

Thornton, Earl A., Papers

Earl A. Thornton Papers
1885-2000



Title Statement

Thornton, Earl A., PapersEarl A. Thornton Papers, 1885-2000 Ms.2010.026

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Sponsor: Part of the processing, arrangement, and description of this collection was created as part of the project, "Piercing the Veil: Creating Access to the Archives of American Aerospace Exploration at Virginia Tech," funded by the National Historical Publications and Records Commission (NHPRC) from 2022 to 2024.

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Profile Description

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Descriptive Summary

Unit ID

Ms.2010.026

Unit Date

1885-2000

Language

The material in the collection is in English.

Abstract

The collection includes research files, personal notes, audio recordings, videocassettes, photographs, and publications collected by engineer and professor Earl A. Thornton on the fields of aviation, aeronautics, and aerospace.

Creator

Thornton, Earl A. (Earl Arthur), 1936-

Extent

5.7 Cubic Feet 11 boxes

Repository

Special Collections and University Archives, Virginia Tech

Administrative Information

Conditions Governing Access

The collection is open for research.

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Source of Acquisition

The Earl A. Thornton Papers were donated to Special Collections and University Archives in 2000, as part of the Earl A. Thornton History of Flight Collection, containing over 800 volumes in the Rare Book Collection and the University Libraries collection.

Processing Information

The processing, arrangement and description of the Earl A. Thornton Papers commenced in May 2010 and was completed in June 2010. Additional materials were integrated and the description updated in June 2023.

Part of the processing, arrangement, and description of this collection was created as part of the project, "Piercing the Veil: Creating Access to the Archives of American Aerospace Exploration at Virginia Tech," funded by the National Historical Publications and Records Commission (NHPRC) from 2022 to 2024.

Preferred Citation

Researchers wishing to cite this collection should include the following information: [identification of item], [box], [folder], Earl A. Thornton Papers, Ms2010-026, Special Collections and University Archives, Virginia Tech, Blacksburg, Va.

Biographical Note

Earl Arthur Thornton was born to Dora Weatherly Thornton and John S. Thornton in 1936. He has a brother, John S. Thornton, Jr. and a sister Elizabeth Thornton Gardner. He is married to Margaret Thornton and resides in Virginia.

Thornton graduated from Virginia Tech with a Bachelor's degree in Mechanical Engineering in 1959. Thornton went on to the University of Illinois to complete his Master's degree in Theoretical and Applied Mechanics before returning to Virginia Tech for a doctoral degree in Mechanical Engineering. Thornton graduated from Virginia Tech in 1968 and joined the professoriate. Thornton served at Old Dominion University (1969-1986), was a visiting scholar at the University of Texas (1987-88), and worked at the University of Virginia (1989-1999) until his retirement on May 24, 1999. Afterwards, he returned to Virginia Tech as a visiting professor in the Department of Engineering Science and Mechanics in 2000.

Thornton authored books on thermal structures and the finite element method and is an Associate Editor of the *Journal of Spacecraft and Rockets*. Thornton is a Fellow of the American Institute of Aeronautics and Astronautics (AIAA).

External Sources:

"RESOLUTIONS ADOPTED BY THE BOARD OF VISITORS, March 26-27, 1999", University of Virginia Board of Visitors, <http://www.virginia.edu/bov/meetings/99mar/resolutionminutes.html>, on The Internet Archive, <https://web.archive.org/web/20160905002526/www.virginia.edu/bov/meetings/99mar/resolutionminutes.html>, accessed June 21, 2023

"DORA WEATHERLY THORNTON HANNAH", *Tyrrell Tides*, Vol. 10, No. 2, Feb. 2004, <http://www.johnowens.info/TyrrellNews/feb2004.htm>, the Internet Archive at <https://web.archive.org/web/20110308152306/www.johnowens.info/TyrrellNews/feb2004.htm>, accessed June 21, 2023

Scope and Content

The Earl A. Thornton Papers contain research files, personal notes, audio recordings, videocassettes, photographs, and publications on the fields of aviation, aeronautics, and aerospace. The research files include files on individuals and subject files, as well as publications. Additional materials include reproduction airplane blueprints, press reports about missiles and satellites, and a poster depicting the history of air travel.

