

THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS

Report on additional correspondence and papers

of

CECIL FRANK POWELL

(1903-1969)

physicist

deposited in the

Wills Memorial Library, University of Bristol

Reproduced for the

Contemporary Scientific Archives Centre

(CSAC 111/2/86)

by

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CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

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Supplementary catalogue of papers and correspondence of

CECIL FRANK POWELL FRS

(1903 - 1969)

Material additional to CSAC 12/6/74

Compiled by:

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Deposited in the Wills Memorial Library, University of Bristol

1986

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INTRODUCTION

The material came to light at Powell's home in Bristol in February 1985 and was received by courtesy of Professor P.H. Fowler FRS of the H.W. Wills Physics Laboratory, University of Bristol.

PRESENTATION

The 'new' 1985 material includes biographical records, correspondence, photographs and press-cuttings which were largely absent from the original collection received in 1973; there is in consequence almost no overlap or duplication of content or of archival class. For this reason, and in view of the considerable lapse of time, no attempt has been made to consolidate the two catalogues. The 1985 material has been treated essentially as a separate collection, presented and indexed as shown in the list of contents.

DESCRIPTION

The biographical material in Section A, though still not a full record, contains an interesting span of Powell's career from the meagre provision of the State Scholarship (A.4) to the worldwide renown of the Nobel Prize (A.6-A.32). The sad coincidence in 1969 of his retirement (June) and death (August) is also marked. Of interest are the family letters (A.101-A.106), with their endearing spontaneity. Powell's unassuming friendliness, so often invoked by others in letters of congratulation or condolence becomes visible, so to say, in many of the delightful photographs (A.107-A.142).

Powell's research is represented chiefly by the contemporary records of the 1952 and 1953 high altitude balloon flights in Sardinia (B.1-B.9). The earlier research on cosmic rays, recorded in the notebooks of Powell and his team, is to be found in the 1973 collection.

Powell's public life in national and international affairs, and service for many scientific associations, remains very scantily documented, only a few records of the Pugwash conferences surviving (Section D) what was thought to be the wholesale destruction of his papers and correspondence after his death. Tantalisingly, a small proportion of the correspondence has now

come to light and is preserved in Section E, though it can be no more than a tiny fraction of the original.

References to the Memoir of Powell by F.C. Frank and D.H. Perkins (Biographical Memoirs of Fellows of the Royal Society, 17, 1971) are given in the form (Memoir, p. ...)

LOCATIONS OF FURTHER MATERIAL

Mrs. Powell retains medals and citations of Powell's honours, family photographs (some going back to 1900), press-cuttings, Nobel Prize and other souvenirs.

ACKNOWLEDGEMENTS

We are grateful to Mrs. Powell for making the material available, and to Professor P.H. Fowler and Mr. N. Higham (Librarian, University of Bristol) for assembling it, and for information.

JBA
PH
MJE

Oxford 1986

SECTION A BIOGRAPHICAL AND PERSONAL A.1 - A.143

A.1 -A.3 TRIBUTES AND INTERVIEWS

A.4 -A.93 CAREER, HONOURS AND AWARDS

A.94 -A.100 MISCELLANEOUS ITEMS

A.101-A.106 FAMILY LETTERS

A.107-A.142 PHOTOGRAPHS

A.143 PRESS-CUTTINGS

Biographical and personal

A.1-A.3 TRIBUTES AND INTERVIEWS

See also obituary tributes at A.58-A.60 and A.143.

- A.1 Entry for H.H. Wills Physics Laboratory Bristol, for 'World Nuclear Directory' 1960, listing the staff of the laboratory, headed by Powell as its Director.

Requests for interviews by Time magazine and Bristol Evening Post, 1960.

- A.2 Letter from the Swedish News Agency, 1969, asking Powell to provide answers to a list of questions (enclosed), sent to a number of Nobel Laureates, to form the basis of a series of articles touching on the origin and development of their scientific work, and their views on the Nobel Prize, the development of science and world peace.

10pp. typescript and ms. drafts of Powell's replies and carbon of the final version, including biographical and personal reflections. In answering those questions touching on world peace and the future of mankind, he raised the issue of the scientist's responsibility for his discoveries and the need for 'balanced development' in the sciences.

- A.3 'Memorable Meetings' by K. Bratov, n.d.

Photocopy of outline of personal recollections of eminent scientists, their lives and work. Powell is included (p.2.).

