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# DAVID W. TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CENTER

Bethesda, Maryland 20084-5000



## INDEX OF ORAL HISTORIES RELATING TO NAVAL RESEARCH AND DEVELOPMENT

by

Carole Elizabeth Nowicka  
David K. Allison  
Peter S. Buchanan

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SUPPORT AND ADMINISTRATIVE SERVICES DEPARTMENT  
NAVAL MATERIAL COMMAND HISTORICAL REPORT

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January 1985

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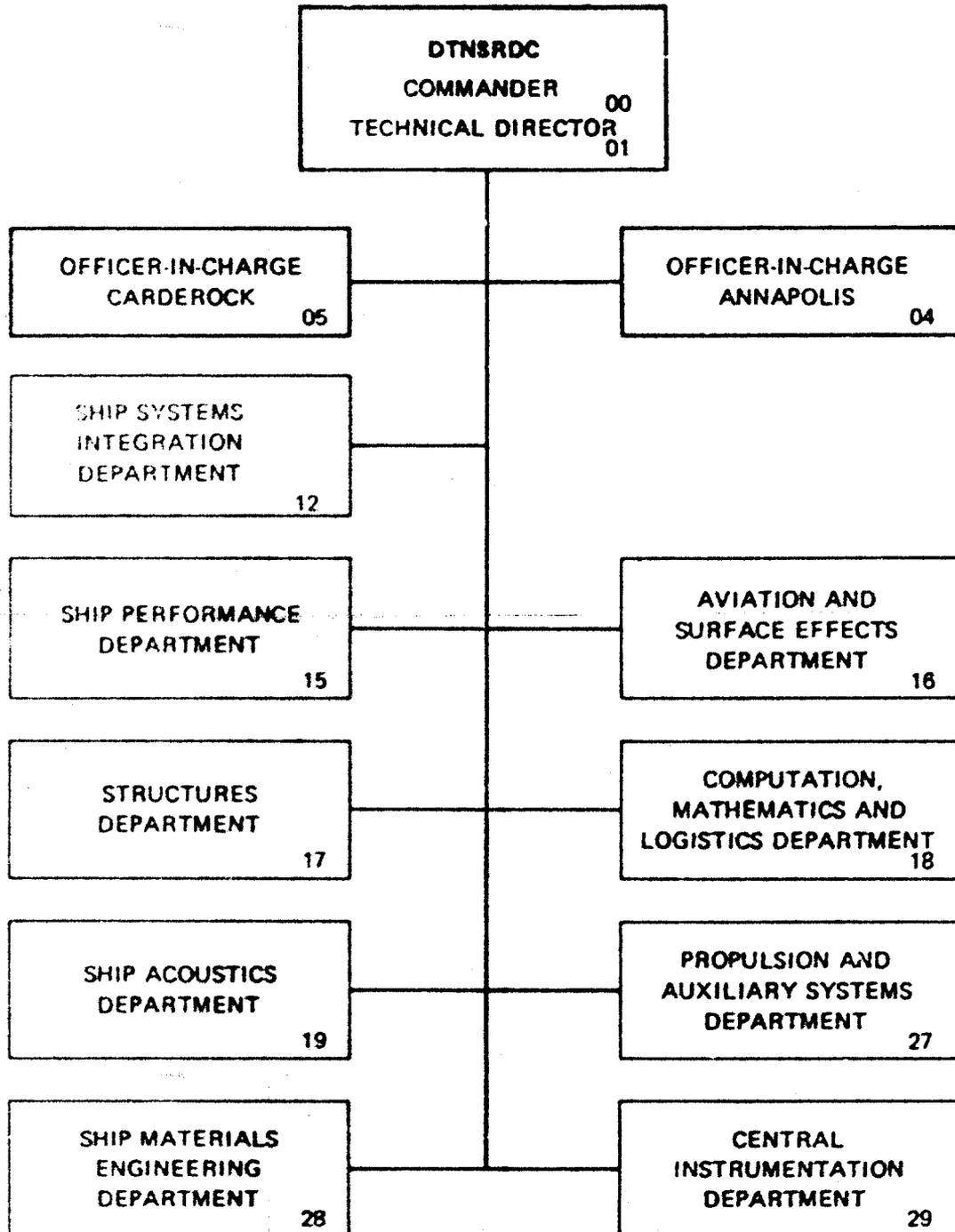
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) → This report is a comprehensive index and guide to oral histories on naval research and development. Tapes and transcripts of the interviews, prepared during the past twenty years, are held in Navy, Federal Government, and nongovernmental repositories. Abstracts and indices by name and subject have been prepared for each interview. The report includes contact points at repositories holding the materials, and an acronym and abbreviation list. → cont keywords include:		

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TABLE OF CONTENTS

	Page
INTRODUCTION . . . . .	v-vii
LIST OF INTERVIEWEES . . . . .	ix-xiv
ORAL HISTORY INDEX . . . . .	1-221
CONTACT POINTS AT ORAL HISTORY REPOSITORIES . . . . .	223-225
ACRONYMS AND ABBREVIATIONS . . . . .	227-230
NAME INDEX . . . . .	231-242
SUBJECT INDEX . . . . .	243-256

## INTRODUCTION

This guide resulted from an attempt to locate and describe all oral history interviews related to U. S. Navy research and development that are available in major U. S. repositories. In a sense, it is a companion to the broader U. S. Naval History Sources in the United States (Washington: U. S. Naval History Division, 1979), which primarily covers written documentation in all areas of Naval history, not just research and development.

