hrs

6 Feb: Probir Roy/Tata Inst. Bombay
"Parton Transverse Momenta and Polarised Electroproduction"

12 Feb: 1400hrs R C Moore/Manchester
"Pion Structure Function and Drell-Yan Processes"

13 Feb: R22 Lecture Theatre Sir S F Edwards/Cambridge
"Visco Elasticity as a Quantum Field Theory Problem"

Please note variations in times and venues!

NIMROD LECTURES
R22 LECTURE THEATRE - 1400hrs

4 Feb: Dr A Hey/Southampton
"Missing Hadrons & Exotics"

11 Feb: Dr Probir Roy/
Tata Inst. Bombay
"Gluonium"

EXTERNAL Events

NPD COLLOQUIUM
H8 CONF.RM. - AERE - 1530hrs

31 Jan: H R Mck Hyder/Oxford
"The Oxford Folded Tandem"

7 Feb: Dr D Gough/Cambridge
"The Solar Neutrino Problem and the Structure of the Sun"

14 Feb: Dr M S Tite/British Museum
"The Impact of Physics on Archaeology"

THEO.PHYS.SEMINARS
QMC - 1615hrs

28 Jan: Dr D Sherrington/Imperial
"Magnons in the Heisenberg-Mattis Random Magnet"

4 Feb: Dr D M Brink/Oxford
"Heavy Ion Scattering"

ELEM.PART.THEO.SEMINARS
N.P.L. - OXFORD - 1430hrs

1 Feb: P Roy/Tata Inst.
"Anomalous Angular Momentum with Merons"

15 Feb: J C Taylor/Oxford
"Failure of non-Abelian Block-Nordsick Cancellations"

PHYSICS COLLOQUIA
CLARENDON LAB - OXFORD - 1615hrs

1 Feb: Prof P G H Sandars/Oxford
"Mirror Symmetry in Nature"

8 Feb: Dr J D Silver/Oxford
"Studies of Highly Ionised Atoms"

15 Feb: Prof I Solomon/
Ecole Polytechnique
"A New Semiconductor with Industrial Applications: (hydrogenated) Silicon"

THEORY SEMINARS
CLARENDON LAB - OXFORD - 1615hrs

7 Feb: Prof M Ruderman/
Columbia & Cambridge
"Pulsars"

NUCLEAR STRUCTURE SEMINARS
NPD - OXFORD - 1430hrs

4 Feb: Prof K Smith/Sussex
"The Electric and Magnetic Moment of the Neutron"

SCHUSTER COLLOQUIM
MANCHESTER - 1615hrs

6 Feb: Dr J D Lawson/RL
"Wave-Particle Interaction and the Free-Electron Laser"

PART.PHYS.SEMINARS
BIRMINGHAM - 1615hrs

1 Feb: Dr G Kalmus/RL
"Direct Electron Production in 70 GeV π^-p Interactions"

8 Feb: Dr D M Webber/Liverpool
"Hard Processes of Nuclear Targets"

15 Feb: Dr J Allison/Manchester
"Results from the JADE Experiment at PETRA"

THEO.PHYS.SEMINARS
CONF.RM.B424.4 - AERE - 1400hrs

5 Feb: Dr J Rae/AERE
"Mathematic Modelling of Oil Resevoirs"

12 Feb: Dr P M Hazzledine/Oxford
"Unstable Dislocations in FCC Metals"

ELEM.PART.PHYS.SEMINARS
DAMTP - CAMBRIDGE - 1500hrs

4 Feb: A Sudbery/York
"Introduction to Quaterionic Analysis"

8 Feb: D Sutherland/Glasgow
"Cosmological & Teleological Aspects of Grand Unified Theories"

Film Badge Notice

It is Period 1 Colour Strip GREEN for beta-gamma films. Please check that you are wearing the correct film and all old ones are returned. Any queries to Mrs J Coates, Ext 430.

Library Notice

"Analytical Laser Spectroscopy" by N Omenetto "disappeared" from the display shelf just before Christmas, and is still missing. You must have read it by now, and we would appreciate its return!

Missing

A Desoutter Pneumatic Drill, Type T3/200, Serial No 27356 is missing from R63. Would anyone in possession of this please contact G Fallon, Ext 325.

Miss A Foster of F16 Atlas Centre would like to know of the whereabouts of Indola Electric Fan No R002964. Please ring Ext 547.

Ray Church of R2 has lost his AVO 8 Serial No 116491-C1260. Will whoever is 'minding' it please ring Ext 6195/6698.