A.4-A.93 CAREER, HONOURS AND AWARDS

- A.4 Notification of payment of Powell's State Scholarship grant for Spring Term 1923, of £26. 13s. 4d. (maintenance), and £20 (tuition fees), at Sidney Sussex College, Cambridge.

- A.5 Correspondence with World Federation of Scientific Workers, 1949, re appeal for funds.

Includes manifesto of W.F.S.W.

Biographical and personal

A.6-A.32 THE NOBEL PRIZE, 1950

A.6 Correspondence with E.T.S. Walton, 1949-50.

Walton revealed his intention to nominate Powell for the Nobel Prize, after an initial request for a set of Powell's publications. Powell replied that 'other friends' had forwarded his material to the Nobel Committee.

Includes correspondence re Powell's visit to Dublin to receive an honorary degree.

A.7-A.32 Letters and messages of congratulation.

The senders include, as well as scientific colleagues or societies, contemporaries and teachers from school and university with their recollections, manufacturers of equipment and especially photographic materials, and fellow workers in the peace movement - often from Eastern Europe. There are also many letters from friends and neighbours from Tonbridge and Bristol. Several of the letters are addressed to Isobel Powell or refer to her contribution to her husband's achievement. A very large number speak of his modest and unassuming friendliness.

26 folders in alphabetical order.

A.7	A	A.20	L
A.8	Ba-Bo	A.21	Ma
A.9	Br-Bu	A.22	Me-My
A.10	Ca-Ch	A.23	N, O
A.11	Cl-Co	A.24	Pa
A.12	D	A.25	Pe-Pu
A.13	E	A.26	Ra-Re
A.14	F	A.27	Ri-Ru
A.15	Ga-Go	A.28	Sa-Sh
A.16	Gr-Gu	A.29	Si-Su
A.17	H	A.30	T-V
A.18	I, J	A.31	W
A.19	K	A.32	First name or unidentified

Biographical and personal

A.33 Letter from L. Rosenfeld, 1953, re possibility of Powell succeeding Blackett at Manchester.

Letter from the British Peace Committee, 1954.

Telegram from Powell in Moscow, 1955.

Brief correspondence with Secretary of United Nations Students' Association, 1957, accepting an honorary vice-presidency.

Congratulatory telegram from A. Vinogradov, 1958, on Powell's election to membership of Academy of Sciences of the U.S.S.R.

A.34-A.44 SIXTIETH BIRTHDAY, 1963

A.34-A.42 Congratulatory letters and telegrams from friends, colleagues and institutions, in alphabetical order. Most are accompanied by carbons of Powell's replies. Many are from organisations connected with the World Federation of Scientific Workers and from as far afield as Cuba and Mongolia. There are also congratulations from Italy, where Powell carried out his balloon flights.

9 folders.

A.34	A	A.39	R, S
A.35	B, C	A.40	T-V
A.36	D-G	A.41	W, Z
A.37	I - L	A.42	First names only, including family
A.38	M-P		

A.43 Menu from dinner held in Powell's honour by Senior Common Room, Bristol, 23 November 1963.

3pp. typescript of message by K. Gottstein, who was not present at the dinner.

Photographs from birthday party at Bristol.

A.44 9pp. ms. draft of address by V.F. Weisskopf, read 'at the celebration of Cecil Powell's 60th birthday', at the conference on cosmic rays, Jaipur, India, December 1963.

Biographical and personal

- A.45 Powell's carbon of letter to Bristol Registrar re his honorary degree, University of Padua, 1964; press-cutting. See also C.8.

Letter from headmaster of the Judd School, 9 March 1966, giving history of school since Powell left in 1922.

Menu from fiftieth annual dinner of Old Juddian Society, 25 March 1966, at which Powell proposed the toast to the School.

A.46-A .56 LOMONOSOV GOLD MEDAL FOR 1967

Powell was the first foreigner to receive this award, and was invited by the Academy of Sciences in Moscow to attend its General Assembly in March 1968 to receive the medal in person.

The surviving material consists almost entirely of congratulatory letters and telegrams, mostly from friends and colleagues in Great Britain and most accompanied by carbons of Powell's replies.

For Powell's address on the occasion of the award of the medal see C.11.

- A.46 Telegram informing Powell of award.
Typescript draft of Powell's reply.

- A.47-A .56 Congratulatory letters, arranged in alphabetical order.
10 folders.

