

University of Toronto Archives

Accession No. **Provenance Heading**

B1993-0036 ALLIN, Elizabeth Josephine

Records [textual ; graphic], 1910-1989, 1.32 m.

Correspondence, diaries, course notes, lecture notes, notes, manuscripts, publications, and photoprints documenting the activities of Elizabeth Josephine Allin, Annie Theresa Reed and Kathleen May Crossley as students, staff and faculty in the Department of Physics, University of Toronto.

Access:

Sous fonds I: Reed, Annie Theresa

Annie Reed (BA, M&P, 1897) was secretary of the Department of Physics from 1910 to 1946. At various times she was also class assistant.

/Box (file) No.	Title	Date(s)
/001 (01)	Journal of seminars held in the Department of Physics, 1910-1911 - 1920-1921	1910-1921
(02)	Journal of seminars held in the Department of Physics, 1921-1922 - 1931-1932	1921-1932
(03)	Lists of seminars (1940-1964) and special lectures (1948-1964) held in the Department of Physics	1940-1964

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Sous fonds II: Crossley, Kathleen May

Kathleen Crossley began her career as an assistant demonstrator in the Department of Physics in 1919. Two years later she was appointed a demonstrator but had to wait another fourteen years before being promoted to the position of lecturer. In 1940 she was promoted to the position of assistant professor, the position she held at her retirement in 1960. She stayed on as a special instructor until 1964.

/Box (file) No.	Title	Date (s)
/001 (04)	Correspondence and notes	1925-1959
(05)	British Association for the Advancement of Science (94th annual meeting : 1924 : Toronto). Programmes and guides	1924
/001 (06)	Notes on trip to Copenhagen	19-
(07)	Diary, 1920, 1921, 1922	1920-1922
(08)	Diary, 1922, 1923, 1924	1922-1924
/002 (01)	Diary, 1926, 1927	1926-1927
(02)	Diary, 1928, 1929; page from diary of trip to New York City, 1928-1929	1928-1929
(03)	Diary, 1930, 1931	1930-1931
(04)	Diary, 1932, 1933	1932-1933
(05)	Diary, 1934, 1935, 1936	1934-1936
(06)	Diary, 1937, 1938, 1939	1937-1939
(07)	Diary, 1940, 1941, 1942	1940-1942
(08)	Diary, 1943, 1944, 1945	1943-1945
(09)	Diary, 1946, 1947	1946-1947
(10)	Diary, 1948, 1949	1948-1949
/003 (01)	Diary, 1950, 1951	1950-1951
(02)	Diary, 1952, 1953	1952-1953
(03)	Diary, 1954, 1955	1954-1955
(04)	Diary, 1956, 1957	1956-1957
(05)	Diary, 1958, 1959	1958-1959
(06)	Diary, 1960, 1961	1960-1961
(07)	Diary, 1962, 1963	1962-1963
(08)	Diary, 1964, 1965	1964-1965
(09)	Diary, 1966, 1967	1966-1967
(10)	Diary, 1968, 1969	1968-1969
/004 (01)	Diary, 1970, 1971	1970-1971
(02)	Diary, 1978	1978

B1993-0036 ALLIN, Elizabeth Josephine**Sous fonds II: Crossley, Kathleen May**

The following notebooks contain lists of expenses related to household expenses and to trips taken in Canada, to the United States and to Europe.

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|------|---|-----------|
| (03) | Notebooks--expenses: Undated; Boston and Harvard, 1937; England, 1937 | n.d.-1937 |
| (04) | Notebooks--expenses: 1947; 1948?; 1949; England, 1951; 1952; 1953; 1956; 1957; 1958; 1959; 1960 | 1951-1960 |
| (05) | Notebooks--expenses: 1961 | 1961 |
| (06) | Notebooks--expenses: 1965, 1966; 1967 | 1965-1967 |
| (07) | Notebooks--expenses: 1967-1968; 1968-1970; 1970-1971 | 1967-1971 |

/001(25)P - /001(35)P Photoprints and negatives 1916-195-

Includes a photoalbum of family photos and images of her student days at the University of Toronto, including Convocation; group shots of the British Association for the Advancement in Science; snapshots of trips to western Canada, Halifax and the Muskokas in 1920s and 1930s.

/002P Panoramic Photographs 192- - 195-?

