

---

## **Guide to the Papers of John A. Anderson, 1914-1951**

Processed by Charlotte Erwin, California Institute of Technology Archives staff.

Archives

California Institute of Technology

1200 East California Blvd.

Mail Code 015A-74

Pasadena, CA 91125

Phone: (626) 395-2704

Fax: (626) 793-8756

Email: [archives@caltech.edu](mailto:archives@caltech.edu)

URL: <http://archives.caltech.edu>

© 2003

California Institute of Technology. All rights reserved.

---

## Guide to the Papers of John A. Anderson, 1914-1951

### Collection number: Consult repository

Archives

California Institute of Technology  
Pasadena, California

#### Contact Information

Archives  
California Institute of Technology  
1200 East California Blvd.  
Mail Code 015A-74  
Pasadena, CA 91125  
Phone: (626) 395-2704  
Fax: (626) 793-8756  
Email: [archives@caltech.edu](mailto:archives@caltech.edu)  
URL: <http://archives.caltech.edu>

Processed by:

Caltech Archives staff

Date Completed:

Revised 2000; 2003

Encoded by:

Machine-readable finding aid created by Kevin C. Knox. Derived from XML/EAD encoded file by the Center for History of Physics, American Institute of Physics as part of a collaborative project (1999) supported by a grant from the National Endowment for the Humanities

© 2003 California Institute of Technology. All rights reserved.

---

#### Descriptive Summary

**Title:** John A. Anderson papers,

**Date (inclusive):** 1914-1951

**Collection number:** Consult repository

**Creator:** Anderson, John Augustus, 1876-1959

**Extent:** 3.5 linear feet

**Repository:** California Institute of Technology. Archives.

Pasadena, California 91125

**Abstract:** These papers document the career of astronomer John A. Anderson. The bulk of the documentation is in the form of correspondence, calculations, drawings, and photos. They relate chiefly to Palomar Observatory and Anderson's work on the instrument and optical design of the telescope.

**Language:** English.

#### Access

Collection is open for research.

#### Publication Rights

Copyright may not have been assigned to the California Institute of Technology Archives. All requests for permission to publish or quote from manuscripts must be submitted in writing to the Head of the Archives. Permission for publication is given on behalf of the California Institute of Technology Archives as the owner of the physical items and is not intended to include or imply permission of the copyright holder, which must also be obtained by the reader.

#### Preferred Citation

[Identification of item, box and file number], John A. Anderson Papers. Archives, California Institute of Technology.

---

### **Acquisition Information**

Donated by Astronomy Department, California Institute of Technology.

### **Biography**

John August Anderson was born on August 7, 1876, in Rollag, Minnesota, the sixth son of Norwegian immigrants. He earned a bachelor's degree from Valparaiso College in Indiana in 1900. After a brief period of teaching, he began graduate study at Johns Hopkins University and received his PhD in 1907. His thesis was a study of the emission and absorption spectra of the oxides of the metals neodymium and erbium.

Anderson was appointed professor of astronomy at Hopkins in 1908. At that time he was requested to take charge of the ruling engine constructed by Henry Rowland, the great American pioneer in spectroscopy. Anderson refined Rowland's machine to produce gratings of even finer resolving power. In 1912, Anderson was called upon by George Ellery Hale to assist in the construction of a new ruling engine for the Mount Wilson solar observatory in Pasadena, California. In 1916 Anderson relocated to California to become a permanent member of the Mount Wilson staff within the physical laboratory set up there by Hale. During his years with Mount Wilson, Anderson conducted major experimental work in solar observation and spectroscopy and became an expert in optics. With Harry O. Wood of the Carnegie Institution's Seismological Laboratory, he developed a new torsion seismometer for the measurement of local earthquake shocks.

In 1928, the California Institute of Technology received funds for the building of the 200-inch Palomar telescope, then the largest optical telescope in the world. Anderson was asked by Hale to serve as executive officer of the newly formed Observatory Council, whose charge was to oversee all aspects of the telescope project. Over the next twenty years, Anderson directed and participated in site selection, design and testing of the 200-inch mirror, the establishment and operation of an on-site optical shop, and the design and testing of the telescope structure and, especially, its instrumentation. Anderson remained head of the Observatory Council up to the time of the telescope's dedication, in June 1948.