The listing of an interview in this guide does not guarantee that it will be available to all researchers. Access restrictions vary from repository to repository, and they change over time. The guide indicates only the existence of oral histories. Provisions for access must be determined by contacting the repositories that hold the material.

Oral history has proven an attractive and useful tool for recording the history of Navy research and development. Of the many reasons for this, the most important is that the engineers, scientists, managers, and naval officers who have shaped the field over the years have generally considered technical reports and articles as the principal permanent records of their enterprise. For this material, there are reasonably reliable systems for access and preservation. Papers published in technical journals are indexed and may be identified through the use of abstracting services or on-line searches. The Defense Technical Information Center provides access to most post World War II technical reports written in the defense establishment. And most Navy R&D institutions maintain complete, indexed archival collections of the documentation that they have produced. However, the technical "result" literature, as this is sometimes called, gives a skewed, if not inaccurate picture of how naval research and development has actually evolved. The reason is that technical literature is not designed to give an accurate historical account of how things happened, but rather a logically reconstructed account of why results are valid.

The care that those involved in naval research and development have devoted to preserving their technical publications has not generally extended to preserving good historical records that explain why work was done, how it was supported, how it progressed over time, the false starts encountered, the interpersonal relations that shaped research activities, and so on. One reason is that complete documentation is frequently not generated as programs advance. Throughout history, few technically minded people have felt compelled to maintain accurate diaries, and the routine practice of writing memoranda to file, keeping personal reflections or notes on meetings, or writing detailed, descriptive correspondence to their colleagues has

largely disappeared. Indeed it is a sad irony that increasingly less historically valuable documentation is generated even as the quantity of administrative paperwork scientists and engineers prepare about their work has increased. A second, more troubling reason for inadequate historical documentation is that research and development institutions have not made serious, professional attempts to ensure that the records that are prepared are subsequently identified, catalogued, and preserved so that they remain available and easily accessible.

Oral history is a valuable, if imperfect, means for filling some of the consequent gaps in the primary historical documentation. It is an effective way for capturing memories individuals have of key events, reflections on their own actions and motivations and also those of others, and judgments about the relative significance of policies, decisions, and interpersonal relationships. These retrospective views obviously lack the immediacy and authenticity of primary sources and cannot replace them. However recollection is far better than speculation, and used in conjunction with primary source material, can greatly enrich understanding of the past.

It is for these reasons that oral history has been used by historians, policy analysts, and management consultants who have needed, for a variety of different reasons, to understand aspects of the evolution of Navy research and development over the past several decades. The interviews they have conducted vary widely in depth and quality, but collectively, they are an extremely valuable resource that should be available to all who need to understand the subject. Meeting that need is the purpose of this guide.

The index entries should largely be self explanatory. Each begins with the name of the person or persons interviewed. A "title" follows, which gives the name of the interviewer. The remainder of each entry provides information about the interview, including its date, documentation, repositories holding it, and, when we were able to analyze the interview, an abstract and content analysis. You should note that the index is arranged alphabetically by name of the individual interviewed. When multiple interviewees were involved in a single interview, however, the full citation appears only once in the body. The text is supplemented by three indices. The first, which appears at the beginning of the work, is a complete list of all interviewees. In a sense, it is a table of contents. The other two indices, which appear at the rear of the volume, are a name index and a subject index. The name index includes both the names of interviewees and the names of individuals who were discussed to a significant degree in the interviews (the "individuals mentioned" entries in the

body). An \* in this index indicates the that the person was actually interviewed, and the page on which the description of the interview begins. The subject index subsumes what, in the body, are broken into the subcategories of subject, institutions, cities, and other added entries. We thought the subcategorization in the body would be helpful to the user, but that multiple indices would be distracting. Finally, the volume includes a list of contact points at the repositories whose collections the guide covers.

This index is a first edition. As oral histories related to Navy research and development continue to be conducted, we hope to prepare revised versions of the guide. If you have suggestions about ways to improve it, or know about oral histories that it does not include but should, please let us know so that we can make subsequent issues better research tools.

D. K. Allison  
HISTORIAN OF NAVY LABORATORIES

November 1984

## LIST OF INTERVIEWEES

Abrams, Robert, 1  
Adams, A. J., 2  
Adkins, Dr. John, 3  
Agnew, Harold, 4  
Alpers, Frederick C., 4  
Alvarez, Dr. Luis W., 5  
Amlie, Dr. Thomas S., 6, 7  
Anderson, Evan, 8  
Andrews, Dr. Dan, 9  
Andrews, RADM B. F., 9  
Ashworth, VADM Frederick L., 9, 10  
Bainbridge, Dr. Kenneth Tompkins, 11  
Baker, Walter L., 12  
Baldwin, Dr. Ralph B., 2  
Ballentine, ADM John Jennings, 12  
Barnaby, CAPT Ralph, 13  
Bastedo, George, 14  
Baum, Dr. William A., 13  
Beach, CAPT Edward Latimer, 16  
Beach, Dr. Eugene H., 15  
Beckmann, CAPT Alcorn G., 16  
Bergstralh, Thor, 17  
Berman, Dr. Alan, 18, 19  
Beshany, VADM Philip A., 19  
Birch, Dr. A. Francis, 20  
Black, CAPT Robert G., 21  
Blood, Dr. Howard, 21  
Bodenburg, John, 22  
Bolt, Dr. Richard Henry, 23  
Bowen, Dr. Edward G., 23  
Bowen, Dr. Ira S., 25  
Bowen, Harold G., Jr., 25  
Bowen, VADM Harold G., 24  
Bowyer, Dr. C. Stewart, 26  
Bradbury, Dr. Norris E., 26  
Bramble, Dr. Charles C., 27  
Braun, RADM Boynton L., 28  
Breslow, Arthur, 28  
Brode, Dr. Wallace C., 29  
Brooks, Dr. Harvey, 30  
Bryan, Dr. Glenn L., 30  
Burke, ADM Arleigh A., 2, 31  
Burns, Dr. Robert O., 32  
Burroughs, Kay (Mrs. Sherman E.), 32  
Burroughs, Mrs. Robert (former Mrs. William S. Parsons), 33  
Burroughs, RADM Sherman E., 34  
Byrum, E. T., 35  
Camp, Victor W., 35  
Carome, Dr. Edward F., 36  
Carstater, Dr. Eugene D., 37  
Cartwright, Dr. Frank W., 7  
Christman, Albert B., 37  
Chubb, Dr. Talbot A., 38