A.47	A, B	A.52	P, R
A.48	, C, D, F	A.53	S
A.49	G, H	A.54	T
A.50	K, L	A.55	W
A.51	M-O	A.56	First names

Biographical and personal

- A.57 'Address given by F.C. Frank to Senate of Bristol University, 16 June 1969, on Powell's retirement.
Photocopy of typescript only.

A.58-A.93 POWELL'S DEATH

Powell died suddenly on 9 August 1969, while on holiday in Italy.

- A.58 Address given by F.C. Frank for Powell's funeral, 15 August 1969.
Photocopy of typescript only.

Notification and programme of Commemorative Meeting held at Bristol University, 5 February 1970.

Supplement to Scientific World, 1970, No.3, with report on Commemorative Meeting, including text of speeches.
See also A.116.

- A.59 Obituary of Powell (and Otto Stern), A.W.R.E. News, October 1969.
- A.60 Tribute to Powell by M.G.K. Menon, Science Today, December 1969.
Appreciation of Powell by F.C. Frank, Physics Bulletin, 20, 1969.
- A.61 Bristol University Newsletter, June 1971, with speech by new Chancellor (D.C. Hodgkin) including reference to Powell.
Report on installation of memorial bench near Lake Como, where Powell had died, from Alumni Gazette of Bristol University, 1970-71, p.27.
- A.62-A.93 Letters of condolence.
- A.62-A.66 Letters and telegrams from individuals and national organisations of the World Federation of Scientific Workers. A.66 contains messages sent direct to Mrs. Powell. Unindexed.
5 folders.

Biographical and personal

- A.67-A.70 Letters and telegrams from colleagues. In alphabetical order, indexed.
4 folders.
- | | | | |
|------|-----|------|-----|
| A.67 | B-D | A.69 | N-R |
| A.68 | F-M | A.70 | S-Y |
- A.71-A.78 Letters from colleagues and friends in Bristol area. A.77, A.78 contain letters signed with first name only or with illegible signatures. Unindexed.
8 folders.
- A.79-A.85 Letters from UK colleagues and friends outside Bristol area. A.83-A.85 contain letters signed with first name only or with illegible signatures. Unindexed.
7 folders.
- A.86-A.93 Letters and telegrams from colleagues and friends overseas. A.92, A.93 are signed with first names only or with illegible signatures. Unindexed.
8 folders.
- A.94-A.100 MISCELLANEOUS ITEMS
- A.94 Letters thanking Mrs. Powell for copies of Royal Society Memoir, March 1972, arranged in alphabetical order.
- A.95 Correspondence (chiefly photocopies) re posthumous edition of 'Selected Papers of Cecil Frank Powell', 1972.
- A.96 Reprint of address, 'The Hydrogen Bomb and the Future of Mankind', given by Powell in 1955, inscribed by Mrs. Powell 'My own copy'.

Posters and leaflets for meetings, etc. at which Powell spoke about nuclear weapons.
- A.97 Draft of telegram by Powell, n.d.

Copy of AScW Journal, May 1961 (reference to Powell, p.5.).

Pamphlet re fall-out from nuclear weapons.

Biographical and personal

A.107-
A.142

PHOTOGRAPHS

- A.107 Photographs of Powell
- A.108 Family and close friends
- A.109-A.112 Colleagues and laboratory workers
- A.113-A.118 Ceremonies and social events at Bristol
- A.119-A.122 Laboratory equipment and experimental results
- A.123-A.125 Balloon making and flights, Bristol, 1950
- A.126-A.129 Expeditions
- A.130-A.137 Conferences
- A.138-A.142 Overseas Visits

The majority of the photographs are of Powell's scientific work and related activities, particularly the balloon flights at Bristol and in Italy, conferences and foreign visits. There are also some photographs of experimental results, including one identified as an X-ray photograph (A.122). Some photographs show Powell 'off-duty', at social events at Bristol and at conferences, although there are few of his family.

A.107

Photographs of Powell

A.108

Family and close friends

Includes a set of negatives, n.d., and a print of Powell and his wife in his laboratory, 1950.

Colleagues and laboratory workers

A.109

Includes two prints from the 1930s, taken on the roof of Royal Fort, of Powell with a technician.

A.110

The Cosmic Ray Group, 1948-55

Powell appears in all of the prints. Possibly from a series of annual photographs.

Biographical and personal

A.111 Unidentified group photographs, one dated 1948. Probably taken at Bristol.

A.112 Mounted photograph, probably of Bristol Physics Department, 1953.

Ceremonies and social events at Bristol

A.113 Nobel Prize Ball, 1951.

A.114 1960

A.115 Presentation to W.H. Heitler, December 1965.

