

**Guide to a Collection of Papers and
Records of the Radiation Laboratory at
the Massachusetts Institute of Technology
AC.0185**

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Summary Information

Repository	Massachusetts Institute of Technology. Institute Archives and Special Collections
Creator	Massachusetts Institute of Technology. Radiation Laboratory
Title	Collection of Papers and Records of the Radiation Laboratory at the Massachusetts Institute of Technology
Date [inclusive]	1941-1991
Extent	2.0 cubic feet (1 record carton, 3 manuscript boxes)
Location	Materials are stored off-site. Advance notice is required for use.
Language	English

Citation

Collection of Papers and Records of the Radiation Laboratory, AC 185, box X. Massachusetts Institute of Technology, Institute Archives and Special Collections, Cambridge, Massachusetts.

Historical note

Radiation Laboratory Organization

Division 1	Business
Division 2	Buildings and Maintenance
Division 3	Personnel and Shops
Division 4	Research
Division 5	Transmitter Components
Division 6	Receiver Components
Division 7	Beacons
Division 8	Fire Control and Army Ground Forces
Division 9	Airborne Systems
Division 10	Ground and Ship
Division 11	Navigation
Division 12	Field Service

Historical note

Radar, an acronym for radio detection and ranging, was patented by British scientist Sir Robert Watson Watt for meteorological applications in 1935. Since practical applications for airborne microwave radar had not been developed before World War II, the government of Great Britain requested assistance from the United States to develop this capability. Britain's secret Tizard mission was dispatched to Washington, DC, in September 1940 to introduce the 10 centimeter cavity magnetron. Beginning in late 1940 and continuing through World War II, large-scale research at the Radiation Laboratory, which operated as part of Division 14, Radar, of the National Defense Research Committee (NDRC) and was sited at the Massachusetts Institute of Technology, was devoted to the rapid development of microwave radar.

The "Rad Lab" designed almost half of the radar deployed in World War II, created over 100 different radar systems, and constructed radar systems on several continents. Physicist Lee DuBridge directed the Radiation Laboratory. From a staff of 30 physicists the lab grew to comprise almost 3,900 research and support staff by late 1945. The Radiation Laboratory was officially terminated on December 31, 1945, but the NDRC set aside funds for a Basic Research Division to continue from January 1 to June 30,

1946, under the direction of MIT professor Julius A. Stratton, and it was known as the NDRC Research Laboratory of Electronics. Beginning July 1, 1946, the laboratory continued operations as the MIT Research Laboratory of Electronics.

Administrative Information

Publication Information

Massachusetts Institute of Technology. Institute Archives and Special Collections

Revision Description

2010

Access note

The collection is open for research.

Related Materials

Related Archival Materials

The official records of the laboratory are housed at the New England Regional Branch of the National Archives as part of Record Group 227, Records of the Office of Scientific Research and Development. NARA, Waltham, Massachusetts.

The records of the Office of the President, 1930-1959, contain correspondence between MIT president Karl T. Compton and Radiation Laboratory administrators. Institute Archives and Special Collections, MIT Libraries, AC 4.

Draft and abbreviated version of "History of Radar in World War II," by Henry Guerlac, 1947. Institute Archives and Special Collections, MIT Libraries, MC 95.

Controlled Access Headings

Corporate Name(s)

- Massachusetts Institute of Technology. Radiation Laboratory
- United States. Office of Scientific Research and Development. National Defense Research Committee

Subject(s)

- Massachusetts Institute of Technology--History.
- Radar--History.
- Radar--Research.
- World War, 1939-1945--Radar.

Bibliography

Burchard, John E. *Q.E.D.: M.I.T. in World War II*. New York: J. Wiley, 1948. MIT Libraries: D810.E45.M3.B947

Five years at the Radiation Laboratory. Cambridge: MIT, originally published 1946, reprinted 1991. MIT Libraries: QC475.F565 1991

Guerlac, Henry E. *Radar in World War II*. New York: American Institute of Physics, 1987. MIT Libraries: D810.R33.G84 1987

Oral histories documenting World War II activities at the MIT Radiation Laboratory, IEEE History Center: http://www.ieeehcn.org/wikitest/index.php/MIT_Radiation_Laboratory_Oral_History_Project

Radiation Laboratory Series, prepared by the Radiation Laboratory Office of Publication under editor Louis Ridenour. 28 vols. New York: McGraw-Hill, 1947 and 1948. MIT Libraries: TK6573.M41

Trump, John G. *A War Diary*. 1973. MIT Libraries: D810.S2.T78

Radiation Laboratory research reports and memos (#1-#1083) 1941-1945. MIT Libraries: TK6573.M41.A4

Administrative Records

Collection Inventory

Series 1. Administrative Records

Scope and Contents note

This series contains a small set of documents relating to administration of the Radiation Laboratory, a classified government research laboratory located on the campus of the Massachusetts Institute of Technology during World War II which focused on the development of radar technology. The official records of the laboratory are preserved at the National Archives, New England Regional Branch, in Waltham, Massachusetts.