Cleeton, Dr. Claud E., 39  
Clement, Lewis M., 2  
Collins, Dr. John J., 40  
Colvard, Dr. James E., 41  
Connolly, VADM Thomas, 42  
Cooper, Dr. Eugene P., 42  
Couperus, Pierce G., 43  
Cozzens, Ernest G., 43  
Crary, Dr. Albert P., 44  
Crawford, Jack A., 7  
Crosbie, Richard, 44  
Cummins, Dr. William E., 45, 46  
Custer, CAPT Benjamin Scott, 47  
Davis, Dr. Charles M., 47  
Diehl, CAPT Walter S., 48  
DiPol, C. John, 49  
Donaldson, Earl J., 7  
Drummeter, Dr. Louis F., 49  
Duncan, ADM Donald, 50  
Duncan, CAPT James, 50  
Dunlap, Jack, 51  
Ebaugh, Paul, 51  
Ebbert, CAPT Edwin L., 52  
Ekas, RADM Claude P., 52  
Ellis, Dr. Emory L., 53, 54  
Ellis, Marion (Mrs. Emory L.), 54  
Entwistle, RADM Frederick I., 54  
Eyster, Dr. Eugene H., 55  
Fallgatter, Calvin J., 56  
Ferguson, Mary, 56, 57  
Fields, Dr. Victor, 58  
Fitzpatrick, William, 59  
Fletcher, Dr. Robert C., 4  
Foladare, Dr. Joseph, 59  
Ford, Curry, 2  
Fowler, Dr. William, 60  
Fresh, J. Norman, 61  
Friedman, Dr. Herbert, 62  
Friedman, Sidney, 63  
Frosch, Dr. Robert A., 64, 65  
Fuller, Mrs. Clarissa Parsons, 65  
Furth, RADM Frederick R., 66  
Gates, SECNAV Thomas S., 67  
Gebhard, Dr. Louis A., 68  
Giallorenzi, Dr. Thomas G., 67  
Gleiter, Werner, 68  
Goddard, Mrs. Robert, 69  
Goss, Dr. Wilbur, 70  
Gould, Gerald, 70  
Gouldman, Harold M. Jr., 71  
Gralla, VADM Arthur R., 71  
Granum, RADM Alfred M., 72  
Grotsky, Jim, 72

Groves, GEN Leslie, 73  
 Guthrie, Dr. Robert C., 73  
 Habicht, Frank, 74  
 Haff, CAPT William B., 75  
 Hafstad, Dr. Lawrence R., 2, 75  
 Hall, Dr. John L., 76  
 Hardy, CAPT John I., 76, 117  
 Hartmann, Dr. Gregory, 77  
 Harwit, Dr. Martin, 78, 79  
 Hattabaugh, William R., 80  
 Havens, Dr. Ralph J., 80  
 Hay, Marley Fotheringham, 81  
 Hayward, ADM John T., 81, 82, 83, 84  
 Henderson, J., 85  
 Henifin, CAPT Edward E., 85  
 Herget, Dr. Paul, 86  
 Highberg, Dr. Ivar E., 86  
 Hillyer, Robert, 87  
 Himes, Allen W., 88, 89  
 History of Radio-Radar-Sonar, 89  
 Hollings, Anthony J., 90  
 Hooker, Ruth, 91  
 Hooper, ADM Edwin B., 91, 92  
 Hopper, COMO Grace Brewster (Murray), 93  
 Howard, Jim, 94  
 Hulburt, Dr. Edward O., 95  
 Hunsaker, Jerome Clarke, 96  
 Hunt, F. L. "Pete", 96  
 Hunter, Dr. Hugh, 97, 98  
 Hussey, VADM George F., 2, 98, 99  
 Hustvedt, VADM Olaf M., 100  
 Jackson, VADM Andrew McBurney, Jr., 100  
 James, Richard, 101  
 Jennison, James H., 101, 102  
 Johnson, ADM Roy L., 106  
 Johnson, Charles Y., 103, 104  
 Johnson, Dr. Frances Severin, 105  
 Jones, Dr. Earl, 106  
 Keener, Charles E., 107  
 Keil, Dr. Alfred H., 108  
 Kelly, CAPT James F., 108  
 Kendig, Dr. Paul M., 109  
 Kirk, ADM Alan Goodrich, 110  
 Koesey, Calvin, 110  
 Kondracki, Henry, 78  
 Krause, Dr. Ernst H., 111  
 Kron, Dr. Gerald Edward, 112  
 Krutter, Dr. Harry, 112, 113  
 Kunz, D. A., 114  
 Land, ADM Emory S., 115  
 Landweber, Dr. Louis, 115  
 Langenbeck, Earl H., 116  
 Laser History, 117