Anderson had maintained a part-time connection with Mount Wilson, from which he retired in 1943. He was a member of several learned societies, including the American Astronomical Society and the American Physical Society. He was elected to the National Academy of Sciences in 1928. John Anderson died in Pasadena on December 2, 1959.

### **Scope and Content of Collection**

The John A. Anderson Papers were transferred to the Caltech Archives by the Astronomy Department in 1974. They comprise the working papers of Anderson and, to some degree, of the Observatory Council. Included is correspondence, much of it connected with technical matters relating to the Palomar telescope. Major correspondents are: George Ellery Hale (1928-1936, director); Clyde McDowell (1935-1938, engineer); Russell Porter (1929-1932, designer and architect). Other types of material include drawings, blueprints, photos; calculations and technical data; reports; reprints; and documents relating to solar observation and spectroscopy.

### **Indexing Terms**

The following terms have been used to index the description of this collection.

#### **People**

Hale, George Ellery, 1868-1938

#### **Corporations**

California Institute of Technology

International Education Board

Palomar Observatory--Administration

Rockefeller Foundation

#### **Subjects**

Astronomers--Correspondence

Astronomical instruments--Design

Astronomical observatories--Administration

Optical instruments--Design

Telescopes, reflecting--Design

#### **Genres and Forms of Materials**

Calculations

Drawings

Photographs

---

**Related Collections**

Astronomy Department Records  
Astrophysics Archive  
George Ellery Hale Papers  
Bruce Rule Papers

---

Box 1, Folder 1	<b>Biographical information</b>
	<b>Correspondence</b>
Box 1, Folder 2	<b>California Institute of Technology 1940-1948</b>
Box 1, Folder 3	<b>Committee on Bolometric Apparatus 1929-1939</b>
Box 1, Folder 4	<b>Fund for Astrophysical Research 1937-1946</b>
	<b>Hale, George E.</b>
Box 1, Folder 5	<b>1928-1929</b>
Box 1, Folder 6	<b>1930-1933</b>
Box 1, Folder 7	<b>1934-1936</b>
Box 1, Folder 8	<b>Hill, Bryon 1937-1941</b>
Box 1, Folder 9	<b>McDowell, Clyde S. 1935-1938</b>
Box 1, Folder 10	<b>McDowell, Clyde S. Memoranda 1935-1938</b>
Box 1, Folder 11	<b>Menzel, Donald A. 1939-1940</b>
Box 1, Folder 12	<b>Miscellaneous I</b>
	<b>Bass, W.L.</b>
	<b>Concerning Brown, W.</b>
	<b>Curtis, H.L.</b>
	<b>Dawson, V.E.</b>
	<b>Diamond, D.</b>
	<b>Dodge, H.</b>
	<b>Elston, T.S.</b>
	<b>Evenson, F.F.</b>
	<b>Fletcher, C.</b>
	<b>Frost, E.B.</b>
	<b>Gibbs, R.C.</b>
	<b>Gray, G.W.</b>
	<b>Hall, J.S.</b>
	<b>Harrison, G.R.</b>
	<b>Hazard, R.E.</b>
	<b>Heck, W.H.</b>
	<b>Heaney, N.S.</b>
	<b>Hoepfner, W.L.</b>
	<b>Holmes, W.H.</b>
	<b>Hubble, E.P.</b>
	<b>King, H.C.</b>
Box 1, Folder 13	<b>Miscellaneous II</b>
	<b>Leibhardt, E.</b>
	<b>Macelwane, J.B.</b>
	<b>Main, V.E.</b>
	<b>McCabe, C.F.</b>
	<b>Morgan, T.H.</b>
	<b>Meinel, A.</b>
	<b>Melton, B.S.</b>
	<b>Morin, H.E.</b>
	<b>Myers, E.H.</b>
	<b>O'Laughlin, H.</b>
	<b>Puckett, A.E.</b>
	<b>Perry, J.</b>
	<b>Porter, R.W.</b>