Individuals listed include: Sir George Cayley, Octave Chanute, William Samuel Henson and John Stringfellow, Frederick W. Lanchester, S.P. Langley, Otto Lilienthal, Charles Matthews Manly, Charles Fayette Taylor, Theodore von Karman, Edward P. Warner, Francis Herbert Wenham, Wilbur and Orville Wright, Pearl I. Young, and Alfred F. Zahm. Topics include: Aerodynamics, Aeronautical Education Development, Aviation Progress, Challenger Launch Decision, Development of Aircraft Structures, The Evolution of Aircraft Design, Metal Airplane Construction, Propulsion, Structures History, Trusses, Wilbur Wright Memorial Lectures, and Wing Spars and Beam Columns.

Separated Materials

This collection was donated as part of the Earl A. Thornton History of Flight Collection, which contains over 800 volumes, in the Rare Book Collection and the University Libraries collection. These publications can be found by searching the online library catalog for "Thornton History of Flight Collection".

During processing, the following publication was also separated to the Rare Book Collection: Thornton, Earl A. *Aerospace thermal structures and materials for a new era*. Progress in astronautics and aeronautics, v. 168. Washington, DC: American Institute of Aeronautics and Astronautics, 1995.

Keywords

Archives of American Aerospace Exploration (AAAE)
Faculty and staff
Science and Technology
Students and alumni
United States. National Aeronautics and Space Administration
University of Virginia

Rights Statement for Archival Description

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Arrangement

The collection is arranged in three series, based on material type:

Series I: Publications, 1933-1997, is divided into two subseries based on material type.

Subseries A: Conference Publications, 1981-1994, contains materials published from conferences held at various NASA facilities and at the Thermal Structures conference held at the University of Virginia, as well as a short course from the American Institute of Aeronautics and Astronautics. This subseries is arranged chronologically.

Subseries B: Other Publications, 1933-1997, contains books, senate hearing transcripts, training programs, journals, and magazines. This subseries is arranged chronologically.

Series II: Research Files, 1885-1997, is divided into two subseries based on subject.

Subseries A: Files on Individuals, n.d., contains articles, pamphlets, and biographical information on individuals who had an impact on the fields of aviation and/or aeronautical or aerospace engineering and design. This subseries is arranged alphabetically by individual's last name.

Subseries B: Subject Files, 1978, 1989, n.d., contain research, articles, and reports on topics related to the field of aviation and aeronautical engineering. The original folder titles were used. This subseries is arranged alphabetically.

Series III: Audio/Visual Materials and Memorabilia, 1955-2000, n.d., is divided into three subseries based on material type.

Subseries A: Audiocassettes, 1978, contain audio taped transcriptions of "13 Famous Aircraft" given on 10-5-1978 by Paul Garber.

Subseries B: Videocassettes, 1978, 1996-1998, n.d., contain VHS recordings of documentaries, television programs, and films all related to aviation and aerospace science.

Subseries C: Prints and Memorabilia, 1955, 1981-2000, n.d., contain airplane illustrations, pamphlets, promotional photo reproductions, posters, and a visor. This series is arranged by material type.

Description of Subordinate Components

Series I: Publications

Unit Date 1933-1997

Subseries A: Conference Publications

Unit Date 1981-1994

NASA Conference Publications

Unit Date 1981, 1988, 1991, 1992

box-folder 1 (box)

Container 2 (folder)

AIAA Short Course

Unit Date 1990

box 8

Thermal Structures Conference Proceedings

Unit Date 1990, 1994

box 1

Measurement Technology Conference

Unit Date 1992

box 2

Subseries B: Other Publications

Unit Date 1933-1997

The Oases Meeting: International Egyptian Aviation Meeting

Unit Date 1933, 1936

box-folder 3 (box)

Container 1 (folder)

The Royal Aeronautical Society 1866-1966: A Short History

box-folder 3 (box)

Container 3 (folder)

Senate Hearings before the Committee on Appropriations Fiscal Year

Unit Date 1971

box 8

McLean, Edward. NASA SP-4720: Supersonic Cruise Technology

Unit Date 1985

box 8

"Exploring the Earth." National Geographic Magazine

Unit Date 1988

box-folder 3 (box)

Container 2 (folder)

American Scientist

Unit Date March-April 1989

box-folder 3 (box)

Container 2 (folder)

Aerospace Design Engineers Guide: Third Edition, Washington DC

Unit Date March 1993

box-folder 3 (box)

Container 2 (folder)

Martin Marietta Corp. Communications Satellite Training Program

Unit Date 1993

box 8

American Institute of Aeronautics and Astronautics Journal

Unit Date April-May 1997

box-folder 3 (box)

Container 3 (folder)

**Missiles and Satellites Press Reports Compiled by the Office of the Chief of Information
Department of the Army**

Unit Date 1957

box 9

Series II: Research Files

Unit Date 1885-1997

Subseries A: Files on Individuals

Unit Date n.d.