Lauritsen, Dr. Charles C., 117, 118  
 Lauritsen, Dr. Thomas, 119  
 Law, Howard, 119  
 Lawson, Dr. Joel, 120  
 Lewis, Russell, 121  
 Lockhart, Dr. Luther, 122  
 Lockwood, VADM Charles A., 123  
 Lyddane, Dr. Russell H., 124  
 Martell, VADM Charles B., 129  
 Marten, William H., 130  
 Masterson, VADM Kleber S., 130  
 McDowell, Rensler, 123  
 McKibbin, Mrs. Joseph (Dorothy), 124  
 McLean, Dr. William B., 126, 127, 128  
 McLean, Edith LaVerne (Mrs. William B.), 125, 126  
 McMillan, Dr. Edwin M., 129  
 Meyers, Wesley W., 131  
 Miller, Laymon N., 132  
 Minter, Jerry, 2  
 Moran, VADM William J., 132  
 Morton, RADM Thomas, 133  
 Naval Research Laboratory Meeting, 133  
 Newell, Dr. Homer E., 134  
 Niedermair, John Charles, 135  
 Niemann, Ralph A., 135  
 Nutt, Mr. Harold V., 136  
 O'Neill, William, 137  
 Offenhauser, William, 2  
 Owen, RADM Thomas B., 138  
 Page, Dr. Robert Morris, 139  
 Parsons, Harry R., 140  
 Pearce, John, 2  
 Pehrson, Gordon, 141  
 Peterkin, Ernest W., 141  
 Petersen, ADM Forrest Silas, 142  
 Plain, Dr. Gilbert, 142  
 Polin, Jerry, 143, 144  
 Pollak, George, 144  
 Pollock, CAPT Thomas, 145, 146  
 Porter, Henry, 70  
 Powers, Kenneth, 146  
 Price, D. George, 147  
 Priori, Dr. E., 66  
 Probus, Dr. James H., 148  
     or, CAPT William L., 149  
 R... ll, D., 150  
 Qu... s, Gilford G., 150  
 Rab... , VADM William F., Jr., 151  
 Ram... , Eugene M., 151  
 Ram... y, Dr. Norman, 152  
 Ran... , Dr. William, 152  
 Rees Mina, 153  
 Regal , Dr. James J., 154

Reich, VADM Eli T., 155  
 Renard, RADM Jack C., 156  
 Renne, Clarence J., 157  
 Rexroth, John, 157  
 Rich, Harry L., 158  
 Richmond, CDR John, 160  
 Ricketts, COMO Myron V., 161  
 Roach, James, 161  
 Robert L. Hansen, 52  
 Robinson, ADM Samuel M., 162  
 Robinson, K. H., 117  
 Roman, Nancy Grace, 162  
 Rosen, Milton, 163  
 Roy, Dr. Max, 164  
 Ruckner, RADM Edward A., 164, 165  
 Russell, ADM James S., 166  
 Sagdahl, John, 167  
 Sage, Dr. Bruce, 167  
 Sanderson, Dr. John A., 168  
 Sandquist, CAPT Oscar, 168  
 Sawyer, Dr. Ralph A., 169, 170  
 Schneider, RADM R. J., 170  
 Schoeffel, RADM Malcom F., 171  
 Schoenherr, Dr. Karl E., 171  
 Schoman, Dr. Charles M., 172  
 Schreiber, J. Raymond, 7  
 Schwede, Harold, 2  
 Sette, Dr. William J., 173  
 Sewell, Robert G. S., 174  
 Seymour, Dr. Harry R., 176  
 Seymour, VADM Ernest R., 175, 176  
 Sheehy, Myles, 177  
 Sherwin, Dr. Chalmers, 177  
 Shugg, Carleton, 178  
 Smith, Bernard, 179, 180  
 Smith, Charles P., 7  
 Smith, Howard, 181  
 Smith, VADM Levering, 181  
 Smitley, Charles Raymond, 182  
 Snyder, RADM J. Edward, 183  
 Spangenburg, George, 183  
 Sprague, Robert C., 2  
 Stone, Dr. Harris B., 183  
 Stoner, Donald W., 184  
 Str nd, Dr. Kai Aa., 185  
 Strauss, RADM Louis L., 185  
 Stump, ADM Felix Budwell, 186  
 Sullivan, ADM William, 186  
 Sykes, RADM James B., 187  
 Thompson, Arthur, 187  
 Thompson, Dr. Louis T. E., 99, 188, 189  
 Tibbitts, CAPT Barrick F., 190  
 Tousey, Dr. Richard, 190

