# Volkoff Family fonds

Compiled by Erwin Wodarczak (2022)



University of British Columbia Archives





# **Table of Contents**

# • Fonds Description

- o Title / Dates of Creation / Physical Description
- Biographical Sketch
- o Custodial History
- o Scope and Content
- o Notes

## • Series Descriptions

- Personal George and Olga Volkoff
- o Research and Reports
- o Published Articles
- o Volkoff Family History
- o Photographs
- File List
- **Catalogue entry** (UBC Library catalogue)

# **Fonds Description**

# Volkoff Family fonds. – 1906-2019.

72 cm of textual records.163 photographs.4 compact disks.Memorabilia.

# **Biographical Sketch**

George Michael Volkoff was a prominent theoretical physicist, known for his pioneering work on neutron stars; his calculations for the design of the CANDU nuclear reactor during World War II; and his important role at the University of British Columbia as a teacher, researcher, and administrator. He was born in Moscow, Russia, on 23 February 1914. With his family, he emigrated to Canada when he was 10 years old – settling first in Winnipeg, then in Vancouver where he attended Lord Roberts School. His father, Mikhail Mikhailovich Volkoff (spelled "Volkov" in Russia) was an engineer, but could not find appropriate work in Canada. The family relocated to Harbin, Manchuria, in 1927, where George attended a Russian-language high school, and his father taught at a Russian technical school.

George returned to Vancouver in 1930 to attend the University of British Columbia, where he would earn a B.A. in physics in 1934, followed by an M.A. in 1936. He was a brilliant student, finishing top of his class in 1934 and winning the Governor-General's Award. His mother had died in Manchuria in 1928. His father returned to the Soviet Union in 1936, only to be caught up in the Stalinist purges of that period. In 1937 he was arrested and exiled to a work camp, where he died in 1940. Before this happened, however, he corresponded regularly with George. He also compiled a history of his family and collected various family documents, all of which he sent to his son before his arrest.

As a graduate student at the University of California, Berkeley, George wrote his pioneering paper, "On Massive Neutron Cores," with J. Robert Oppenheimer as coauthor. In this paper he postulated the existence of neutron stars, three decades before they were actually observed in nature. After earning his Ph.D. in physics at Berkeley in 1940, he continued to investigate topics in nuclear physics.

George returned to UBC in 1940 as an assistant professor in the Department of Physics and, apart from his war work, remained there for the rest of his career – he was promoted to full professor in 1946. From 1961 to 1970, he was the head of his department, and in 1970 he was appointed Dean of Science, succeeding his brother-inlaw Vladimir Okulitch – he held that position until his retirement in 1979. During World War II George lived in Montreal, where he worked in the Allied war effort at the University of Montreal, designing the first nuclear reactor to produce plutonium and other nuclear materials in connection with the Manhattan Project. It was completed in 1945, and the design eventually became known as the CANDU reactor. For this he was awarded an honorary doctorate in 1945 by UBC. In 1946, he was also made a member of the Order of the British Empire.

During the Cold War, George carried out important work as a liaison with scientists from the Soviet Union, and translated many Russian-language physics articles into English. He served as president of the Canadian Association of Physicists from 1962 to 1963. In 1994, George's earlier work on neutron stars was largely acknowledged by his appointment as an officer of the Order of Canada.

In 1940 George married Olga Okulitch, whom he had met while he was a student at UBC. He had become good friends with her and her family. The Okulitchs were also Russian emigres – they had fled during the 1917 Revolution, eventually settling on a family farm in Abbotsford. Like George, Olga had been an outstanding student (B.A. 1933, M.A. 1935), majoring in bacteriology and microbiology, and was also an excellent scientist. While living in Montreal she worked on the first commercial production of penicillin. She later taught at UBC and did research in industrial mycology. Olga and George would enjoy almost sixty years of married life together, living in the University Hill neighbourhood just off-campus. They had three daughters: Elizabeth, Alexandra, and Olga.

Two of Olga's brothers, Vladimir and George, also attended UBC, majoring in geological engineering and dairying, respectively. A third brother, Vladislav ("Lindy") took the UBC agriculture occupational training course. Vladimir Okulitch went on to become the first Dean of Science at UBC, after the Faculty of Arts and Science was split in 1963; George eventually became general manager of Dairyland; and Vladislav became manager of the Okulitch family farm.

George Volkoff suffered a severe brain hemorrhage in 1996 which left him paralyzed, but still able to speak. He spent the rest of his life in the extended care ward of UBC Hospital. He died on 24 April 2000. His wife Olga died on 10 January 2005.

# **Custodial History**

Much of the Volkoff Family History series was created or collected by Mikhail Mikhailovich Volkoff before being sent to George Volkoff in 1937. After George Volkoff's death these materials, together with George and Olga Volkoff's own papers, were kept by Elizabeth Bell (Volkoff) before being donated to UBC Archives in 2013 and 2022.

# Scope and Content

Fonds consists of records documenting the history of the Volkoff family, in particular the life and career of George Volkoff. It includes manuscripts, correspondence, research notes, academic records and other official documentation, certificates, published items, photographs (black and white prints of various sizes, black and white 35mm negatives, and digital scans from original prints), memorabilia, and digital media. The fonds is arranged in the following series: Personal – George and Olga Volkoff, Research and Reports, Published Articles, Volkoff Family History, and Photographs.

# Notes

File list available.