A.116 Mrs. Powell unveiling commemorative plaque to her husband at the Cecil Powell Centre for Science Education, University of Bristol School of Education, 1970.

Folder includes photograph of exterior of Powell's house in Bristol.

A.117 Award of honorary degree to A.M. Tyndall.

A.118 Laboratory Christmas party, n.d.

Laboratory equipment and experimental results

A.119 Print taken through a Burch microscope, with covering note from I. Ford giving details of photographic technique, 1959.

A.120 Negative used to illustrate a paper, with covering letter from publishers, 1971.

A.121 Set of illustrations of experimental results, probably for a paper, n.d.

A.122 Print of 'X-ray films in emulsion chamber', 1969.

Balloon making and flights, Bristol, 1950

A.123 Making the balloons.

A.124, A.125 Balloon flights.

Some of research team on roof of Royal Fort laboratory, others unidentified but probably at Bristol. A.125 includes two prints sent to Powell by K. Pinkau, 1963, of balloon flights inspired by the work done at Bristol, with covering letter for Powell's 60th birthday.

2 folders.

Biographical and personal

Expeditions

- A.126 Montserrat expedition, 1936.
 These photographs are chiefly of the landscape.
 Folder includes four photographs taken in 1938.
- A.127,
A.128 Sardinia expeditions, 1952 and 1961.
 Italian personnel, sea-vessels, equipment; includes some scenic views.
 2 folders.
- A.129 Includes photographs taken in Rome, 1961, and postcards.

Conferences

- A.130 WFSW Conferences: Moscow May 1959, Geneva September 1961,
 Varua (Bulgaria), 1967
- A.131,
A.132 CERN, 1956, 1962
- A.131 Equipment and buildings, 1956.
- A.132 Equipment.
 Some photographs labelled 'bubble chamber', January 1962.

 High Energy Conference, July 1962.
- A.133-
A.137 Miscellaneous conferences, some unidentified, arranged in chronological
 sequence.
 5 folders.
- A.133 'Krakow 1947'.

 'Varenna, 1953'.
- A.134 Unidentified, September 1956.

 IUPAP (Moscow), 1959.
- A.135 International Conference on Cosmic Rays and the Earth Storm, September
 1961.

 Institute of Physics and Physical Society of London Conference, Bristol,
 January 1963.

Biographical and personal

A.136 Lindau, n.d.

Rome, n.d.
Includes photograph of Powell with Clement Attlee.

A.137 Unidentified.

Visits

A.138, India, 1955-56 and 1963
A.139 2 folders.

A.138 Bombay and Delhi, 1955.

Bangalore and Peryar Lake, All India Science Congress, 1956.

Miscellaneous, 1955-56.

A.139 Powell's meeting with Nehru, December 1963.

Powell with Homi Bhabha, December 1963.

Miscellaneous prints, n.d.

A.140 Japan visits: 1956 (Tokyo and Kyoto), 1961.

A.141 China visit, 1956.

A.142 British Council Exhibition, Colombo, Ceylon, December 1966 (with covering letter).

Biographical and personal

A.143 PRESS-CUTTINGS

One box; folders contain:

1. Obituaries and biographical articles, British and Italian press.
2. Scrapbook, containing cuttings, 1949-1954, chiefly re banning atomic weapons, and atomic research.
3. Nobel Prize, 1950 (British press).
- 4, 5 Nobel Prize (foreign press). 2 folders.
6. Nobel Prize ceremony, 1950.
7. Cancelled lecture tour, 1953.
8. Wedding of Ann Powell (daughter), 1957.
9. Lomonosov medal, 1967.
10. Miscellaneous cuttings re awards and honours.
11. Reports of Powell's speeches.
- 12, 13 Balloon flights, 1949-64 (British press). 2 folders.
14. Visit of Duke of Edinburgh to Royal Fort laboratory, 1957.
15. Balloon flights, 1950, 1954 (foreign press).
16. Foreign research, including Anglo-Soviet atomic research project, 1955.
17. Peace movements and disarmament, 1950-61 (British press).
18. Peace movement and disarmament, 1950-60 (foreign press).
19. Vietnam, 1965-68 (British press).
20. Miscellaneous cuttings from Indian press, 1956, 1968 and n.d.
21. Miscellaneous cuttings (British press).