Towle, CAPT Bernard, 191, 192  
Tremblay, Harold, 193, 194  
Trexler, James Hugh, 195  
Trotter, Dr. Herbert, 2  
Truax, CAPT Robert, 195  
Uppgren, A., 196  
Van Allen, Dr. James, 196  
Vossler, RADM Curtis F., 197  
Wakelin, Dr. James H., 198  
Walker, Eric A., 199  
Ward, Dr. Newton E., 7, 199, 200  
Warner, Dr. Arthur H., 200  
Waterman, Dr. Peter, 201  
Watson, Clement, 202  
Watson, Dr. Earnest C., 201  
Watson-Watt, Sir Robert Alexander, 203  
Waynick, Arthur H., 203  
Weaver, Dr. Warren, 204  
Welford, Randolph, 204  
White, Dr. Howard J., Jr., 205  
Whitmarsh, David, 206  
Wiegand, Dr. James, 206  
Wilcox, Douglas, 207, 208  
Wilcox, Dr. Howard A., 7, 208, 209, 210  
Willey, Thomas, 210  
Williams, ADM Henry, 211  
Williams, ADM John G. Jr., 212  
Wills, James R., 212  
Wilson, CAPT Eugene Edward, 214  
Wilson, Dr. Haskell G., 7, 213  
Wingo, Carl H., Jr., 214  
Winnick, Robert L., 215  
Wislicenus, Dr. George F., 215  
Withington, RADM Frederick S., 216  
Wolff, Dr. Irving, 217  
Worchesek, CAPT Robert R., 217  
Word, Thomas J., 218  
York, Dr. Herbert, 219  
Young, Dr. Leo C., 219  
Youngblood, Curtis, 220  
Zisman, Dr. William A., 221

## ORAL HISTORY INDEX

---

Abrams, Robert

Interview of Robert Abrams, conducted by Dr. David K. Allison

**Date of Interview:** 8210705

**Documentation:** 2 Tapes, Index 8 pp.

**Abstract:** Mr. Abrams reviews the history of the Office of the Director of Navy Laboratories, the creation of the office, the first personnel, selection of DNLs, and changes in the office over the past 17 years.

**Repositories:** DTNSRDC

**Individuals mentioned:** Kleback, Thomas

Volmut, Rosemary  
Gralla, VADM Arthur R.  
Towle, CAPT Bernard  
Langille, CAPT John  
Hughes, David  
Johnson, Dr. Gerald  
Teller, Dr. Edward  
Frosch, Dr. Robert A.  
Andrews, CAPT Albert  
Smith, Howard  
Huang, Theodore S.  
Crook, Mary Charlotte  
Parrish, CAPT David

**Institutions:** Bureau of Weapons  
Navy Science Assistance Program  
Bureau of Ordnance  
Bureau of Ships  
Naval Material Command  
Director of Navy Laboratories  
Deputy Chief of Naval Material (Laboratories)

**Other added entries:** Laboratory Management

Dillon Study  
Hermann Study  
Reduction in Force  
Laboratory Consolidations

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Adams, A. J.  
Baldwin, Dr. Ralph B.  
Burke, ADM Arleigh A.  
Clement, Lewis M.  
Ford, Curry  
Hafstad, Dr. Lawrence R.  
Hussey, VADM George F.  
Minter, Jerry  
Offenhauser, William  
Pearce, John  
Schwede, Harold  
Sprague, Robert C.  
Trotter, Dr. Herbert

Transcript of Meeting on VT (Proximity) Fuze

**Date of Interview:** 781117

**Documentation:** Transcript, 100 pp.

**Abstract:** This is a transcript of the Annual Conference of the Radio Club of America. The participants reminisce about their roles and the roles of their agencies in the development of the proximity fuze. The manufacturing process was highly compartmentalized, thus many interviews deal with components of the fuze - the batteries and capacitors, and differences in assembly line procedures at plants. ADM Burke discusses the actual use of the fuzes, Dr. Ralph B. Baldwin describes the effect of the fuze on the German war machine, several interviews are about testing at the Naval Proving Ground.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Robinson, Dr. Preston  
Tuve, Dr. Merle  
Parsons, RADM William S.  
Brooks, Dr. Lester  
Currie, Dr. Lauchlin M.  
McPherson, Dr. Herbert G.

**Institutions:** Applied Physics Laboratory  
U. S. Army  
Eastman Kodak Company  
Naval Proving Ground  
Hoover Company  
Baldwin Piano Company  
McQuay-Norris Corporation  
Johns Hopkins University  
Office of Scientific Research and Development  
Crosley Corporation  
Bureau of Ordnance  
Department of Terrestrial Magnetism

**Subjects:** Ordnance  
Artillery

**Cities:** Pearl Harbor, HI.

**Other added entries:** Proximity Fuze

---

Adkins, Dr. John

Interview of Dr. John Adkins, conducted by Vincent Ponko, Jr.

**Date of Interview:** 810409

**Documentation:** 2 Tapes, Index, Transcript 48 pp.

**Interview number:** NL-T35

**Abstract:** Dr. Adkins talks about his first R&D appointment as head of Geophysics at the Office of Naval Research, his promotion to Assistant Chief Scientist of ONR, and studies of R&D during the McNamara Era. He discusses the work of the Naval Research Advisory Committee, the unilinear Navy, and Dr. Chalmers Sherwin and the Sherwin Plan for reorganizing the laboratories of the Department of Defense. Adkins also comments on the role of in-house laboratories in the Navy, the Mansfield Amendment, and the Blue Ribbon Defense Panel. He describes Navy Industrial Funding and Project REFLEX, ONR's relationship with other agencies and military-civilian relationships in the Navy. Adkins explains the impact of the creation of the National Science Foundation on the Office of Naval Research and the effect of centralized management on Navy Research and Development.