Donated to the University Archives in two accessions: by Elizabeth Bell in 2013, and by Elizabeth Bell and Alexandra Volkoff in 2022.

The Volkoff family retains ownership of the two photograph albums, which were loaned to the Archives to allow for scanning of selected photographs for the Archives' collections.

Photographs 2.1/59 to 2.1/116 are available as digitized images only.

Much of the manuscripts, correspondence, and official documents in the Volkoff Family History series is written in Russian (Cyrillic alphabet). Some official documents originating from Harbin, Manchuria are written in Chinese.

Oversized documents are stored separately in Box OVR 19. Two memorabilia items are stored separately in UBC Archives Artifacts Box 4. The CDs are stored with the Archives' digital media collections.

See also the interview with George Volkoff, part of the UBC Professors Emeriti Oral History Project: Part 1, Part 2.

# **Series Descriptions**

**Personal – George and Olga Volkoff series. –** 1926-2000.

13 cm of textual records.2 items of memorabilia.

Series consists of records documenting the personal and academic lives of George Volkoff and Olga Volkoff (Okulitch), and includes correspondence, academic records and certificates, event programmes, copies of George Volkoff's M.A. and Ph.D. dissertations, published items, and two medals. Correspondence includes two letters from famed American physicist J. Robert Oppenheimer.

Files are arranged in chronological order.

Oversized documents and medals are stored separately.

```
Research and Reports series. – 1944-1957.
```

11 cm of textual records.

Series consists of technical reports authored by George Volkoff and others. Most of the reports are unpublished, and some were originally "classified", and are about various aspects of work experimental and theoretical work done at the Montreal Laboratories for the Manhattan Project during and after World War II. There is also one report to the Canadian Association of Physicists co-written by Volkoff.

Files are arranged in chronological order.

```
Published Articles series. – 1936-2001.
10.5 cm of textual records.
```

Series consists of articles written and published by or about George Volkoff. Some are academic research articles, while others are of a more general nature.

Files are arranged in chronological order.

Volkoff Family History series. – 1906-2019.

25.5 cm of textual records.4 compact disks.1 item of memorabilia.

Series consists of records documenting the history of the Volkov/Vokkoff family, and includes correspondence, a cloth mail-bag which once held much of the correspondence, official documents such as passports and marriage certificates, hand-

written accounts of family history by Mikhail Mikhailovich Volkoff, transcriptions of correspondence and family history manuscripts translated into English from the original Russian, and digital copies of these transcriptions stored on CDs.

Files are arranged in chronological order

Many of the manuscripts, correspondence, and official documents are written in Russian (Cyrillic alphabet). Some official documents originating from Harbin, Manchuria are written in Chinese.

Some manuscripts are hand-bound.

Photographs series. – 1915-1994. 163 photographs.

Series consists of photographs showing members of the Volkoff family, and includes 61 black and white prints of various sizes, 36 black and white 35mm negatives, and 58 digital scans from original prints.

Digital scans were taken from selected photographs included in two photograph albums which remain with the Volkoff family.

Photographs are numbered UBC 2.1/1 to UBC 2.1/119.

# File List

# BOX 1

# PERSONAL – GEORGE AND OLGA VOLKOFF

# Academic documents

1-1	[George Volkoff – Report cards and certificates] 1926-1927 - from Lord Roberts School, Vancouver
1-2	[George Volkoff – Certificates, etc.] 1926-1969
1-3	Academic transcripts – OV & GMV 1931-1940 - OV = Olga Volkoff, GMV = George Michael Volkoff
1-4	UBC certificate, Honours in physics and mathematics 10 May 1934 - George Michael Volkoff
1-5	"Determination of Mean Lives of Excited Atoms" April 1936 - George Volkoff's MA thesis from UBC - bound – includes photo inserts as illustrations
1-6	"The Oppenheimer-Phillips Process" 1939-1940 [3 folders] - manuscript of George Volkoff's article, published in the journal "Physical Review" in May 1940 - includes off-print copy of published article, plus off-prints of Volkoff's article "On the Equilibrium of Massive Spheres" and his published PhD dissertation "On Massive Neutron Cores" (February 1939)
1-7	<ul> <li>"I. The Equilibrium of Massive Neutron Cores II. The Oppenheimer-Phillips Process" [1940]</li> <li>George Volkoff's PhD dissertation from the University of California, Berkeley</li> <li>bound – includes published version of part I.</li> </ul>
Honours – Non-academic	

1-8 [Honours, etc.] 1946-2000

- 1-9 [Covering letters National Research Council of Canada membership certificates] 1969, 1971
   - certificates stored with oversize items
- 1-10 Order of Canada 1994
   includes official notification, ceremony programme, and letters of congratulation

## Other documents

- 1-11 Letters re. U.S. university applications and acceptance at Berkeley 1931-1946
   also UBC correspondence and notifications
- 1-12 [Event programmes] 1934-1947
   Congregation 1934, Congregation 1945, formal opening of Physics Building (1947), special lecture series on "Recent applications of modern physics" [n.d.]