Includes the 1924 meeting of the British Association for the Advancement of Science in Edmonton; 1928 Annual meeting of St. Hilda's College Alumnae Association; and one unidentified meeting of Women ca. 1950s?

Access to panoramic prints restricted due to conservation.

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/Box (file) No.	Title	Date(s)
Sous fonds III: Allin, Elizabeth Josephine		
Series I: Personal files		
/004	(08) Biographical file	19-
/005	(01) Allin, Elizabeth J. "The hyperfine structure of spectral lines..." PhD thesis (University of Toronto)	1931
/005	(02) Correspondence	1975-1984
	(03) Memorabilia (events, University of Toronto)	1932-1983
	(04) Memorabilia (50th anniversary reunion, Class of 3T0, Maths and Physics)	1980
	(04) Memorabilia (Wick School reunion)	1990
	(05) Civil defence course, 1951. Correspondence, course material, diploma	1951-1952
	(06) Lectures on civil defence	1952-1953
Series II: Lecture notes		
These lectures were delivered in the Department of Physics at the University of Toronto		
	(07) "Real numbers; infinite series; variables and functions; differential equations". Mimeo.	19-
	(08) "Thermal diffusion"	194-
	(08) "Isotopes"	19-
/006	(01) "Introduction to atomic physics: X-rays" (Graduate Department of Physics, No. 30)	194-
	(02) University of Toronto. Department of Physics. Weekly schedules, 1954-1955, 1955-1956; room capacities	1954-1956
Series III: Course notes		
These files contain the course and lab notes taken by Elizabeth Allin while she was taking post-doctoral studies at Cambridge University in 1933-1934.		
	(03) Course notes, Cambridge University. Notes from articles, offprints (1)	1914-1932
	(04) Course notes, Cambridge University. Notes from articles, offprints (2)	1914-1932

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/Box (file) No.

Title

Date(s)

Sous fonds III: Allin, Elizabeth Josephine

Series III: Course notes

/006	(05)	Course notes, Cambridge University. Autumn, 1933. "Construction of matter"	1933
	(06)	Course notes, Cambridge University. Autumn, 1933. "Field theory of matter (Born)"	1933
	(07)	Course notes, Cambridge University. Autumn, 1933. "Quantum mechanics of atoms and molecules (Lennard-Jones)"	1933
	(08)	Course notes, Cambridge University. Autumn, 1933. "Dynamical theory of gases (Powell)" (1)	1933
	(09)	Course notes, Cambridge University. Autumn, 1933. "Dynamical theory of gases (Powell)" (2)	1933
/007	(01)	Course notes, Cambridge University. 1933-1934. "Theoretical colloquia"	1933-1934
	(02)	Course notes, Cambridge University. Spring, 1934. "Physical optics (Born)"	1934
	(03)	Course notes, Cambridge University. Spring, 1934. "Quantum mechanics (Dirac)"	1934
	(04)	Course notes, Cambridge University. Spring, 1934. "Statistical mechanics (Fowler)" (1)	1934
	(05)	Course notes, Cambridge University. Spring, 1934. "Statistical mechanics (Fowler)" (2)	1934
	(06)	Course notes, Cambridge University. Spring, 1934. "Quantum theory of dispersion (Hulme)"	1934
	(07)	Course notes, Cambridge University. Spring, 1934. "Ionisation and radioactivity (Rutherford)"	1934
/008	(01)	Course notes, Cambridge University. Spring, 1934. "Functions used in mathematical physics (Steen)"	1934
	(02)	Course notes. Cambridge University. "Final report". Undated (spring, 1934)	1934
	(03)	Course notes. Cambridge University. Miscellaneous notes	193-
	(04)	Course notes. Cambridge University. Tables and graphs	193-