Sir Edward Appleton

Sir Edward Appleton, pioneer of the study of the physics of the Upper Atmosphere, was born in Bradford in 1892. At the outbreak of the 1914-18 war, he joined the army straight from St John's College Cambridge where he had gained a first class honours degree.

Historic Experiment

As a Signals Officer, his interest was aroused by the newly-developed triode valve and in 1918 he returned to the Cavendish under Rutherford and continued to work in the field of valves, atmospheric radio noise and wave propagation. It was here, whilst studying the phenomena of 'fading', that he developed his historic experiment to test the hypothesis that waves travelled by reflection from regions of electrically conducting gases in the atmosphere high above the earth's surface.

The experiment proved of great importance to the science of Geophysics, and in the years 1925-27 Appleton and his co-workers proved the existence of an ionised layer at a height of 80km, soon to be followed by the discovery of a further layer at a height of some 250km (later christened the Ionosphere by Watson-Watt).

Contact with Ditton Park

By now Appleton's career had taken him to King's College London as Wheatstone Professor of Physics, and his investigations brought him into contact with the staff of Ditton Park. By 1929 the Slough installation, used by the National Physical Laboratory and the Radio Research Board experimenters, was playing an increasingly important part in his investigations.

In 1936 he returned to Cambridge as Jacksonian Professor of Natural Philosophy. Three years later he became Secretary of the DSIR, where he remained until 1949, continuing, where possible, to influence research as a member of the Radio Research Board. It was during this time that he was mainly responsible for the Radio Research Station emerging as an establishment in its own right within the DSIR.

Nobel Prize

Knighted in 1941, he was awarded the Nobel Prize for Physics in 1947 for "his work on the physical properties of the upper atmosphere and especially for his discovery of the Ionospheric region called the Appleton Layer".

Sir Edward returned to academic life in 1949 as Principal and Vice-Chancellor of the University of Edinburgh, a position he held with great distinction to the end of his life in 1965.

Appleton Laboratory

In 1973 the Radio Research Station at Ditton Park was re-named the Appleton Laboratory in honour of Sir Edward's distinguished scientific career and in recognition of the personal role he had played in setting up the Station as a separate establishment in 1948.

Professor Houghton Reflects···

As the two Laboratories merge, it is interesting to recall the association between the two men, Sir Edward Appleton and Lord Rutherford.

As a young scientist, Appleton returned to the Cavendish after the end of the first world war to work under Rutherford where he carried out much of the work towards the major discoveries for which he later received the Nobel Prize. Later, Appleton's period as Jacksonian Professor also overlapped with Rutherford's last two years as Cavendish Professor.

Appleton also had Oxford connections. His critical experiment in 1924 which unequivocably demonstrated the existence of the ionosphere was in fact made from the University Electrical Laboratory in Oxford, for the very good reason that Oxford was about the right distance from Bournemouth. When it was suggested to Appleton that it was a pity that he could not make the measurements at Cambridge he replied,"Most Cambridge men have their Oxford moments!"

Appleton concentrated on investigations of the ionosphere, much of the work being in cooperation with scientists at Ditton Park, which gained its autonomy largely due to his efforts. To recognise Appleton's unique contribution to radio research, the Station then under the Science Research Council was re-named the Appleton Laboratory in 1973.

··and Looks Ahead

In what ways is it intended the Appleton programme should devolve in the merged Laboratories? Two main areas of the current Appleton programme are Radio and Communications Research and Space Research. In the communications field we are living at a time of enormous growth due to developments in radio electronic and computer technology. During the 1980s the lives of all of us will be affected by changes brought about through these new possibilities. Merging Appleton's expertise in radio techniques and propagation with Rutherford's expertise in micro-electronic and computer technology will enable the Laboratories together with the Universities to become involved in the whole field of communications research. In this way we can try to ensure that the UK plays its part (and reaps its fair share of the rewards) in shaping communications of the future.

In Space Research the intention is to build a Space Support Centre at Chilton combining Appleton's background in the management of space projects, in satellite operation and in space data acquisition, with Rutherford's background in a range of relevant technology - for instance vacuum techniques and materials research. Through this Centre we shall be able to plan for and support a broad-based space science programme in both astrophysics and earth-orientated research, and also be more able to participate in the work of the European Space Agency.