Box 1, Folder 14	<b>Miscellaneous III</b> <b>Rieber, F.</b> <b>Robinson, H.M.</b> <b>Rusk, C.B.</b> <b>Ryerson, K.</b> <b>Schmid, A.</b> <b>Skilling, W.T.</b> <b>Tauchmann (?) G.T.</b> <b>Teale, E.W.</b> <b>Trent, F.P.</b> <b>Viriden, R.J.</b> <b>Watson, R.S.</b> <b>Wilson, M.</b> <b>Slater, B.B.</b> <b>Suverkrop, L.</b> <b>Wormser, F.E.</b> <b>Wright, F.</b>
Box 1, Folder 15	<b>National Defense Research Committee: re Range finder problem 1940-1943</b>
Box 1, Folder 16	<b>Observatory Committee 1931-1937</b>
Box 1, Folder 17	<b>Observatory Council 1929-1938</b>
Box 1, Folder 18	<b>Pickering, W.H. 1928-1929</b>
Box 1, Folder 19	<b>Porter, Russell, W. 1929-1932</b>
Box 1, Folder 20	<b>Rockefeller Foundation-General Education Board 1928-1948</b>
Box 1, Folder 21	<b>Strong, John 1946-1947</b>
Box 1, Folder 22	<b>Thorkelson, H.J. 1929-1948</b>
Box 1, Folder 23	<b>Tillyer, E.D. 1946</b>
Box 2, Folder 1	<b>Warner and Swasey Company 1928-1936</b>
Box 2, Folder 2	<b>Woodbury, David O. 1937-1943</b> <b>Carl Zeiss, Inc.</b> <b>1928-February 1932</b> <b>March 1932-1937</b> <b>re: Recording photometer</b>
Box 2, Folder 3	
Box 2, Folder 4	
Box 2, Folder 5	
Box 2, Folder s 6-14	<b>The Observatories</b> <b>Calculations for lenses, mirrors, etc. I-IX</b>
Box 2, Folder 15	<b>Catalogs</b>
Box 2, Folder 16	<b>Data for corrector plate for 200 inch mirror</b>
Box 2, Folder 17	<b>Date re: Telescope - miscellaneous</b>
Box 3, Folder 1	<b>Dedication of Palomar June 1948</b>
Box 3, Folder 2	<b>Dome of Palomar, miscellany 1931-50</b>
Box 3, Folder 3	<b>Drawings of an optical spherometer by R.W. Porter</b>
Box 3, Folder 4	<b>Equipment for completion - lists, memoirs, etc. 1947</b> <b>Graphs - lenses, mirrors, etc.</b>
Box 3, Folder 5	<b>I</b>
Box 3, Folder 6	<b>II</b> <b>Lenses - Correspondence, Ross, Frank E.</b> <b>1928-1929</b> <b>1930-1937</b> <b>Lenses - Correcting, calculations of Ross</b> <b>I 1935-1949</b> <b>II 1935-1949</b>
Box 3, Folder 7	
Box 3, Folder 8	
Box 3, Folder 9	
Box 3, Folder 10	
Box 3, Folder 11	<b>Lenses - Correcting orders 1935-1941</b>
Box 3, Folder 12	<b>Lenses - Spencer Lens Co. weekly reports 1942-1944</b>
Box 3, Folder 13	<b>Meteorograph record 1933</b> <b>Mirror</b> <b>Coating (aluminization) 1933-1950</b> <b>Design</b>
Box 3, Folder 14	