## BOX 2

- 2-1 Clippings 1934-2000
- 2-2 Correspondence J. Robert Oppenheimer January 1944
   two hand-written letters from J. Robert Oppenheimer (signed as "Oppie") to George Volkoff regarding his PhD dissertation includes dated envelope
   originally found inserted in Volkoff's PhD dissertation
- 2-3 [Biographical] 1946-2000
   includes CVs, biographical sketch, and obituary from "Physics Today Online"
- 2-4 Toast proposed at the dinner honouring President Gage 2 April 1971

Oversized documents – stored in UBC Archives Box OVR 19

"Attestat" [school certificate] 1930 [oversize] - Russian/Cyrillic and Chinese texts

[UBC degrees] 1933-1936 [oversize] - Olga Okulitch, BA, 1933 - George Volkoff, BA, 1934 - Olga Okulitch, MA, 1935

- George Volkoff, MA, 1936

University of California – Ph.D. certificate – George Michael Volkoff 25 May 1940 [oversize]

UBC – D.Sc. honorary degree certificate – George Michael Volkoff October 1945 [oversize]

Order of the British Empire – membership certificate – George M. Volkoff 1 July 1946 [oversize]

National Research Council of Canada – membership certificates – George Michael Volkoff 20 October 1969, 19 August 1971 [oversize] - see also file 1-9

Royal Society of Canada – certificate – George M. Volkoff [1978?] [oversize]

Order of Canada – certificate – George Michael Volkoff 13 April 1994 [oversize]

Memorabilia - stored in UBC Archives Artifacts Box 4

George Volkoff's Governor-General's Award, in case 1934

George Volkoff's Centennial Medal and pin, in case 1967

BOX 2 (cont.)

2-5

### RESEARCH AND REPORTS

- "Lectures on Pile Theory" George Volkoff 1944-45
  - I. Introductory remarks... [2 copies]
  - II. Diffusion of thermal neutrons [2 copies]
  - III. Slowing-down of fast neutrons [2 copies]
  - IV. Multiplying media... [2 copies]
  - V. Reflectors [2 copies]
  - VI. Time-Dependent Phenomena (Pile Kinetics)

- annotated – where there are two copies, one is marked "Secret" and the second has that designation whited-out

2-6 "Some Engineering Aspects of Working Piles" – R.E. Newell 1944-45
- 3 untitled lectures – all marked "Secret"

2-7 ["Secret" research] 1944-46

- "Critical Conditions for a Multiplying Spherical Core with an Infinite Reflector of the Same Scattering Properties" - declassified

- "Application of "Synthetic" Kernels to The Study of Critical Conditions in Multiplying Sphere with an Infinite Reflector" – censored, some passages redacted

- "Diffusion Theory Expressions for the Thermal Utilization Factor f in Cells with Slab, Cylindrical and Spherical Geometry" – classified secret

- "Critical Radius of a Multiplying Spherical Core Surrounded by a Non-Multiplying Reflector of Finite Thickness" – classified secret
- annotated

2-8 [reports by George Volkoff and others] 1944-50

- Critical Radius of a Multiplying Spherical Core... - marked "Unclassified"

- Critical Radius of a Strongly Multiplying Sphere... - J. LeCaine

- Application of "Synthetic" Kernels to the Study of Critical Conditions... - G. Volkoff and J. LeClaine

- A Table of Integrals Involving the Functions  $E_n(x)$  – no classification given

- A Note on the Density of Thermal Neutrons in a Pile – L. Kowarski and G. Volkoff

- Notes on Cadmium Ratio Measurements

- Unclassified Guide to the Security Classification of Atomic Energy Project Information – National Research Council of Canada – marked "Unclassified"

- annotated – authored by Volkoff unless otherwise indicated – marked

"Secret" unless otherwise indicated

- 2-9 "Experimental Neutronics" B.W. Sargent Jan.-June 1945
  - I. Introduction

- III. Detectors in Scattering Media

- IV. Methods of Measuring Capture Cross-sections

- V. Transport Mean Free Path

- VII. The Measurement of a Diffusion Length

- VIII. Measurement of the Laplacian of a Multiplying System

- annotated – all marked "Secret"

- 2-10 "A High Energy Laboratory for Canada" January 1957
   report to the executive of the Canadian Association of Physicists
   co-authored by George Volkoff
- BOX 3

### PUBLISHED ARTICLES

3-1	[Articles and offprints] 1936-2001 - articles and technical reports by and about both Olga Okulitch (Volkoff) and George Volkoff
3-2	Scientific articles 1939-1947 - offprints of journal articles by Volkoff et. al.
3-3	Scientific articles 1943-1963, 2001 - manuscripts and offprints of journal articles by Volkoff et. al. – mss. undated
3-4	"Atomic Energy" – G.M. Volkoff, P.R. Wallace [1945?] - published by the Canadian Association of Scientific Workers
3-5	General publications and lectures 1945-1960 - articles and lectures by George Volkoff on scientific topics, but with many aimed at a general audience
3-6	General publications and lectures 1945-1963 - articles and lectures by George Volkoff on scientific topics, but with many aimed at a general audience
3-7	"Into the Atomic Age" [1946?] - collection of essays, originally published in the Montreal Standard newspaper - George Volkoff wrote the essay "Explaining the Atomic 'Pile'"
3-8	Scientific articles 1949-1961 - offprints of journal articles by Volkoff et. al.