SECTION B BALLOON FLIGHTS B.1 - B.18

Powell's discovery of the pion in 1947 led to a programme of balloon flights since 'in order to obtain a reasonable number of events and investigate in detail the pion production process itself, it was essential to transport the [photographic] emulsions to the stratosphere, where they would be exposed to the primary cosmic ray protons' (Memoir, p.548). These flights, conducted at first in Britain, were moved in 1952 to the Mediterranean and involved collaboration with colleagues in many universities (Memoir, pp.550-51, 554).

The surviving material includes interesting contemporary accounts of the 1952 and 1953 high altitude flights in Sardinia (B.1 - B.9) and correspondence on the manufacture of balloons by a Bristol company (B.12 - B.17). Photographs of the manufacture of the balloons, and of expeditions, are at A.123 - A.125, A.127, A.128.

Correspondence on planning, funding and carrying out of balloon flights can be found in Section E, particularly in exchanges with Feather (E.15), Houtermans (E.18, E.19), Hutchinson (E.20), Massey (E.21), The Royal Society (E.26), Shapiro (E.31), Sørensen (E.35), West (E.56), Yekutieli (E.69).

- B.1-B.8 Balloon flights from Cagliari, May-June 1952.
Ms. accounts by Powell, and some typed-up copies. Written partly as letters to Mrs. Powell and partly as diary of events.
- B.1 5pp. ms. account, n.d., and a typed-up copy with added heading 'Report on the Italian expedition by C.F.P.' and a note at end 'Received in Bristol, 23 May 1952'.
- B.2 Ms. account, 21, 24 [sic, in error for 23] May, paginated 6-10.
- B.3 Ms. account, 24, 25, 26, 27 May, paginated 1-6.
- B.4 Ms. account, 28, 29 May, 3pp.
- B.5 Typed-up copy of B.2-B.4, paginated 6-19, with added heading 'Progress report on Italian expedition by C.F. Powell' and note at end 'Received in Bristol on June 3'.
- B.6 Ms. account, 30, 31 May, 3, 4 June, paginated 1-10.
- B.7 Telegram from Mrs. Powell, 6 June. Powell's ms. account, 4, 5 June, paginated 1-3, and 6 June.

Balloon flights

- B.8 Ms. account, 20, 21, 22, 23, 24, 25 June, paginated 1-16; copy of telegram re balloon fallen near Minorca 28 June; 'Report for flight 19'.
- B.9 'Expedition to Sardinia 1953'.
15pp. typescript account for 31 May to 23 June, and 1p. typescript 'Letter received from Rome', 29 May, sent by J.W. Webb and J.H. Davies. Two copies.
No ms. version survives for this expedition.
- B.10 Treasury licence for importation (from Padua) of machinery for balloon apparatus, 1954.
- B.11 2pp. typescript account of cosmic ray research, balloon flights and emulsion stacks, and 1p. timetable for visit by Duke of Edinburgh, as part of International Geophysical Year, 1957.
- B.12-B.17 Correspondence with Willcocks (Clevedon) Limited, principally M.J. Willcocks, re manufacture of balloons and other devices.
- B.12 1952. One letter only, and diagrams.
- B.13 1957, February-June. Includes correspondence with others re financial support, specification and costings.
- B.14 1957, July-October. Continuing correspondence re staff, agreement with University, training of personnel, negotiation with D.S.I.R.
- B.15 Drawing of proposed workshop for balloon manufacture, May 1957.
- B.16 1958. Includes draft agreement, progress report, contract.
- B.17 1959-61.
- B.18 Brief correspondence re balloon flights in Scotland, 1959.

SECTION C LECTURES, BROADCASTS, PUBLICATIONS C.1 - C.25

C.1 -C.12 LECTURES, SPEECHES, TALKS, 1949-68

C.13-C.19 BROADCASTS, 1957-69

C.20-C.25 CORRESPONDENCE, 1950-68

The material in this Section is somewhat scanty. The greater part of it consists of lecture material, with a few scripts from broadcasts and some correspondence about publications.

The lecture material includes drafts of Powell's speeches given at conferences, often in his capacity as an officer of the organisation concerned. C.11 contains his address to the Academy of Sciences on the occasion of the award of the Lomonosov Gold Medals for 1967. The content of these lectures and speeches is often concerned with the future of science, and its role in and value to society.

The broadcast scripts are chiefly of BBC radio programmes, and range in topic from cosmic rays to the role of science in society.

The correspondence concerning publications covers not only requests made to Powell for articles, but also requests for advice re the work of others. C.23 contains an article submitted by Powell.