**Repositories:** DTNSRDC

**Individuals mentioned:** Kennedy, PRES John F.  
Sherwin, Dr. Chalmers

**Institutions:** Office of Naval Research  
Naval Research Advisory Committee  
National Science Foundation

**Other added entries:** Glass Report  
Unilinear Navy  
Blue Ribbon Defense Panel  
Mansfield Amendment  
Sherwin Plan  
Project REFLEX  
Navy Industrial Fund

---

Agnew, Harold

Interview of Mr. Harold Agnew, conducted by Albert B. Christman

**Date of Interview:** 670100

**Documentation:** Index, transcript 22 pp.

**Interview number:** NOTS-75201-S26

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Mr. Agnew discusses Parsons and Dr. Norman Ramsey at Tinian and the test flights from there. He also reflects on the uses of small nuclear weapons and the communication problems involved.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S. Ramsey, Dr. Norman

**Cities:** Los Alamos, NM.  
Tinian

**Other added entries:** Manhattan Project

---

Alpers, Frederick C.  
Fletcher, Dr. Robert C.

Interview of Frederick C. Alpers and Dr. Robert C. Fletcher, conducted by Leroy L. Doig, III.

**Date of Interview:** 810127

**Documentation:** Index, transcribed, 89 pp.

**Interview number:** S-118

**Abstract:** Mr. Alpers details early missile work on the Bat and Pelican missiles at the National Bureau of Standards. He talks about German contributions to missile research, wartime supply problems, and postwar developments of Bat II and Corvus. Alpers discusses the search for nuclear weapons and the shift in missile research to the Naval Ordnance Laboratory at Corona, California. He mentions the later move of NOL-Corona to the Naval Weapons Center-China Lake and the work on Walleye II and Puma missiles. In addition,

Alpers explains the current trends in R&D and his contributions to the Naval Weapons Center.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.  
Riggs, Leroy

**Institutions:** Naval Ordnance Laboratory  
National Bureau of Standards  
Naval Weapons Center

**Subjects:** Missile Research

**Other added entries:** Bat II Missile  
Corvus Missile  
Puma Missile Project  
Walleye II Missile Project

---

Alvarez, Dr. Luis W.

Interview of Dr. Luis W. Alvarez, conducted by Albert B. Christman

**Date of interview:** 670300

**Documentation:** Transcript 32 pp.

**Interview number:** NOTS-75201-S35

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Alvarez assesses Parsons' role in the Manhattan Project, as well as his own. He describes Parsons' missions on the Enola Gay and Parsons' promotion from Captain to Commodore to Rear Admiral. Alvarez also explains the role of the Los Alamos laboratory in atomic research and development.

**Repositories:** DTNSRDC, NWC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Oppenheimer, Dr. Robert  
Tibbets, COL Paul  
Lauritsen, Dr. Charles C.

**Institutions:** Naval Ordnance Test Station

**Cities:** Los Alamos, NM.

**Other added entries:** Manhattan Project

---

Amlie, Dr. Thomas S.

Interview of Dr. Thomas S. Amlie, conducted by Michelle Ballinger

**Date of Interview:** 760824

**Documentation:** Transcript, Index

**Interview number:** S-109

**Abstract:** Amlie comments on the qualities the technical director of a laboratory should have, his education, and his military service. He reflects on his career at NWC, first working on the Sidewinder missile and then as technical director. Amlie discusses problems with the Condor and Harpoon missile programs and SARAH, a radar guided version of Sidewinder. He describes his job as Technical Director, his work with the FAA, and his hobbies, including old cars and a penchant for Shakespeare.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Amlie, Dr. June McLean, Dr. William B. Wilson, Dr. Haskell G.

**Institutions:** Naval Weapons Center  
Federal Aviation Administration

**Subjects:** Missile Research

**Cities:** China Lake, CA.

**Other addey entries:** Sidewinder Missile Project  
Harpoon Missile Project  
Condor Missile  
SARAH Missile Project  
Technical Director

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Amlie, Dr. Thomas S.  
Cartwright, Dr. Frank W.  
Crawford, Jack A.  
Donaldson, Earl J.  
Schreiber, J. Raymond  
Smith, Charles P.  
Ward, Dr. Newton E.  
Wilson, Dr. Haskell G.  
Wilcox, Dr. Howard A.

Group Interview, conducted by William F. Wright and  
Budd Gott.

**Date of Interview:** 800314

**Documentation:** Index, Transcript 101 pp.

**Interview number:** S-112

**Abstract:** This is a group discussion on the occasion of the reunion of the Air Ordnance Department at NOTS. The goals of weapon design, Sidewinder from its start to its finished product, and Dr. William B. McLean as Technical Director are discussed. They describe NOTS role in the Korean War, Dr. L. T. E. Thompson's management style, and NOTS' relations with Washington. Also included are sections on the 1967 reorganization of the Navy, R&D at NOTS, Dr. Amlie as Technical Director, and changes in the NOTS-NWC management philosophy.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Amlie, Dr. Thomas S.  
LaBerge, Dr. Walter  
McLean, Dr. William B.  
Parsons, RADM William S.  
Smith, Chuck  
Thompson, Dr. Louis T. E.  
Wilcox, Dr. Howard A.  
Wilson, Dr. Haskell G.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Cities:** China Lake, CA.

**Other added entries:** Sidewinder Missile Project  
Korean War  
Technical Director

**Anderson, Evan**

Interview of Mr. Evan Anderson, conducted by Dr. Vincent Ponko, Jr.