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/Box (file) No.	Title	Date(s)
Sous fonds III: Allin, Elizabeth Josephine		
Series IV: Publications		
/008	(05) List of publications by Elizabeth Allin	
	(06) 1927. Allin and H.J.C. Ireton. "The under-water spark spectra of certain elements", <u>Transactions of the Royal Society of Canada</u> , 3rd series, XXI, III, 13-18	1927
	(07) 1927. "On the under-water spark spectra of various metals", <u>Transactions of the Royal Society of Canada</u> , 3rd series, XXI, III, 231-233	1927
	(08) 1928. McLennan, J.C., R. Ruedy, and E. Allin. "Absorption in excited helium", <u>Transactions of the Royal Society of Canada</u> , 3rd series, XXII, III, 273-277	1928
	(09) 1929. McLennan, J.C. and E. Allin. "Fine structure of spectral lines", <u>Transactions of the Royal Society of Canada</u> , 3rd series, XXIX, III, 7-11	1929
	(10) 1929. McLennan, J.C. and E. Allin. "Fine structure of spectral lines", <u>Philosophical Magazine</u> , VIII (October, 1929), 515-521	1929
	(11) 1930. McLennan, J.C. and E. Allin. "Fine structure of some lines in the visible region of the spectrum of thallium III", <u>Proceedings of the Royal Society</u> , 129 (1930), 43-47	1930
	(12) 1930. McLennan, J.C. and E. Allin. "The hyperfine structure of some lines in the arc and first spectrum of indium", <u>Proceedings of the Royal Society</u> , 129 (1930), 208-210	1930
	(13) McLennan, J.C., E. J. Allin and K. E. Hall. "The nuclear movement of the Indium atom", <u>Proceedings of the Royal Society</u> , A, 133 (1931), 333-335	1931
	(14) 1932. McLennan, J.C., E. Allin and A.C. Burton, "The change in the infra-red reflecting power of bismuth in a magnetic field", <u>Philosophical Magazine</u> , Series 7, vol. 14 (September, 1932), 509-512	1932
	(15) 1939. "Nuclear disintegration", <u>Journal of the Royal Astronomical Society</u> , 33 (1939), 151-161	1939

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B1993-0036 ALLIN, Elizabeth Josephine

/Box (file) No.

Title

Date(s)

**Sous fonds III: Allin, Elizabeth Josephine
Series IV: Publications**

- /008 (16) 1953. Noakes, G.E. and Elizabeth J. Allin. "Interference effects in the small angle scattering of X rays by small particles", Canadian Journal of Physics, 31 (January, 1953), 40-48 1953
- (17) 1954. Allin, Elizabeth J. and W.P. Wallace. "Impurities in monetary silver", American Numismatic Society Museum Notes VI, 35-67 1954
- (18) 1955. "Infrared absorpton of liquid and solid hydrogen", Physical Review, 98, 2, (1955-04-15), 554-555 1955
- (19) 1955. Hare, W.F.J., Elizabeth Allin, and H.L. Welsh, "Infrared absorpton of liquid and solid hydrogen with various ortho-para ratios", Physical Review, 99, 6, (1955-09-15), 1887-1888 1955
- (20) 1956. Allin, Elizabeth J., T. Feldman, and H.L. Welsh, "Raman spectra of liquid and solid hydrogen", Journal of Chemical Physics, 24, 5, 1116-1117 (May, 1956), 1 1956
- (21) 1956. Cho, C.W., Elizabeth J. Allin and H.L. Welsh, "Structure of the infrared "atmospheric" bands in liquid oxygen", Journal of Chemical Physics, 25, 2, (August, 1956), 371-372 1956
- (22) 1957. Gush, H.P., W.F.J. Hare, Elizabeth J. Allin, and H.L. Welsh, "Double transitions in the infrared spectrum of solid hydrogen", Physical Review, 106, 5 (1957-06-01), 1101-1102 1957
- (23) 1958. Allin, E. J., H.P. Gush, W.F.J. Hare, and H.L. Welsh, "The infrared spectrum of liquid and solid hydrogen", No. 1 of the Supplemento of Nuovo Cimento, Vol. 9, Series X, (1958), 77-83 1958
- (24) Allin, Elizabeth J., H.P. Gush, W.F.J. Hare, J.L. Hunt and H.L. Welsh, "Le spectre infrarogue de l'hydrogene gazeux, liquide et solide", Proprietes optiques et acouttiques des fluides comprimés et actions intermoleculaires, Colloques internationaux du centre national de la recherche scienfitique (1957), 1959, 21-39 1959