Sir George Cayley: Article on Cayley

box-folder 4 (box)

Container 1 (folder)

O. Chanute: Bibliographic information, notes, and articles by and about Chanute

box-folder 4 (box)

Container 2 (folder)

William Samuel Henson and John Stringfellow: Articles about Henson and Stringfellow

box-folder 4 (box)

Container 3 (folder)

Frederick W. Lanchester: Article about Lanchester

box-folder 4 (box)

Container 4 (folder)

S.P. Langley: Articles by Langley

box-folder 4 (box)

Container 5 (folder)

Otto Lilienthal: Articles and magazine by and about Lilienthal

box-folder 4 (box)

Container 6 (folder)

Charles Matthews Manly (April 24, 1876- October 16, 1927) Binder

box 8

General Physical Description note Binder is divided into the following headings: Birth, Biographies, Cornell, Veal Biography, F. Spratt, Father, Thurston, Obituary, Papers, SAE Manly Engine, Langley 1903 Tests, Louise Manly

Charles Fayette Taylor Binder

box 8

General Physical Description note Binder is divided into the following headings: MIT Libraries, Archives Finders Guide, Growing Up with the 20th Century, Engine Articles

von Karman: Research notes and articles about von Karman

box-folder 4 (box)

Container 7 (folder)

Edward P. Warner: Article about Warner

box-folder 4 (box)

Container 8 (folder)

Francis Herbert Wenham: Article about Wenham

box-folder 4 (box)

Container 9 (folder)

Wright Brothers: Flyers, maps, notes, pamphlets, photographs, newsletters and articles by and about Wilbur and Orville Wright

box-folder 4 (box)

Container 10-12 (folder)

Pearl I. Young: Articles by and about Young

box-folder 4 (box)

Container 13 (folder)

Alfred F. Zahm

box-folder 4 (box)

Container 14 (folder)

Subseries B: Subject Files

Unit Date 1978, 1989, n.d.

Aerodynamics: Bibliography, articles, and a report on topics related to aerodynamics

box-folder 5 (box)

Container 1 (folder)

Aeronautical Education Development: Notes and articles on topics related to aeronautical

education

box-folder 5 (box)

Container 2 (folder)

Aviation Progress: Articles on topics related to aviation progress

box-folder 5 (box)

Container 3 (folder)

Challenger Launch Decision Notes and articles on topics related to the Challenger space shuttle

box-folder 5 (box)

Container 4 (folder)

Development of Aircraft Structures: Articles on the development of aircraft structures and copies of Aerospace Engineering

Unit Date May-October 1989

box-folder 5 (box)

Container 5 (carton)

The Evolution of Aircraft Design: Notes, conference and papers from AIAA conference

Unit Date 1978

box-folder 5 (box)

Container 6 (folder)

Metal Airplane Construction: Articles on metal airplane construction

box-folder 6 (box)

Container 1 (folder)

Propulsion: Article on propulsion

box-folder 6 (box)

Container 2 (folder)

Structures History: Notes and articles on structures

box-folder 6 (box)

Container 3 (folder)

Trusses: Articles on trusses

box-folder 6 (box)

Container 4 (folder)

Wilbur Wright Memorial Lectures: Handwritten notes, bibliographic references, booklets, and articles on the Wilbur Wright Memorial Lectures

box-folder 6 (box)

Container 5 (folder)

Wing Spars and Beam Columns: Articles on topics related to wing spans and beam columns

box-folder 6 (box)

Container 6 (folder)

Series III: Audio/Visual Materials and Memorabilia

Unit Date 1955-2000, n.d.

Subseries A: Audiocassettes

Unit Date 1978-10-05

Audiocassettes of Paul Garber's lecture on 13 Famous Aircraft

Unit Date 1978-10-05

box-folder 6 (box)

Container 7 (folder)

Subseries B: Videocassettes

Unit Date 1978, 1996-1998, n.d.