	<b>Corning Glass Works</b>
Box 3, Folder 15	<b>Correspondence 1935-1948</b>
Box 4, Folder 1	<b>Blueprints and photos</b>
	<b>General Electric Correspondence</b>
Box 4, Folder 2	<b>1928-1929</b>
Box 4, Folder 3	<b>1930</b>
Box 4, Folder 4	<b>1931-1934</b>
Box 4, Folder 5	<b>Notes</b>
Box 4, Folder 6	<b>Possible materials 1929-1935</b>
	<b>Grinding</b>
Box 4, Folder 7	<b>Data on curvature</b>
Box 4, Folder 8	<b>Measurements</b>
	<b>Transportation</b>
Box 4, Folder 9	<b>Corning to Pasadena 1932-1935</b>
Box 4, Folder 10	<b>Pasadena to Palomar 1947</b>
	<b>Miscellany</b>
Box 4, Folder 11	<b>Bibliography</b>
	<b>Address book</b>
	<b>Drafts for an exhibit</b>
	<b>Notes</b>
	<b>Palomar reprints list</b>
	<b>Drawings of a telescope by R. Edgar</b>
Box 4, Folder 12	<b>Monthly Reports re: Construction 1946-1948</b>
Box 4, Folder 13	<b>Mount Wilson "Seeing" Record 1918-1933</b>
Box 4, Folder 14	<b>Photographs I</b>
Box 5, Folder 1	<b>Photographs II</b>
	<b>Publicity</b>
Box 5, Folder 2	<b>News clippings</b>
Box 5, Folder 3	<b>Telescope celluloid model correspondence 1936-1940</b>
Box 5, Folder 4	<b>Radio Station 1935-1946</b>
Box 5, Folder s 5-8	<b>Requests for photographs 1932-1945</b>
Box 5, Folder s 9-12	<b>Requests - miscellaneous 1931-1947</b>
	<b>Schmidt telescope</b>
Box 5, Folder 13	<b>Correspondence, 1946-1947</b>
Box 5, Folder 14	<b>Data I</b>
Box 6, Folder 1	<b>Data II</b>
Box 6, Folder 2	<b>Seismometer data</b>
	<b>Site</b>
Box 6, Folder 3	<b>Bills, ordinances, permits, etc. 1936-1946</b>
Box 6, Folder 4	<b>Miscellany</b>
	<b>Property purchase</b>
Box 6, Folder 5	<b>1934-1936</b>
Box 6, Folder 6	<b>1937-1940</b>
Box 6, Folder 7	<b>Roadways 1934-1938</b>
Box 6, Folder 8	<b>San Diego Board of Supervisors, 1935-1942</b>
	<b>"Seeing" records and problems,</b>
Box 6, Folder 9	<b>1914-1927</b>
Box 6, Folder 10	<b>1928-1947</b>
Box 6, Folder 11	<b>Selection 1928-1934</b>
Box 6, Folder 12	<b>Utilities 1936-1940</b>
Box 6, Folder 13	<b>Solar furnace</b>
Box 6, Folder 14	<b>Solar telescope</b>
	<b>Spectrographic equipment</b>
Box 6, Folder 15	<b>General</b>
Box 6, Folder 16	<b>Gratings 1938-1940</b>
Box 6, Folder 17	<b>f/0.36 objectives lens. G.E. Hale correspondence 1933-1936</b>

Box 6, Folder 18	<b>Bausch and Lomb spectrograph 1931</b>
	<b>Tube and mounting</b>
Box 6, Folder 19	<b>Committee on design 1928-1936</b>
Box 7, Folder 1	<b>Contracts 1936</b>
Box 7, Folder 2	<b>Correspondence with individuals 1933-1936</b>
Box 7, Folder 3	<b>Correspondence with companies 1929-1935</b>
Box 7, Folder 4	<b>Correspondence with Westinghouse Electric and Mfg. Company 1936-1940</b>
Box 7, Folder 5	<b>Drawings</b>
Box 7, Folder 6	<b>Memoranda 1936</b>
Box 7, Folder 7	<b>Truss</b>
	<b>Papers and reprints and reports</b>
Box 7, Folder s 8-10	<b>Papers by J. Anderson; See folder for list (3 folders)</b>
Box 7, Folder 11	<b>Reports I</b>
Box 7, Folder 12	<b>Reports II</b>
Box 7, Folder 13	<b>Reports III</b>
Box 7, Folder 14	<b>Reprints I</b>
Box 7, Folder 15	<b>Reprints II</b>
Box 7, Folder 16	<b>Reprints correspondence 1933-1938</b>