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/Box (file) No.	Title	Date(s)
Sous fonds III: Allin, Elizabeth Josephine		
Series IV: Publications		
/008 (25)	1960. Gush, H.P., W.F.J. Hare, Elizabeth J. Allin, and H.L. Welsh, "The infrared fundamental band of liquid and solid hydrogen", <u>Canadian Journal of Physics</u> , 38 (1960), 176-193	1960
(26)	1962. Bhatnagar, S.S., Elizabeth J. Allin and H.L. Welsh, "The raman spectra of liquid and solid H ₂ , D ₂ , and HD at high resolution", <u>Canadian Journal of Physics</u> , 40 (1962), 9-23	1962
(27)	1962. Landau, Alexandra, Elizabeth J. Allin and H.L. Welsh, "The absorption spectrum of solid oxygen in the wavelength region from 12,000 Å to 3300 Å", <u>Spectrochimica Acta</u> , 18 (1962), 1-19	1962
(28)	1963. Cho, C.W., E. J. Allin and H.L. Welsh, "Effect of high pressures on the infrared and red atmospheric absorption band systems of oxygen", <u>Canadian Journal of Physics</u> , 41 (1963), 1991-2002	1963
(29)	1965. Soots, V., Elizabeth J. Allin and H.L. Welsh, "Variation of the raman spectrum of solid hydrogen with ortho-para ratio", <u>Canadian Journal of Physics</u> , 43 (November, 1965), 1985-1995	1965
(30)	1965. Allin, E. J., A.H. McKague, V. Soots, and H.L. Welsh, "The raman spectrum of solid hydrogen", <u>Journal de Physique</u> , 26 (Novembre, 1965), 615-620	1965
(31)	1967. "An intensity anomaly in the raman spectra of solid and liquid hydrogen and deuterium", <u>Canadian Journal of Physics</u> , 45 (1967), 3589-3595	1967
(32)	1967. Allin, Elizabeth J., A.D. May, B.P. Stoicheff, J.C. Stryland, and H.L. Welsh, "Spectroscopy research at the McLennan Physical Laboratories of the University of Toronto", <u>Applied Optics</u> , 6 (October, 1967), 1597-1608	1967

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/Box (file) No.	Title	Date(s)
Sous fonds III: Allin, Elizabeth Josephine		
Series IV: Publications		
/008	(33) 1969. Welsh, H.L., Elizabeth J. Allin and V. Soots, "The raman spectrum of solid hydrogen; a study in molecular interactions", [chapter for book?], 343-364	1969
(34)	1969. Tabisz, G.C., Elizabeth J. Allin, and H.L. Welsh, "Interpretation of the visible and near-infrared absorption spectra of compressed oxygen as collision-induced electronic transmissions", <u>Canadian Journal of Physics</u> , 47 (1969), 2859-2871	1969
(35)	1970. Mathai, P.M. and Elizabeth J. Allin, "Magnon scattering in the raman spectrum of -oxygen", <u>Canadian Journal of Physics</u> , 48 (1970), 1518-1519	1970
(36)	1971. Mathai, P.M. and Elizabeth J. Allin, "Low frequency raman spectra of $^{-16}\text{O}_2$, $^{18}\text{O}_2$, and $-\text{N}_2$ ", <u>Canadian Journal of Physics</u> , 49, 15 (November, 1971), 1518-1519	1971
(37)	1972. Prior, William R.C. and Elizabeth J. Allin, "Fundamental and overtone vibrational transitions in the raman spectrum of h.c.p. solid hydrogen", <u>Canadian Journal of Physics</u> , 50, 13 (1972), 1471-1479	1972
(38)	1972. Mannik, L. and Elizabeth J. Allin, "The (ν_1 , $2\nu_2$) vibron-photon infrared absorption band of solid CO_2 ", <u>Canadian Journal of Physics</u> , 50, 18 (1972), 2105-2110	1972
(39)	1973. Prior, William R.C. and Elizabeth J. Allin, "Anisotropic intermolecular interactions in the rotation-vibration raman spectrum of solid hydrogen", <u>Canadian Journal of Physics</u> , 51, 4 (1973), 405-413	1973
(40)	1973. Prior, William R.C. and Elizabeth J. Allin, "The Q branch of the fundamental raman band of the ordered phase of solid hydrogen and deuterium", <u>Canadian Journal of Physics</u> , 51, 18 (1973), 1935-1943	1973
(41)	1977. "Physics at the University of Toronto, 1907-1977", <u>Physics in Canada</u> , 33, 2 (1977), 26-31, with covering correspondence	1977