**Date of Interview:** 801104

**Documentation:** 2 Tapes, Index, Transcript 29 pp.

**Interview number:** DNL-T29

**Abstract:** Mr. Anderson describes his work with the government before 1962 at the Franklin Arsenal, Diamond Ordnance Fuze Laboratory, and the Special Assistant to the Chief of Ordnance. He recalls his selection as a staff member in the Office of the Secretary of Defense and his work in the Base Utilization Division. Anderson talks about his transfer to the office of Director of Defense Research and Engineering (DDR&E) in 1966 and his relationships with Dr. Chalmers Sherwin and Dr. Edward Glass. He discusses studies and reports done at DDR&E, his associations with DNL/DLP and ASN (R&D), and military-civilian relationships in R&D. Anderson comments on Navy R&D efforts and opportunities in the McNamara and Laird eras, Congress' role in R&D, and his duties at the National Science Foundation.

**Repositories:** DTNSRDC

**Individuals mentioned:** Glass, Dr. Edward  
Johnson, Dr. Gerald  
Sherwin, Dr. Chalmers

**Institutions:** National Science Foundation  
Director of Navy Laboratories  
Director of Laboratory Programs  
Assistant Secretary of the Navy (R&D)  
Director of Defense Research and Engineering  
Franklin Arsenal

**Other added entries:** Sherwin Plan

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**Andrews, RADM B. F.**

**Date of Interview: 740912**

**Documentation: 2 Tapes**

**Interview number: BA-22**

**Repositories: NHC, DTNSRDC**

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**Andrews, Dr. Dan**

Interview of Dr. Dan Andrews, conducted by Albert B. Christman

**Date of Interview: 780300**

**Documentation: Transcript 18 pp.**

**Interview number: DNL-T8-78**

**Abstract:** Dr. Andrews discusses his work at NOTS and NOSC during World War II and after, the differences between wartime and peacetime funding, and bureaucratic problems created by Navy reorganizations. He talks about doing contract work for industry; in particular, compartmentalization and the resulting loss in quality. He mentions profit as industry's motivating factor.

**Repositories: DTNSRDC**

**Institutions: Naval Ocean Systems Center  
Naval Ordnance Test Station**

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**Ashworth, VADM Frederick L.**

Interview of VADM Frederick L. Ashworth, conducted by Albert B. Christman

**Date of Interview: 690410**

**Documentation: Index, Transcript 98 pp.**

**Interview number: NWC-75201-S61**

**Other interview date: 690409**

**Abstract:** This interview was conducted partly as background for a biography of RADM William S. Parsons and partly for

inclusion in a history of Navy Research and Development. Ashworth talks about his initial contacts with Parsons, Parsons role in the Manhattan Project, and Parsons' flight to Hiroshima on the Enola Gay. He discusses Parsons' administrative talent and general disposition. Ashworth also comments on industry and the Navy and weapons R&D, the effect of officers' short tours on R&D, and the military-industrial complex. Also included are segments on NWC and Navy R&D, in general.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Blandy, ADM George  
Farrell, GEN  
Groves, GEN Leslie  
Hayward, ADM John T.  
McLean, Dr. William B.  
McNamara, SECDEF Robert S.  
Oppenheimer, Dr. Robert  
Parsons, RADM William S.  
Ramsey, Dr. Norman  
Rivero, ADM Horacio  
Sweeney, MAJ Charles W.  
Thompson, Dr. Louis T. E.  
Tibbets, COL Paul

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Cities:** Hiroshima, Japan  
Nagasaki, Japan  
Tinian  
Los Alamos, NM.  
China Lake, CA.  
Inyokern, CA.

**Other added entries:** Manhattan Project

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Ashworth, VADM Frederick L.

"Nagasaki", conducted by John Burnett

**Date of Interview:** 560000

**Documentation:** Transcript 62 pp.

**Interview number:** S-92

**Abstract:** VADM Ashworth describes the preparation behind the dropping of the atom bombs on Hiroshima and Nagasaki. He comments on the Hiroshima flight; in particular, the perfect

timing of the run. Ashworth then details the Nagasaki flight - his role as weaponeer, CAPT Beahan's role as bombardier, the no drop situation at Krokura, and the flight from there to Nagasaki. In addition, Ashworth recalls the weather conditions at Nagasaki, plans to drop the bomb by radar if necessary, the fuel situation on the plane, and the emergency landing on Okinawa. Also included are comments on the roles of GEN Doolittle and GEN Groves and accuracy of the bomb drop.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Beahan, CAPT  
Groves, GEN Leslie  
Doolittle, GEN James H.  
Parsons, RADM William S.  
Sweeney, MAJ Charles W.

**Cities:** Okinawa, Japan  
Nagasaki, Japan  
Hiroshima, Japan  
Krokura, Japan  
Los Alamos, NM.  
Potsdam, East Germany

**Other added entries:** Manhattan Project  
Enola Gay

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Bainbridge, Dr. Kenneth Tompkins

Interview of Dr. Kenneth Tompkins Bainbridge

**Date of Interview:** 600000

**Documentation:** Transcript 150 pp.

**Abstract:** Dr. Bainbridge talks of his education and early research at MIT, the creation of the NDRC Radiation Laboratory at MIT in 1940, the 1941 technical mission to England on radar development, and testing the first atom bomb.

**Repositories:** COL

**Individuals mentioned:** Szilard, Dr. Leo  
Compton, Karl  
Oppenheimer, Dr. Robert  
Smyth, Henry D.

**Institutions:** National Defense Research Committee  
Radiation Laboratory

Massachusetts Institute of Technology

**Cities:** Los Alamos, NM.

**Other added entries:** Manhattan Project  
Radar Research

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Baker, Walter L.