TRACE Solar Panel Test Video: UVA Thermal Structures Lab

Unit Date Summer 1998

box 7

NOVA: Rescue Mission in Space 1460; Women of Courage, 1460-2550; APOLLO 13, 2550

box 7

Paul Garber: 13 Famous Aircraft, Audio Only

Unit Date 1978-10-05

box 7

Challenger Report 60 min., Copied 3/26/1996; Roger Boisjoly Talk

box 7

The World at War; Strategic Bombing in Europe

box 7

(1) 777-0-1471; (2) 1470-2570; (3) 2570-

box 7

TWA 800; NTSB Hearing, Dec. 8, 1997: 5 hours

box 7

Research on Space Station

box 7

The Wright Stuff; The American Experience

Unit Date Feb. 1996

box 7

Restoration Special: Jenny Ken Hyde, National Geographic: 4574: Last Episode (Cars, etc.)

box 7

1. Amelia Earhart (American Experience) 1-1470; 2. NOVA: (Hunt for Alien Worlds) 1470-2520

box 7

Red Baron: 0-1426; A Fighter Pilot's Story: 1426-3094; A Fighter Pilot's Story 3100-4312

box 7

1. No Highway in the Sky: 0-2310; 2. Wing and a Prayer, Utah Man: 2312-3250; A and E Wright Brothers Biography

box 7

1) NOVA: DC-3: 0-1430; 2) Memphis Belle 1431-2585

box 7

NOVA: Fastest Planes in the Sky: 0-1440; NOVA: DC-3: 1440-4180; Boeing 777: 4180-4820

box 7

We Saw It Happen, United Tech. Film, Narrated by Igor Sikorsky: 120 min.

box 7

Subseries C: Prints and Memorabilia

Unit Date 1955, 1981-2000, n.d.

Stinson SM-8A 1931-33, DeHavilland D.H.-4B 1926-1927, artist Nixon Galloway Copyright 1981 United Airlines

box-folder 3 (box)

Container 4 (folder)

"Aircraft of the Skunk Works: A gallery of innovative designs from a small group of engineers who mastered the fine art of achieving the impossible." Air and Space Smithsonian: a supplement to the April/May 1994 issue of Air and Space/Smithsonian. Design and production by Phil Jordan, illustrations by John Batchelor

box-folder 3 (box)

Container 4 (folder)

NASA Photo no. 69-HC-171 "Exercise for a Lunar Landing-The Lunar Module of Apollo 9 on Its Own in Space"

box 8

NASA Photo no. 66-HC-289 "Going for the touchdown-Apollo Rollout Atop Saturn V near the Vehicle Assembly Building at the Kennedy Space Center"

box 8

NASA Photo no. 69-HC-317 "An Open Door To Space-The Command Service and Lunar Modules of Apollo 9 Joined Together During Commander David R. Scott's Extravehicular Activity"

box 8

NASA Photo no. 68-HC-866 "Between Heaven and Earth-The Beginning of the Voyage of Apollo 8 to Circumnavigate the Moon"

box 8

NASA Photo no. 69-HC-609 "Within Reach But Not Within Grasp-The Apollo 10 Command Ship in Orbit About Sixty Miles Above the Moon"

box 8

Men and Ideas from American Aviation

box-folder 3 (box)

Container 4 (folder)

Popular Science magazine pamphlet: Welcome to the Curtiss-Wright Exhibit of Air Power for the Next Ten Years

box-folder 3 (box)

Container 4 (folder)

Air Scoop: The aeronautical endeavors of the Naval Air Material Center, August 30, 1955

box-folder 3 (box)

Container 4 (folder)

Illustrations on Air Force F-100 Super Sabre, Air Force F-86D Sabre Jet, North American Aviation, Inc

box-folder 3 (box)

Container 4 (folder)

Crosley Division Manufacturing Corp., Quality Products for the Nation's Defense

box-folder 3 (box)

Container 4 (folder)

Visor from Bendix Aviation Corporation

box-folder 3 (box)

Container 4 (folder)

Promotional photo reproductions: H-21 Work-Horse; Navy HUP-2 Helicopter; H-21C Work Horse; YH-16 Transporter; PH-42 Transport Helicopter

box-folder 3 (box)

Container 4 (folder)

The Story of Flight: A 100-Year Panorama

Unit Date 2000

box 9

Model JND-4 Airplane Reproduction Blueprints

Unit Date n.d.

box 10

"Kitty Hawk" Airplane Reproduction Blueprints

Unit Date n.d.

box 11