- 3-9 "Architects of Modern Thought" 1955

  collection of essays, originally broadcast on CBC
  George Volkoff wrote essay on Albert Einstein

  3-10 Book reviews 1956
  - reviews for "Endeavours" and "Science" magazines
     also includes Volkoff's contribution to engineering students' 1956
     "Slipstick" yearbook

# VOLKOFF FAMILY HISTORY

# Official Documents

3-11	Old passports, etc. 1906-1949
	Russian passport for Elizaveta Pavelovna Volkoffa[?] 1914
	- Russian passport for Mikhail Mikhailovich Volkoff[?] 1915
	- Russian passport for [?] 1919
	- Soviet passport for George Volkoff 1928
	- Soviet passport for Elisabeth Paul Volkova-Titova 1923
	- "Attestate" [certificate] for Mikhail Volkoff[?] 1906
	- Russian passport and related documentation (Russian birth certificate,
	English translation, Canadian citizenship certificate) for Alexandra Okulitch 1919-1949
	- letter of introduction from Nippon Yusen Kaisha re. tickets issued to Volkoff
	family: third-class, Vancouver-Yokohama 22 August 1927
3-11a	British Passport – Mr. G.M. Volkoff April 1937
	- at the time of issue Canada did not issue its own passports
	- last visa stamp dated May 1946
3-12	Documentation for Olga (Okulitch) Volkoff 1912-1979
	- marriage certificate, Canadian citizenship certificates (2), immigrant's
	identification (2), Russian birth certificate, list of UBC appointments
BOX 4	
4-1	Documentation for George Volkoff 1914-1948 - Russian birth certificate, Chinese travel certificate, Canadian citizenship

	certificates (2), immigrant's identification (2), list of important immigration dates
4-2	Maria Titova Barbashoff – identity papers and passports 1919-1973 - Russian, Chinese, French, and English texts - George Volkoff's aunt
4-3	Olga Okulitch Volkoff papers 1933-1973 - Notice of Appointment, UBC 31 May 1949 - UBC certificate, Honours in Bacteriology 11 May 1933 - clippings and photographs attached to photo album page [ca. 1933-1945] – photographs removed and listed in Photographs series
4-4	Father's efforts re. Irina 1947, 1966 - documenting George Volkoff's support for his sister Irina (Irene) in the Soviet Union, and his attempt to allow her to immigrate to Canada
Correspo	ndence
	Files 4-5 to 4-13 and 5-1 to 5-6 originally stored together in cloth mail-bag
4-5	Family correspondence [handwritten in Russian/Cyrillic – hand-bound – small sheets] [1910]
4-6	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1912]
4-7	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1913]
4-8	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1913]
4-9	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1913]
4-10	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1913]

4-11	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1914]
4-12	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1915-1927]
4-13	Family correspondence [handwritten in Russian/Cyrillic – hand-bound with some loose pages – small sheets] [1922-1928]
BOX 5	
5-1	Family correspondence [handwritten in Russian/Cyrillic – unbound – small sheets] [1924-1928]
5-2	Family correspondence [handwritten in Russian/Cyrillic – unbound – small sheets] [1925-1928]
5-3	Family correspondence [handwritten in Russian/Cyrillic – hand-bound] [1928-1934]
5-4	Family correspondence [handwritten in Russian/Cyrillic – unbound – small sheets] [1930-1933]
5-5	Family correspondence [handwritten in Russian/Cyrillic – unbound] [1934]
5-6	Family correspondence [handwritten in Russian/Cyrillic – unbound] [1934-1936]
5-7	Cloth mail-bag 1937 - used to send collected family correspondence from Harbin, Manchukuo – addressed to George Volkoff at U.C. Berkeley – stamps and wax seal still affixed – date-stamped 1937
5-8	Correspondence – Mikhail Fedorovich Volkoff 1924-1933 [2 folders] - letters from Mikhail Fedorovich Volkoff (Soviet Union) to his son Mikhail Mikhailovich Volkoff (father of George Michael Volkoff), ending with his death in 1933 - letters contain family news and commentary of life in the Soviet Union
	- written in Russian – some with handwritten translation by Elizabeth Bell

5-9 Correspondence – Mikhail Mikhailovich Volkoff 1933-1937 [2 folders]
- letters from Mikhail Mikhailovich Volkoff (Harbin, Manchuria, and Soviet Union) to George Michael Volkoff
- written in Russian – some with handwritten translation by Elizabeth Bell
- letters include accounts of daily life in Harbin, Manchuria and later in the Soviet Union during turbulent times
- letters end not long before Mikhail Mikhailovich Volkoff was arrested (October 3, 1937)

# BOX 6

- 6-1 [Mikhail Fedorovich Volkov correspondence] 1936
   handwritten in Russian/Cyrillic
   includes original date-stamped envelope
- 6-2 [Correspondence between George Volkoff and his cousin's daughters in the former Soviet Union] 1990-93
  Russian/Cyrillic handwriting
  statement on original folder "Some of these letters may be of interest because she writes about the daily situation at the independence of Ukraine"
- 6-3 [Correspondence between George Volkoff and his cousin's daughters in the former Soviet Union] 1994-1996
   Russian/Cyrillic handwriting

# Family histories

6-4	[Original family chronicle by Mikhail Mikhailovich Volkoff] [ca. 1924] [2 folders] - typed and hand-written manuscript, Russian with Cyrillic lettering
6-5	"Chronicle of the Volkov Family" – Mikhail Mikhailovich Volkoff [ca. 1924], 2016, 2019 - translation by Elizabeth Bell of her grandfather's family history - 2 bound volumes
6-6	"A Tile in the Canadian Mosaic" [September 2012] - Part I: autobiography of George Volkoff, based on transcribed conversations with his daughter Elizabeth Bell and supplemented with information from letters and other materials, compiled by her after his death