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Sous fonds III: Allin, Elizabeth Josephine**Series IV: Publications**

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|------|------|---|-----------|
| /008 | (42) | 1979. "The vibrational Raman spectrum of compressed solid hydrogen", <u>Canadian Journal of Physics</u> , 57, 3 (1979), 442-448 | 1979 |
| | (43) | Allin, Elizabeth J. <u>Physics at the University of Toronto, 1843-1980</u> . 1981 | 1981 |
| /009 | (01) | Mitchell, C. M. "Derivation of the unit cell from powder patterns of monoclinic structures", Slide photostats for paper presented at the ACA meeting in Chicago, Ill. | 1951 |
| | (02) | Quinlan, Florence M. "Spectroscopic standards of wave-length", University of Toronto: PhD thesis, n.d. [1932] | 1932 |
| | (03) | Manuals, addresses, and articles on radiation | 1949-1955 |
| | (04) | Wakefield, Ernest H. Articles on radiation, with covering correspondence | 1953-1955 |

Series VI: Research files

The following files were assembled by Professor Allin for the writing of her book, Physics of the University of Toronto, 1843-1980 (1981).

- | | | |
|------|--|-----------|
| (05) | University of Toronto. Sesquecentennial history project. Correspondence between Elizabeth Allin and (primarily) Robin Harris, University Historian | 1973-1981 |
| (06) | University of Toronto. Department of Physics history project. Miscellaneous notes for departmental history | 197- |
| (07) | University of Toronto. Department of Physics history project. Notes for chapters by Elizabeth Allin and others | 197- |
| (08) | University of Toronto. Department of Physics history project. Notes on Computation Centre | 197- |
| (09) | University of Toronto. Department of Physics history project. Biographical notes and articles re departmental faculty members | 1936-1980 |
| (10) | University of Toronto. Department of Physics history project. Notes for staff lists, 1843-1964 | 197- |

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Sous fonds III: Allin, Elizabeth Josephine

Series IV: Research files

- /009 (11) University of Toronto. Department of Physics history project. Notes on departmental staff and drafts of appendicies; press clippings 197 -1981
- (12) University of Toronto. Department of Physics history project. Notes on departmental faculty, staff, and students and research 1970-1980
- (13) University of Toronto. Department of Physics history project. Notes on numbers of students 197-
- (14) University of Toronto. Department of Physics history project. Lists of graduate (MA and PhD) students 1971-1980
- (15) University of Toronto. Department of Physics history project. Notes on Harold Chappell as the departmental glassblower 197-
- (16) Chappell, Reuben Harold. "Sixty years in retrospect" TS of address for glasblowers' symposium, 1972, with covering letter, 1989 1972, 1989
- (17) University of Toronto. Department of Physics history project. Notes re special lectures 197-
- (18) University of Toronto. Department of Physics history project. Notices for special lectures and symposia, 1930, 1937, 1979-1983 1930-1983
- (19) University of Toronto. Department of Physics history project. Captions for photographs [photo included] 197-
- /010 (01) University of Toronto. Department of Physics history project. List of publications about the Department
- (02) University of Toronto. Department of Physics history project. Articles from Beatrice Read (includes two by her and one by Dearle and Kingdon) passed on to Elizabeth Allin for the project 1910-1928
- (03) University of Toronto. Department of Physics history project. Articles by John Satterly
- (04) University of Toronto. Department of Physics history project. Biographical articles on Lord Rutherford and Alexander Boyd McLay 1938, 1968
- (05) University of Toronto. Department of Physics history project. Articles by P.M.S. Blackett, Frederich Hund, Robert A. Millikan, and Victor F. Weisskopf; The Scientific Education of Physicists (1952) 1931-1970

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Sous fonds III: Allin, Elizabeth Josephine

Series V: Photoprints and Negatives

/001(01) - /001(23)

192- - 196-

Mainly copy prints collected of historical photographs of the Physics department. Most were in an album and page numbers are indicated on the folders. Some originals are included.

List of books about Departmental activities consulted by Elizabeth Allin for the writing of the history

Ball, Don. A short history of engineering science at University of Toronto. November, 1970

Hewitt, J. S. and K. G. McNeill. A final report on the University of Toronto Linac Project, 1966-1978.

University of Toronto. Department of Physics. Research in the physics of condensed matter. March, 1980