C.1-C.12 LECTURES, SPEECHES, TALKS, 1949-68

- C.1 'Lectures on the development of science', 1949.
2pp. typescript summary for course of four lectures, no indication of place.
- C.2 'Discussion on V-particles and heavy mesons', introduction for Royal Society Discussion meeting, January 1953. Typescript only.
Includes programme of meeting and press-cutting.
- C.3 Correspondence re Lindau meeting of Nobel prizewinners, June 1953, and Powell's lecture on 'High altitude flights with free balloons'.
- C.4 Presidential address given by Powell at Sixth General Assembly of W.F.S.W., Warsaw, September 1959.
Typescript draft only.
- C.5 'Some remarks on the rôle of science in the modern world and the problems arising in its organisation'.
16pp. typescript draft for speech at General Assembly, Association Frédéric et Irène Joliot-Curie, Orsay, 1960.
pp.3-14 typescript version in French (not identical) as delivered and 1p. contribution to discussion. A shortened French version was published under the title 'Conditions du progrès scientifique dans les grands laboratoires' in Sciences.
Folder also includes extract from speech by F. Joliot-Curie, 1958, used by Powell.
- C.6 'Science and Higher Education'.
Address given by Powell to 'Discussion Conference on Science and Education', 11 March 1961.
Typescript only.

Speech delivered by Powell at 22nd Session of the Council of CERN, 12 October 1962.
Typescript only.
- C.7 'Why should we study high-energy Nuclear Physics?'
Address to British Association, September 1964.
Typescript and printed text.

Lectures, speeches, talks

- C.8 'Speech at the degree congregation in the University of Padua in celebration of the 400th anniversary of the birth of Galileo Galilei on March 20th, 1965'.
Typescript only.
See also A.45.
- C.9 'Budapest Symposium', 1965.
Ms. and typescript drafts of Preface to W.F.S.W. booklet (1967) on symposium.
- C.10 'The promise and scope of international scientific co-operation'.
Typescript of speech given at W.F.S.W. Conference on the Conditions and Possibilities of Scientific Co-operation in Europe', Vienna, April 1968.
- C.11 'Address to the Academy of Sciences of the U.S.S.R. on the occasion of the award of the Lomonosov Gold-Medals for 1967', Moscow, 18 June 1968.
Typescript only.
See also A.46-A.56.
- C.12 'The aims and role of science in our time', the first Homi Bhabha Memorial Lecture, delivered at the Tata Institute of Fundamental Research, Bombay, 9 November 1968.
Typescript only, with ms. notes added in 1969.
- C.13-C.19 BROADCASTS, 1957-69
Duplicated typescripts unless otherwise stated.
- C.13 'Cosmic Rays', talk recorded 23 July 1957 as contribution to 'International Geophysical Year' for BBC series 'The World of Science' in 'London calling Asia' programme.
- C.14 'The Origin of Cosmic Radiation'.
Series of four broadcasts, recorded in October and November 1959 for 'The Frontiers of Knowledge' programme, BBC European Service.

Lectures, speeches, talks

- C.15 Powell's typescript draft of 'Talk given by C.F. Powell on radio from Clermont-Ferrand, France, 29 or 30 June 1962'. In French, on Pascal.
- C.16 'Recent Evidence on the Origin of Cosmic Rays', recorded 21 January 1965 for 'The Frontiers of Knowledge' programme, BBC European Service.

'Why should we do pure science?', talk recorded 29 January 1965 for BBC General Overseas Service.

Ms. and typescript draft.
- C.17 'Science and Society in the Thirties', recorded 9 December 1965 for 'The Thirties in Britain' series, BBC Third Programme, with contributions from several distinguished scientists, including Powell.
- C.18 'Fundamental Particles'.

Uncorrected transcript of interview with Powell, c.1965.
- C.19 'Typescript of television interview' with Powell, July 1969.
- C.20-C.23 CORRESPONDENCE, 1950-68
- C.20 The Times, 1950, 1951

Methuen, 1954
- C.21 Science News Journal, 1956
(launching of a new Indian journal; Powell was 'Honorary Patron').

Journal of Scientific Instruments, 1956
Includes paper by Silverstein and Slater forwarded by Powell for publication.
- C.22 United Educators Inc., 1960
re article 'Balloon', by Powell, for Encyclopedia.

Eyre & Spottiswoode, 1960.

