

JOSEPH ALEXANDER GRAY

Judy Scott
Supervised by Shirley Spragge

Queen's University Archives
Kingston, Ontario
April, 1984

TABLE OF CONTENTS

	Page
Biographical Sketch	1
Provenance	2
Restrictions	2
Box Listing for Boxes 1-7 and 10	3
General Description Boxes 8 and 9	4
Detailed Listing Boxes 8 and 9	5

JOSEPH ALEXANDER GRAY

BIOGRAPHICAL SKETCH

Joseph Alexander Gray was born in 1884 in Melbourne, Australia. In 1907 he graduated from Melbourne University with a B.Sc. in Mathematics and Physics, receiving honours and awards for his high achievement in these areas. With the help of an Exhibition of 1851 Scholarship, Gray studied for three years, from 1909 to 1912, under Ernest Rutherford at Manchester, England. He received both his M.Sc. and D.Sc. from Manchester University. In 1913 Gray became a lecturer in Physics at McGill University in Montreal. In the same year he published an article in Philosophical Magazine which summarized experiments that he was working on and which he continued with after World War One. The conclusions on scattering of rays ascertained by Gray were later confirmed by Compton, an American physicist, for whom the "Compton effect" was named. Gray's earlier discovery had been overlooked; he spent much effort in the 1920's trying to gain recognition for his pioneering work.

Gray obtained leave from McGill and joined the Canadian artillery in World War I. He became involved in Sound Ranging in France with the Royal Engineers during the second half of the war, and was greatly respected for his ability in this field. Shortly after the war, in August 1919, he married in London and returned to McGill. At this period he was troubled with illness, but he recovered to become an Associate Professor and take on his first research students.

In January 1924 Gray took the post of Chown Research Professor at Queen's University, where he remained until his retirement in 1952. Gray lived in Kingston until 1962 when he and his wife retired in London, England. Gray died in 1966.

Gray and his wife were often complimented for their hospitality, both by students and friends. They shared an interest in book and manuscript collecting: and Elizabeth Gray Collection is in Special Collections in the Douglas Library. Gray corresponded frequently with Librarians and Book Dealers as well as philatelists, another of Gray's personal interests.

In 1961 Gray attended the Rutherford Jubilee International Conference in Manchester, meeting old friends and prominent men of science. Upon his retirement to England Gray was troubled again with illness and spent several months in hospitals.

Biographical Sketches have been published by:

W.B. Lewis, Biographical Memoirs of Fellows of the Royal Society, 13 (November, 1967), 89-106.

B.W. Sargent, Proceedings of the Royal Society of Canada, Fourth Series, VI (1968), 107-118.

PROVENANCE

Mrs. E. Gray
Deposited to Queen's University 1968.

RESTRICTIONS

None

BOX LISTING Boxes 1-7, 10

Box 1: General Correspondence, 1918 - 1935

Box 2: General Correspondence, 1936 - 1950

Box 3: General Correspondence, 1951 - 1962

 All three boxes are about physics, mainly exchange
 with other physicists, often former students.

Box 4: Correspondence with Ernest Rutherford, 1908 - 1937

Box 5: Miscellaneous items, main importance being material
 on prospective contributions to war effort 1940 - 1942

Box 6: Material relating to technical papers, installation of
 synchrotron, and personal items.

Box 7: Off-prints of his own and papers published by others

Box 10: Memorabilia and personal oddments, diaries, bills, etc.

Note: Boxes 1 - 7 are six inch transfer cases, 8 - 10 are
 cubic foot boxes.

GENERAL DESCRIPTION Boxes 8 and 9

This section of the J.A. Gray collection contains two cubic foot boxes. Material covers the period from 1908 until Gray's death in 1966. The bulk of this collection is general correspondence to and from Gray with colleagues in physics in North America and England, members of the University, and his former students. The greater part of this correspondence includes the years 1930 to 1950. Also included are papers by Gray's students, personal correspondence with family and friends in many parts of the world, and many of Gray's own publications. Gray's interest in book collecting and his hobby of stamp collecting are apparent in his personal papers. Two items of correspondence are with Rutherford, and several of Gray's own papers and talks deal with Rutherford's prominent place in the history of atomic physics. One file contains mementoes and an itinerary of the "Rutherford Jubilee International Conference" that Gray attended in Manchester, England in September, 1961. The papers reflect Gray's interest in improving the Physics Department at Queen's, especially his efforts to obtain a Synchrotron, which was thwarted by a lack of funding during the 1930s and the years of the Second World War. Gray was a person who collected and saved memorabilia, thus interesting events are represented by invitations and clippings. There are eight other boxes in the collection, one cubic foot and seven six inch cases, that contain correspondence, personal items and research papers. Some material and the Gray additions 1976, have not been listed.

DETAILED LISTING Boxes 8 and 9

Box 8

SERIES 1

1) Correspondence, to and from:

A) General, including university, colleagues, National Research Council, Committees.

1. n.d., 1908 - 1933
2. 1934 - 1938
3. 1939 - 1941
4. 1942 - 1945
5. 1946 - 1949
6. 1950 - 1956
7. 1957 - 1966
8. Five letter books, 1956 - 1960

Box 9

B) Student's Letters and Papers, including memos, research papers, correspondence with students.

1. Research papers and theses of Gray's students
2. Correspondence: n.d., 1933 - 1938
3. Correspondence: 1939 - 1961

C) Personal, family, friends, book and stamp collecting

1. n.d., 1913, 1936 - 1959
2. 1960 - 1962, including trip to England
3. n.d., 1937 - 1963 stamp collecting

D) Rutherford draft n.d., copy 1933

SERIES 2

2) Articles and Reprints

1. Papers and Talks by Gray regarding physics, Rutherford
2. Printed Matter including mementoes, interesting articles, university and society circulars

Detailed Listing Boxes 8 and 9 continued:

Box 9

SERIES 3

3). Subject File

1. Synchrotron (Gray's file) n.d., 1946 - 1949
2. Rutherford Jubilee International Conference,
September, 1961 in Manchester, England
3. Photographs, Queen's Synchrotron and Ontario Hall
4. Photographs, International Conference on Nuclear
Structure, Queen's, 1960. Includes Key to photographs.
5. Invitations to lectures, convocations
6. Catalogues and Price Lists
7. Miscellaneous especially physics equations, graphs