Because the Appleton Laboratory is considerably smaller than Rutherford Laboratory many Appleton staff are concerned lest they become swallowed up by the much larger Rutherford. I am confident that this will not be the case, but rather that the particular background and ethos brought over by the Appleton Laboratory, with its long tradition going back over fifty years, will not be lost but will contribute in effective ways to the future development of the combined Laboratories.

The portrait of Sir Edward will remain a suitable reminder to Rutherford and Appleton staff of an important component of the Laboratory's history.

OVERSEAS Visits

C A Baker to Ill from 27 Jan-2 Feb to work on proposal 157.
P S Maxwell to DESY from 28-30 Jan to visit researchers using PETRA.
D J Crennell to CERN from 3-6 Feb to attend NA13 collaboration meeting.
R J N Phillips to USA from 31 Jan-11 Feb to attend collaboration meeting at the University of Wisconsin.
W S Howells to ILL from 3-16 Feb to work on experiment UK6/190 on IN10.

Coffee at Cosener's

Once a month coffee mornings are held at the Cosener's House, Abingdon, for the wives of Rutherford and Appleton Laboratories employees, especially newcomers to the area, to get to know one another, swap local knowledge, or just to relax in pleasant surroundings away from household chores for a while.

Do come along, we'd love your company on Thursday, 7 February, between 10.30am and noon.

Gillian Litt (Abingdon 26009)
Dorothy Gibson (Abingdon 25250)

Food for Thought

An intriguing discovery made by the new residents of R32, is causing speculation as to the strange predilections of the former owners of a locked filing cabinet, that they inherited.

What weird and esoteric experiment needed for its accomplishment the hundredsof old Club biscuit wrappers they unearthed, secreted away from prying eyes?

Is the cache an attempt to corner the world market in this commodity?

Secretive mice ..... ?

Restaurant Raffle

PRIZE WINNERS 1979

1. Bert Kidd. R51
2. Tony Wardle. R2
3. Mandy Hearman. R22
4. M Moore. R22
5. P Shipley. R20
6. Nancy. Lab 10
7. M Sexton. R51
8. Sandie Hopcroft. R22
9. M Moore. R22
10. M Crudwell. R1
11. Mandy Hearman. R22
12. M Sexton. R51

Lunchtime Films

Lecture Theatre - 12.30 - 30 January

CLASSICS FOR BRASS BAND
GRIMETHORPE COLLIERY BAND

Four works specially written for band contests between 1928 and 1936. The composers are Holst, Elgar, Ireland and Bliss.
The Grimethorpe, of course, has gained some recent fame as the backing band for Peter Skellern on his two recent albums, apart from its success in contests.

AN APPEAL

Harry Edwards is rapidly exhausting his repertoire of usable music and will soon be reduced to playing "Des O'Connor conducts the LSO in All-Time-Party Favourites", if some kind people don't come forward with material.

The type of music we need is that which will appeal to a wide audience ie six people - three to the left and three to the right of the Lecture Theatre. Run of the mill classics get people staying away in droves. Good progressive rock or modern groups fare better. If there is anything really out of the ordinary, classical or modern in someone's collection it would be most welcome.

We prefer cassettes to those round things with holes in the middle. Unless they are really looked after you can't hear the music for the scratch/fingerprints/dust accompaniment. Yes, we know discs give better quality - but on our equipment?

If you can help, please ring Harry Edwards, Ext 6177, or if you prefer, send him a list of things you think will appeal.

Netball

Netball is to resume in the not too distant future, and as we have lost some players anyone who wishes to join us with a view to playing in a team to defend our SRC Trophy will be welcomed. Please contact either Susan Gill, Ext 495, or Susan Underdown, Ext 443.

Folk Club

R22 Coffee Lounge

Friday 1 February

8 pm

"HOGLEG"

Country, Rock, Folk, Blues

Tickets: £1.40 at the door
£1.20 in advance
from John Ellis Ext 6368/494
Alan Hodges Ext 6323

Christian Fellowship

Don't forget the special film on the experiences of James Irwin of Apollo 15 which will be shown in the Lecture Theatre at 12.30pm on Thursday, 31 January.

The following meeting will be held at 12.30 in the R2 Conference Room. As always, you are all welcome.

7 Feb: Prayer Meeting led by Ken Potter

14 Feb: Bible Study led by Jimmy Darius

Found

A sum of money has been found in Building R27. Please enquire of Sheila Parker, Ext 6289.

Another sum of money - this time in a box - was rescued in R61. Sheila would also like to hear from the owner of this cache.

RUTHERFORD LABORATORY BULLETIN

Deadline for Insertions 1000hrs Monday 4 February

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