Lectures, speeches, talks

- C.23 United Educators Inc., 1968
Correspondence requesting 'statement' about future developments of science.
Includes typescript of 'Science, Education and the Future', article produced by Powell in response.
- C.24 Telegram from Romanian newspaper requesting article 'especially on the relation between war and progress', 1968.
- C.25 Brief correspondence re lectures, 1951, 1968
With E. Broda and others, re lecture on 'Cosmic Radiation', Vienna, 1951.
With University of Warwick Physical Society, 1968.

SECTION D PUGWASH CONFERENCES D.1 - D.19

Powell was involved in the Pugwash movement from its beginning, first as Deputy Chairman and then, from 1967, as Chairman (Memoir, pp.553-4). The surviving material, however, is unfortunately scanty and many of the conferences are unrepresented here.

The material includes several of the addresses delivered by Powell at the conferences, printed matter, press-cuttings, and photographs including several taken at the first and second conferences in 1957 and 1958 (D.12, D.13). Item D.11 contains cards sent to Mrs. Powell in 1982 on the occasion of the 25th anniversary commemorative meeting.

D.1-D.7 Addresses and miscellaneous

Seven folders in chronological order.

D.1 1958

D.2 1962

D.3 1964

Typescript of Powell's address, 'Priorities in science and technology for developing countries', given at 12th Pugwash Conference, with published version which differs from typescript.

D.4 1965-66

Includes typescript of Powell's address, 'The Dragon is now aroused in its lair', given at 16th Pugwash Conference, September 1966.

D.5 1967

D.6 1968

Carbon of joint letter to Editor of The Observer (with R.E. Peierls and J. Rotblat) on 'Disarmament or Disaster'.

D.7 1969

Pugwash conferences

D.8-D.10 Printed material, 1958-69

Includes Pugwash Newsletter, October 1969, containing obituary of Powell (p.23).

3 folders.

D.11 Cards sent to Mrs. Powell, 1982, to mark 25th anniversary commemorative meeting.

Includes photograph of Eaton residence at Pugwash, where first meeting took place in 1957 and which gave its name to the conferences.

D.12-D.18 Photographs

7 folders.

D.12 First conference, 1957, at the residence of Cyrus Eaton.

D.13 Second conference, 1958.

D.14 1959

D.15 1960

D.16 1967

D.17 1969

D.18 n.d.

D.19 Press-cuttings

SECTION E CORRESPONDENCE E.1 - E.76

The correspondence, which survived only by chance from what was thought to be the wholesale destruction of Powell's files, is regrettably small and disproportionately skewed towards the second half of the alphabet. There are virtually no sequences of substance, though Powell enjoyed professional and personal contact with scientists and political figures on the widest international scale.

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|----------|---|---------------------|
| E.1 | Appleton, E.V. | 1952 |
| E.2, E.3 | Bristol University | 1950, 1955-62, 1967 |
| | Miscellaneous correspondence on the affairs of the Physics Department, research, personnel, exchanges and scholarships. | |
| E.2 | 1950, 1955-58 | |
| E.3 | 1959 (Solar flare alarm system; Fulbright scholar and research visitors), 1961-62, 1967 (acceptance of Science Research Council grant for P.F. Fowler). | |
| E.4 | Burhop, E.H.S. | 1956-58, 1962 |
| | Brief exchanges on research, meeting with Russell (1956), recommendations. | |
| E.5 | Cockcroft, J.D. | 1950 |
| | One letter only. | |
| E.6 | Dedijer, S. | 1955 |
| | Isobaric spin. | |
| E.7-E.9 | Dee, P.I. | 1947-55 |
| E.7 | 1947-49. Cosmic ray research, publications, suppliers. | |
| E.8 | 1950-52, 1955. Research, appointments. | |
| E.9 | 1954-55. Invitation and programme for International Physics Conference, Glasgow. | |
| E.10 | Ekspong, A.G. | 1962-63 |
| | Meson research and publications. | |
| E.11 | Essenhigh, R.H. | 1955 |
| | Photography of coal particles: Powell recommends C.R. Burch's reflecting microscope. | |