- Part II: biography of George Volkoff's grandfather Mikhail Fedorovich Volkov written by Mikhail Mikhailovich Volkoff, and translated by Elizabeth Bell

- Part III: letters written by Mikhail Mikhailovich Volkoff to George Volkoff, from Harbin, Manchuria and the Soviet Union, and translated by Elizabeth Bell

Digitized copies

UBCA-ARC-1577-CD01	CD – Life of Mikhail Fedorovich Volkoff - digitized Mikhail Fedorovich Volkoff letters – 1 MSWord document – 29 pages - from File 5-8
UBCA-ARC-1577-CD02	CD – MFV letter translation - digitized Mikhail Fedorovich Volkoff letters – 18 MSWord documents - from File 5-10
UBCA-ARC-1577-CD03	CD – Letters from Mikhail Mikhailovich Volkoff - digitized Mikhail Mikhailovich Volkoff letters – 1 MSWord document – 29 pages - from File 5-9, duplicate of 1577-CD01
UBCA-ARC-1577-CD04	CD – A Tile in the Canadian Mosaic - A Tile in the Canadian Mosaic_208707.pdf – 129-page document - from File 6-6

### PHOTOGRAPHS

2.1/1	Congregation procession, George Volkoff at bottom far-right. – 12 x 9.5 cm
	b&w print. – [n.d.]
2.1/2	George Volkoff, right, with unidentified man at Congregation. – 12 x 9.5
	cm b&w print. – [n.d.]
2.1/3	Congregation procession, George Volkoff second from left. – 12 x 10 cm
	b&w print. – [n.d.]
2.1/4	George Volkoff at his desk with his secretary Beryl Wilson. – 12.5 x 9 cm
	colour print. – [1970s]

2.1/5	[George Volkoff, far right, with four others in military uniform]. – 12.5 x 8 cm b&w print. – [n.d.]
	- written on back: "The Forigen [sic] Legion or the five men that came back. Gentlemen Cadets or the blushing five."
2.1/6	George Volkoff, left, with UBC Chancellor Allan McGavin and President Walter Gage in Congregation robes. – 12.5 x 10 cm b&w print. – [n.d.]
2.1/7	George Volkoff speaking at podium in Congregation robes. – 12.5 x 10 cm b&w print. – [n.d.]
2.1/8	George Volkoff, right, with unidentified man in Congregation robes. – 10 x 12 cm b&w print. – [n.d.]
2.1/9	George Volkoff UBC graduation portrait. – 6 x 9 cm b&w print. – 1934.
2.1/10	George Volkoff on steps of UBC Library. – 6 x 9 cm b&w print. – [1930s].
2.1/11	George Volkoff. – 9 x 14.5 cm b&w print. – 1954.
,	- on UBC campus with Wesbrook Building in background
2.1/12	George Volkoff. – 9 x 14.5 cm b&w print. – 1954.
2.1/13	George Volkoff. – 9.5 x 12 cm b&w print. – 1954.
2.1/14	George Volkoff. – 10 x 15 cm colour print. – [1990s]
2.1/15	George Volkoff. – 12.5 x 18 cm b&w print. – [n.d.]
2.1/16	Lord Roberts School class picture, George Volkoff fifth from right second
	row from top. – 18 x 12.5 cm b&w print. – [n.d.]
2.1/17	Deans of Science, UBC. – 12.5 x 16.5 colour print. – January 1990
	- standing L-R: R.C. Miller, C.V. Finnegan, Barry C. McBride; sitting L-R:
	George Volkoff, Vladimir J. Okulitch
2.1/18	Deans of Science, UBC. – 12.5 x 17.5 b&w print. – January 1990
	- standing L-R: R.C. Miller, D.H. Dolphin, Barry C. McBride, C.V.
	Finnegan; sitting L-R: George Volkoff, Vladimir J. Okulitch
2.1/19a,b	Deans of Science, UBC. – 2 18 x 12.5 b&w prints. – January 1990
	- standing L-R: R.C. Miller, D.H. Dolphin, Barry C. McBride, C.V.
	Finnegan; sitting L-R: George Volkoff, Vladimir J. Okulitch
2.1/20	Vladimir J. Okulitch, former Dean of Science. – 12.5 x 17.5 cm b&w print. –
	January 1990
2.1/21	George Volkoff on steps of UBC Library. – 12.5 x 17.5 cm b&w print. –
	[1930s].
	- same image as 2.1/10
2.1/22	Faculty, administrative staff, and students of UBC Department of Physics.
	– 25.5 x 10.5 cm b&w print. – [1960s]
	- George Volkoff, front row centre
2.1/23	Faculty, administrative staff, and students of UBC Department of Physics.
	– 25.5 x 10.5 cm b&w print. – 1969.
	- George Volkoff, front row centre