	Box	Folder
Instructions for Radar School records	1	1
Radiation Laboratory, general 1942-1945	1	2-4
Radiation Laboratory Library, suggestions for organization administration 1942 October 28	1	5
Final Report of the Editorial Board of the Radiation Laboratory Office of Publications 1946 June 27	1	6
Research Laboratory of Electronics, Final Report under Contract OEMsr-262, Division 14, NDRC 1946 June 30	1	7
Correspondence regarding "Longhairs and Short Waves," published in <i>Fortune</i> magazine 1945	1	8

Series 2. Publications

Scope and Contents note

Publications

This series includes a few print Radiation Laboratory research reports and a set of microfiche of the complete set of over 1,000 regular reports, texts, and manuals created by Radiation Laboratory staff during the course of their research. Original print reports are part of the Institute Archives and Special Collections publications holdings. Each report was cataloged by the MIT Libraries and can be found by browsing TK6573.M41.A4 in the Libraries' catalog.

Indexes to the reports are: Report 400, "Index of Regular Reports, Texts, and Manuals," January 29, 1944; Report 800, "Continuation of Index of Regular Reports, Special Reports, Manuals and Texts," November 12, 1945; and Report 1083, "Continuation of Index of Regular Reports, Special Reports, Manuals and Texts," March 1, 1946.

	Box	Folder
"Handbook for Radar Equipment," DMS 1000 1942 September 1	1	9
"Characteristics of Fixed Tuned X-band Anti-TR," Report 53 1944 May 13	1	10
"Tentative Instructions for Installation, Operation, and Maintenance of Type 102B (Radiation Laboratory Type TTS-3BR) and Type 102C (Radiation Laboratory Type TTS-4BR) Field Test Sets" 1943 December	1	11
Banks, Floyd, "Aircraft Interception Tactics" (Chapter 16) 1946 February 13	1	12
Bethe, H. A., R. E. Marshak, and J. Schwinger, "Theoretical Results on the T-R Box," NDRC Contractor's Report 1943 January 20	1	13
Holdam, J. V. "Manually Directed Radar Gun Sights" (Chapter 19) 1943 January 31	2	1
Pound, R. V., "General Lecture Series on Radar Components – Mixers, TRs, Xtals," Lecture no. 15 1944 January 21	2	2
Silver, S., "General Lecture on Radar Components – Antenna Theory," Lecture no. 10 1944 January 14	2	3
Sise, A. F., and B. P. Bogert, "History of AN/APG-5 (ARO)," Informal report 1946 January 15	2	4

Edythe Baker Memorabilia

Thrall, R.M. "General Considerations on Airborne Fire Control," January 15, 1946. 1946	2	5
<i>Division 14 Radar of the NDRC Final Project Report, Report 565.</i> 1945 December	2	6
<i>Radiation Laboratory Staff Members, 1940-1945</i> 1945	2	7
<i>RLE Currents</i> , vol. 4, no. 2 (Spring 1991), issue devoted to the Radiation Laboratory on its 50th anniversary 1991	3	1
Radiation Laboratory report numbers 1-549, microfiche circa 1941-1945	4	1
Radiation Laboratory reports, numbers 550-1083, microfiche circa 1941-1945	4	2

Series 3. Edythe Baker Memorabilia**Scope and Contents note**

Edythe Baker was secretary to Dr. Lee A. DuBridge, director of the Radiation Laboratory. While most of the material is from when the Laboratory was in operation, some later material from staff reunions is included.

	Box	Folder
British War Relief Society, Inc. 1941-1942	3	2
Silk scarf, postcard, note about code name 1942-1943	3	3
<i>Radiation Laboratory, Massachusetts Institute of Technology, Handbook for Secretaries, April 15, 1944.</i> 1944	3	4
Notifications of appointment, badge 1944	3	5
Certificate of Service 1945 November 9	3	6
<i>Staff Member Placement Survey. Radiation Laboratory, January 31, 1946.</i> 1946	3	7

Edythe Baker Memorabilia

<i>Staff Member Permanent Address List. Radiation Laboratory, March 15, 1946. second edition. 1946</i>	3	8
Photographs of Lee DuBridge, John Trump, Edythe Baker, and others circa 1945	3	9
Tributes in memory of MIT president Karl Taylor Compton 1954 June 25	3	10
Radiation Laboratory reunion including remarks by Lee A. Dubridge 1976 November	3	11
Radiation Laboratory 50th anniversary correspondence 1991	3	12
<i>Five Years at the Radiation Laboratory, Presented to Members of the Radiation Laboratory by the Massachusetts Institute of Technology, Cambridge 1946 1946</i>	3	13