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|------------|--|---|
| E.12 | Evans, G.R. | 1954 |
| E.13-E.15 | Feather, N. | 1947-54 |
| | E.13 | 1947 (meson transformation), 1949-51. |
| | E.14 | 1953. Proposed monograph by Powell and J. Rotblat. |
| | E.15 | 1954. Collaborative research on balloon flights and results. |
| E.16 | Gunn, J.C. | 1950 |
| | Neutral vector meson. | |
| E.17 | Heitler, W.H. | 1950 |
| | One letter only, 4pp. typescript with ms. additions, on pions. | |
| E.18, E.19 | Houtermans, F.G. | 1953-58 |
| | Collaborative research on balloon flights, supplies of photographic equipment. | |
| | E.18 | 1953-54 |
| | E.19 | 1955. Includes photographic negatives dated on packet '10.2.55' and described as 'Big Monster'; 1958. |
| E.20 | Hutchinson, G.W. | 1964 |
| | Collaborative research with Southampton University on balloon flights from Cardington. | |
| E.21 | Massey, H.W.S. | 1956, 1958 |
| | Proposed flights at great altitude during a solar flare. | |
| E.22 | Pauli, W. | 1952 |
| | Nomination of G. Occhialini for Nobel Prize. | |
| | Polanyi, M. | 1950 |
| | Peace movement. | |
| E.23 | Rinderer, L. | 1958 |
| E.24 | Rochat, O. | 1951 |
| | Collaborative research. | |

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|------------|--|--|
| E.25 | Rogers, G.L. | 1950 |
| | Stereoscopic microscopy. | |
| E.26 | Royal Society | 1958 |
| | Report on Powell's International Geophysical Year (IGY) project on balloon investigation of cosmic radiation associated with solar flares. | |
| E.27 | Salam, A. | 1954 |
| | Brief correspondence only, on hyperons. | |
| E.28 | Sard, R.D. | 1950, 1955 |
| E.29 | Schein, M. | 1952 |
| | Includes letter 4 August from Schein on his part in design for apparatus for determining mean life of μ mesons. | |
| E.30 | Science Museum, London | 1948-49, 1951 |
| | <u>re</u> deposit at Museum of a collection of 45 photographs showing the tracks of atomic particles, with Powell's list of the items and his 'suggested arrangement'. Letter 1951 describes exhibition of Powell's photographs in Atomic Physics Section of Museum. | |
| E.31 | Shapiro, M.M. | 1951, 1953 |
| | Balloon flights, stripped emulsion stack processing. | |
| E.32 | Skinner, H.W.B. | 1958 |
| | Teaching syllabuses. | |
| E.33 | Skobelzyn, D.V. | 1960 |
| | <u>re</u> M.M. Samygin. | |
| E.34, E.35 | Sørensen, S.O. | 1948-57 |
| | E.34 | 1948-52 Research, visits to Bristol and Oslo. |
| | E.35 | 1953 Balloon expedition to Sardinia, 1955, 1957 Plates and publications on mesons. |

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E.48	Ventry, Baron Model airship envelopes.	1957
E.49	Vigneron, L.	1951, 1953
E.50	Voyvodic, L.	1952
E.51	Walden, L.	1955
E.52	Wallis, H.R.E. Congenital pyloric stenosis.	1955
E.53	Walton, S. Radiation hazards; also encloses letter on 'Sputnik effect' by S.S. Nehru.	1958
E.54	Wataghin, G.	1948, 1949
E.55	Weisskopf, V.F.	1947
E.56	West, G.D. Loan of photographs; collaboration in balloon flights.	1949
E.57	Weysenhoff, J. Cosmic Rays Conference, Cracow.	1947
E.58	Wheeler, J.A. Mainly research on mesons.	1947-50
E.59	Whitmore, B.G. Neutron research.	1949, 1956
E.60	Whyte, L.L. History of physics and 'the atomic hypothesis'.	1957-58
E.61	Wilkinson, A. Conditions of work for Powell's scanning observers.	1957
E.62	Williams, E.S.	1960
E.63	Williams, T.I. Information on balloon flights and collaborative research, for publications.	1954

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E.64	Willmore, P.L.	1948
E.65	Wilson, J.G. Publications; research on μ -mesons.	1952, 1953, 1956
E.66	Wirtz, K. Lenses and plates.	1948-49
E.67	Yagoda, H. Correspondence 1949 and 1951 is on stratosphere exposures and includes photographs and tables.	1949, 1951, 1954
E.68-E.70	Yekutieli, G. E.68 1952. Publications and draft paper by Yekutieli. E.69 1953-54. Research on mesons, including Sardinian expedition. E.70 1958	1952-54, 1958
E.71	Young, E.P. Proposed exchange visit with Bulgaria.	1957
E.72	Yukawa, H.	1956
E.73	Zachariasen, W.H.	1948
E.74, E.75	Shorter correspondence, including letters and discoveries from members of the general public. Not indexed. E.74 1951-56 E.75 1957-61	
E.76	Requests for references and advice	1948-62

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