2.1/24	George Volkoff. – 20 x 25 cm b&w print. – [n.d.]
2.1/25a-d	George Volkoff in his office. – 4 25 x 20 cm b&w prints. – [n.d.]
2.1/26a,b	George Volkoff in his office. – 2 20 x 25 cm b&w prints. – [n.d.]
2.1/27	George Volkoff in front of blackboard. – 25 x 20 cm b&w print. – [n.d.]
2.1/28	George Volkoff, left, with unidentified man writing a physics equation on
	a blackboard. – 18 x 13 cm b&w print. – [n.d.]
2.1/29a-d	George Volkoff, right, and unidentified man with molecular model. – 4 25
·	x 20 cm b&w prints. – [n.d.]
2.1/30	[Meeting at Dominion Astrophysical Observatory, Victoria, B.C.]. – 25 x 20
	cm b&w print. – 23 March 1951.
	- George Volkoff with glasses seated near back of room centre-left
2.1/31	Honorary degree recipients October 1945. – 25 x 20 cm b&w print. – 31
	October 1945.
	- Left to right - back row - Percy Barr, J.L. Plant, Gordon Stead, George M.
	Volkoff, Sherwood Lett. Front row - William Murphy, Henry Cody,
	Phyllis Ross, Harry Letson
	- same image as UBC 23.1/299-77
2.1/32	Henry Cody signing honorary degree register with President Norman
	MacKenzie and Registrar Charles B. Wood at Congregation. – 25 x 20 cm
	b&w print. – 31 October 1945.
2.1/33	IUPAP [International Union of Pure and Applied Physics] 9th General
	Assembly. – 18 x 24 cm b&w print. – September 1957.
	- George Volkoff seated at front, second from right
2.1/34	IUPAP [International Union of Pure and Applied Physics] 9th General
	Assembly. – 18 x 24 cm b&w print. – September 1957.
	- George Volkoff seated far right
2.1/35	George Volkoff receiving Order of Canada from Governor-General Ray
	Hnatyshyn. – 9 x 12.5 cm colour print. – 1994.
2.1/36	George Volkoff, centre, with others at Order of Canada reception. – 12.5 x
	9 cm colour print. – 1994
2.1/37	George Volkoff wearing his Order of Canada, MBE, and Centennial
	medals. – 9 x 12.5 cm colour print. – [n.d.]
2.1/38	Deans of Science, UBC. – 12.5 x 16.5 colour print. – January 1990
	- standing L-R: R.C. Miller, C.V. Finnegan, Barry C. McBride; sitting L-R:
	George Volkoff, Vladimir J. Okulitch
2.1/39	Gordon Shrum, Norman MacKenzie, J. Robert Oppenheimer, and George
	Volkoff during Oppenheimer's visit to UBC. – 25 x 20 cm b&w print. –
	April 1955
	- same image as UBC 23.1/301-17

2.1/40	J. Robert Oppenheimer, far right, with George Volkoff and others during Oppenheimer's visit to UBC. – 25 x 20 cm b&w print. – April 1955 - George Volkoff third from left
2.1/41	George Volkoff. – 20 x 25 cm b&w print. – [n.d.]
2.1/42	George Volkoff at blackboard. – 25 x 20 cm b&w print. – [n.d.]
2.1/43	George Volkoff. – 20 x 25 cm b&w print. – [n.d.]
2.1/44	George Volkoff. – 24 x 34 cm b&w oversize print. – [n.d.]
2.1/45	George Volkoff signing honorary degree register with Registrar Charles B. Wood at Congregation. – 25 x 20 cm b&w print. – 31 October 1945.
2.1/46	George Volkoff, (unidentified), Myer Bloom, and Gordon Shrum. – 34 x 27.5 cm colour oversize print. – [n.d.]
2.1/47	Vladimir Okulitch, Cyril Finnegan, and George Volkoff. – 35.5 x 27.5 cm colour oversize print. – [n.d.]
2.1/48	[Volkoff family portraits]. – 36 35mm b&w negatives, 6 strips. – 11 March 1967
2.1/49	[from Box 2] Souvenir photo, Commodore Cabaret. – 18 x 13 cm b&w
	print. – 26 December 1946
	- L-R: George Volkoff, Olga Volkoff, ?, George Okulitch
	Photographs 2.1/50 to 2.1/58 originally found in file 4-3
2.1/50	[Olga Okulitch in laboratory]. – 12 x 10 cm b&w print. – [n.d.]
2.1/51	[Olga Okulitch in graduation robes]. – 7 x 10 cm b&w print. – 23 February 1933. – written inscription in Russian on back, with date.
2.1/52	[Olga Okulitch (r) and Pat Leslie(?) in laboratory]. – 12.5 x 9.5 cm b&w
- , -	print. – [n.d.]
2.1/53	[Olga Okulitch (r) with brother George Okulitch in graduation robes]. – 12
	x 21 cm b&w print, hand-tinted. – 1935.
2.1/54	Dairying Lab U.B.C. with brother George Okulitch. – 7.5 x 5.5 b&w print. – 1933
2.1/55	[Olga Okulitch (r) with brother George Okulitch in graduation robes]. –
2.1/00	6.5 x 9 cm b&w print. – [1935]. - same image as no. 53
2.1/56	Dairying Lab U.B.C. in mid 30s. – 6.5 x 9 cm b&w print. – [1930s]
2.1/57	Montreal, 1944, Penicillin production lab, Ayerst, McKenna & Harrison. – 6.5 x 9 cm b&w print. – 1944
2.1/58	[Okulitch family at Christmas]. – 9 x 6 cm b&w print. – [n.d.] - L-R: Joseph, Lindy, Olga, George, and Alexandra Okulitch

	Photographs 2.1/59 to 2.1/116 were scanned from prints kept in two photograph albums which have been returned to the Volkoff family. Only a selection of images were scanned from each album. Digital copies only.
	Photograph album 1 – Volkoff family – [1800s-1934]
2.1/59	George Michael Volkoff as a small child. – scanned from 8.5 x 13.5 cm b&w print. – [ca. 1915]
2.1/60	Mikhail Mikhailovich Volkoff and son, George Michael Volkoff. – scanned from 9.5 x 13.5 cm b&w print on 11 x 17 cm matte. – 1916
2.1/61	Volkoff family: Michael, Elizabeth, George, Irene. – scanned from 6.5 x 11 cm b&w print. – 1924
2.1/62	Volkoff family [L-R George, Michael, Irene, Elizabeth]. – scanned from 13 x 8.5 cm b&w print. – [ca. 1924]
2.1/63	George Volkoff selling newspapers in front of the old post office on Hastings Street in Vancouver, B.C. – scanned from 6 x 8.5 cm b&w print. – [ca. 1926]
2.1/64	George Volkoff and bicycle bought with newspaper earnings. – scanned from 9 x 6.5 cm b&w print. – [ca. 1926]
2.1/65	George Michael Volkoff in uniform [Boy Scout?]. – scanned from 6.5 x 9 cm b&w print. – [ca. 1926]
2.1/66	George Volkoff, semaphore in Alexandra park, Vancouver, B.C. – scanned from 6.5 x 9 cm b&w print. – [ca. 1926]
2.1/67	George Michael Volkoff, Vancouver, B.C. – scanned from 8.5 x 14 cm b&w print. – 26 April 1926
2.1/68	George and Irene Volkoff, Japan (on the way to Harbin from Vancouver). – scanned from 8 x 13.5 cm b&w print. – 16 October 1927
2.1/69	Irene and George Volkoff. – scanned from 8 x 13.5 cm b&w print. – 25 August 1929
2.1/70	George Volkoff. – scanned from 12 x 17 cm b&w print. – [n.d.]
2.1/71	In the dining room in Harbin: Ledya Gercke, Tony Goodwin, George Volkoff. – scanned from 6.5 x 4 cm b&w print. – 25 November 1928
2.1/72	George Volkoff. – scanned from 6 x 9 cm b&w print. – [1920s]
2.1/73	Maria Alexandrovna (GMV's aunt), George Volkoff, Mila Volkoff (GMV's cousin), Irene Volkoff, Mikhail Mikhailovich Volkoff, in Harbin. – scanned from 19 x 12.5 cm b&w print. – 1934 - during Volkoff's visit back to Harbin while he was attending UBC
2.1/74	George Michael Volkoff: photo taken just before his final departure from Harbin to Canada. – scanned from 6 x 8 cm b&w print. – 1934 - on his return to Vancouver after his visit

2.1/75	George Volkoff standing by a railway carriage of the Chinese Eastern Railroad probably when he was departing Harbin. – scanned from 6 x 8 cm b&w print. – 1934 - on Volkoff's return to Vancouver after his visit
	Photograph album 2 – George Volkoff and family – 1930-1945
2.1/76	Maria Barbashoff and George Volkoff. – scanned from 8.5 x 14.5 cm b&w print. – 20 September 1930
	- taken the day of Volkoff's departure for Canada at the home of his aunt Maria (Titov) Barbashoff in Yokohama, Japan
2.1/77	Anatol (Tony) Goodwin, George Volkoff, Yurka Rott. – scanned from 8.5 x 14.5 cn b&w print. – 20 September 1930
	- Goodwin and Rott were two of Volkoff's school friends from Harbin who moved with him to Vancouver
	- taken the day of Volkoff's departure for Canada at the home of his aunt
2.1/78	Maria (Titov) Barbashoff in Yokohama, Japan George Volkoff. – scanned from 6.5 x 9 cm b&w print. – 1930
2.1/79	· ·
2.1/79	George Volkoff, student at UBC. – scanned from 8 x 11 cm b&w print. – 1930
2.1/80	George Volkoff in UBC laboratory. – scanned from 5.5 x 8 cm b&w print. – 1930
2.1/81	George Volkoff, far right, with friends at Okulitch family farm,
	Abbotsford, B.C. – scanned from 8 x 5.5 cm b&w print. – 1930
	- L-R: Tony Goodwin, ?, George Okulitch, Vladimir Okulitch, Olga
	Okulitch, Nick Lobzowskiy, Igor Kosin, Lindy Okulitch, Yurka Rott, George Volkoff
2.1/82	George Volkoff and Yurka Rott in front of cabin. – scanned from 9 x 6.5
	cm b&w print. – 1931
	- Summer 1931: George Volkoff and Yurka Rott rented a cabin on the
0 1 /00	North Shore probably at the bottom of Grouse Mountain
2.1/83	George Volkoff and Yurka Rott inside their cabin. – scanned from 9 x 6.5 cm b&w print. – 1931
	- Summer 1931: George Volkoff and Yurka Rott rented a cabin on the North Shore probably at the bottom of Grouse Mountain
2.1/84	UBC Radio Club members: L-R Tony Goodwin, George Volkoff, Yurka
	Rott. – scanned from $9 \times 6.5$ cm b&w print. – 1931
2.1/85	George Volkoff, Olga Okulitch, and Alexandra Okulitch at Okulitch
,00	family farm, Abbotsford. – scanned from 8 x 5.5 cm b&w print. – 1931

2.1/86	George Volkoff with horse and plow at Okulitch family farm, Abbotsford. – scanned from 9 x 6 cm b&w print. – 1931
2.1/87	Olga Okulitch with cow at Okulitch family farm, Abbotsford. – scanned from 9 x 6 cm b&w print. – 1931
2.1/88	Vladimir Okulitch in laboratory, UBC. – scanned from 6.5 x 9 cm b&w print. – 1932
2.1/89	George Volkoff with members of the Okulitch family. – scanned from 9 x 6.5 cm b&w print. – 1932
	<ul> <li>L-R: ?, George Volkoff, Vladimir Okulitch, Olga Okulitch, George</li> <li>Okulitch, Lindy Okulitch</li> </ul>
2.1/90	Olga Okulitch on Grouse Mountain with her brothers George, Vladimir, and Vladislav (Lindy). – scanned from 18.5 x 13.5 cm b&w print. – 1932
2.1/91	Olga Okulitch on Grouse Mountain. – scanned from 18.5 x 13.5 cm b&w print. – 1932
2.1/92	George Volkoff and Olga Okulitch with car. – scanned from 12 x 9 cm b&w print. – [1930s]
2.1/93	Olga Okulitch and George Volkoff. – scanned from 9 x 6.5 cm b&w print. – [1930s]
2.1/94	Vladimir Okulitch. – scanned from 9 x 12.5 cm b&w print. – [1930s]
2.1/95	George and Olga Okulitch, grads 1933 UBC. – scanned from 7 x 11.5 cm b&w print. – 10 May 1933
2.1/96	George Michael Volkoff. – scanned from 9 x 6.5 cm b&w print. – [1934?]
2.1/97	George Michael Volkoff with UBC diploma and Governor-General's Gold Medal. – scanned from 6 x 9 cm b&w print. – 10 May 1934
	- The Governor-General's Gold Medal was awarded to Volkoff as head of that year's graduating class
2.1/98	George Volkoff at graduation ceremony in UBC Gymnasium. – scanned from 8.5 x 6 cm b&w print. – 10 May 1934
	- inscribed "George V. graduation 1934"
	<ul><li>presentation of Governor-General's Gold Medal[?]</li></ul>
2.1/99	George Volkoff in military uniform. – scanned from 6.5 x 9 cm b&w print. – [n.d.]
	- Canadian Officers' Training Corps?
2.1/100	George Volkoff holding a fish, Bowen Island. – scanned from 6 x 9 cm b&w print. – June 1935
2.1/101	Olga Okulitch in her lab at UBC. – scanned from 11 x 8.5 cm b&w print. – [1930s]
2.1/102	Olga Okulitch in her lab at UBC. – scanned from 11.5 x 8.5 cm b&w print. – [1930s]
	- inscribed "Sometime between 1933-1941"

2.1/103	Olga Okulitch in her lab at UBC. – scanned from 9 x 6.5 cm b&w print. – [1930s]
2.1/104	George Volkoff with roommate Bob Christie, UC Berkeley. – scanned from 9 x 6 cm b&w print. – [ca. 1936]
2.1/105	George Volkoff at UC Berkeley. – scanned from 6 x 9 cm b&w print. – [ca. 1936]
2.1/106	George, Alexandra, and Olga Okulitch in front of University Lodge, Dalhousie Road, UBC. – scanned from 9 x 6.5 cm b&w print. – [1930s]
2.1/107	Olga and Lindy Okulitch at University Lodge, Dalhousie Road, UBC. – scanned from 9.5 x 6.5 cm b&w print. – [1930s] - inscribed "in front of Dalhousie Lodge apt."
2.1/108	Olga Okulitch. – scanned from 5.5 x 8 cm b&w print. – [1930s]
2.1/109	George Volkoff. – scanned from 5.5 x 8 cm b&w print. – [1930s]
2.1/110	George Volkoff and Olga Okulitch on passenger ferry [California?]. – scanned from 6.5 x 11 cm b&w print. – [1930s]
2.1/111	Olga Okulitch and George Volkoff in San Francisco. – scanned from 5.5 x 8 cm b&w print. – 1939
2.1/112	Olga Okulitch and George Volkoff at Spanish Banks, Vancouver. – scanned from 15.5 x 12 cm b&w print. – [ca. 1940]
2.1/113	George Volkoff. – scanned from 7 x 10 cm b&w print. – 1940
2.1/114	Wedding picture, George and Olga Volkoff. – scanned from 12.5 x 16 cm b&w print on cardboard backing. – 22 June 1940
2.1/115	George and Olga Volkoff, Christmas 1940. – scanned from 5.5 x 8 cm b&w print. – December 1940
2.1/116	George Volkoff. – scanned from 7.5 x 11.5 cm b&w print on cardboard matte. – 1933
	Photographs 2.1/117 to 2.1/119 originally found in file 4-3
2.1/117a,b	[from Box 2] Volkoff, O. and T. Walters. 1973. Unpublished Data. Cross section of hyphal cell of Agaricus bisporus – 2 12 x 15 cm b&w prints. – 1973.
2.1/118	[from Box 2] Volkoff, O. and T. Walters. 1973. Unpublished Data. Virus- like particles in hyohal cell of Agaricus bisporus. – 11.5 x 15.5 b&w print. – 1973.
2.1/119	[from Box 2] Volkoff, O. and Volkoff, O., T. Walters, and R.A. Dejardin. 1972. Can. J. Microbiol. 18:1352-1353. Fig. 3. Longitudinal section of P. chrysogeum showing a vesicle filled with virus-like particles. – 13 x 6.5 cm b&w print. – 1972.