Interview of Walter L. Baker, conducted by Richard D. Glasow

**Date of Interview:** 800818

**Documentation:** 2 Tapes, Transcript

**Abstract:** Mr. Baker discusses his career at the Applied Research Laboratory of Pennsylvania State University.

**Repositories:** ARL

**Institutions:** Applied Research Laboratory  
Ordnance Research Laboratory  
Pennsylvania State University

**Other added entries:** Acoustics Research

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Ballentine, ADM John Jennings

Interview of ADM John Jennings Ballentine

**Date of Interview:** 640000

**Documentation:** Transcript 758 pp.

**Abstract:** Of interest in this interview are ADM Ballentine's experiences in testing and development, his work at the Naval Proving Ground and his involvement in the development of the Norden bombsight.

**Repositories:** COL, NHC

**Individuals mentioned:** King, FADM Ernest

**Institutions:** Naval Proving Ground

**Cities:** Dahlgren, VA.  
Pensacola, FL.

**Other added entries:** Norden Bombsight  
Testing and Development  
Naval Aviation

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Barnaby, CAPT Ralph

Interview of CAPT Ralph Barnaby, conducted by Albert B. Christman

**Date of Interview:** 780400

**Documentation:** Tape, Transcript 32 pp.

**Interview number:** DNL-T19-78

**Abstract:** CAPT Barnaby talks about his background in aviation, his early days in the Navy, and his duties during World War I. He discusses inter-war Naval aviation research and the design and evaluation of aircraft. Barnaby describes aviation work during World War II and his tenure as CO of NADC.

**Repositories:** DTNSRDC

**Institutions:** Boeing Airplane Company  
Naval Aviation Development Center

**Other added entries:** Commanding Officer

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Baum, Dr. William A.

Interview of Dr. William A. Baum, conducted Dr. David H. DeVorkin

**Date of Interview:** 820112

**Documentation:** Tapes, 1.5 hours, Transcript 26 pp.

**Abstract:** Dr. Baum discusses his family background and training, World War II involvement with the Caltech rocket project, and his career at the Naval Research Laboratory. At NRL he first worked in fire control, then on constructing the ultra-violet solar spectrograph for V-2 rocket flights. He describes technical difficulties with the solar spectrograph, his contact with von Braun and other German rocket scientists, V-2 firings at White Sands in 1946, co-workers, his doctoral thesis, and accepting a position at Mount Wilson observatory.

**Repositories:** NASM

Tousey, Dr. Richard  
Braun, Wernher von  
Strong, John  
Wood, R. W.  
Lyman, Theodore

**Institutions:** Naval Research Laboratory  
California Institute of Technology

**Subjects:** Astrophysics

**Cities:** White Sands, NM.

**Other added entries:** V-2 Rocket  
Ultra-Violet Solar Spectrograph  
Fire Control

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Bastedo, George

Interview of George Bastedo, conducted by Mickey Strang

**Date of Interview:** 750416

**Documentation:** Index, Transcript 13 pp.

**Interview number:** S-98

**Abstract:** Mr. Bastedo discusses his work on various missile projects, including Bat, Dove, Petrel, Terrier, and Sidewinder. He describes his work at the Bureau of Standards, the establishment of the Naval Ordnance Laboratory at Corona, CA, and his transfer to the Naval Weapons Center.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Sams, Gerald R.

**Institutions:** Naval Weapons Center  
Bureau of Standards  
Bureau of Ordnance  
Bureau of Aeronautics

**Other added entries:** Bat Missile  
Dove Missile Project  
Sidewinder Missile Project  
Petrel Missile  
Terrier Missile

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Beach, Dr. Eugene H.

Interview of Dr. Eugene H. Beach, conducted by Albert B. Christman

**Date of Interview:** 780321

**Documentation:** Transcript 17 pp.

**Interview number:** DNL-T12-78

**Abstract:** Dr. Beach comments on NOL's move to the Navy Yard in 1941; in particular, on the leadership of Dr. Duncan and Dr. McLean, on wartime research and development, and on the commitment of the scientists involved. He talks about the turnover in personnel after the war and the reduction in workload in peacetime. Beach discusses the mission of NSWC and the effort to further define it. He also mentions duplication in the labs. and describes the consolidation of NOL and NWL into NSWC in 1974 and subsequent re-organizations. He explains the role of commanding officers in recent times.

**Repositories:** DTNSRDC

**Individuals mentioned:** Bennett, Dr. Ralph  
Hartmann, Dr. Gregory  
McLean, Dr. William B.  
Duncan, Dr.

**Institutions:** Naval Ordnance Laboratory  
Naval Weapons Laboratory  
Naval Surface Weapons Center  
Washington Navy Yard

**Cities:** White Oak, MD.  
Dahlgren, VA.

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Beach, CAPT Edward Latimer

Interview of CAPT Edward Latimer Beach

**Date of Interview:** 670000

**Documentation:** Transcript 470 pp.

**Abstract:** CAPT Beach recalls his World War II submarine service, and the development of atomic submarines.

**Repositories:** COL, NHC

**Individuals mentioned:** Rickover, ADM Hyman

**Other added entries:** Atomic Submarines

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Beckmann, CAPT Alcorn G.

Interview of CAPT Alcorn G. Beckmann, conducted by Albert B. Christman

**Date of Interview:** 680500

**Documentation:** Index, Transcribed 38 pp.

**Interview number:** NWC-75201-S53

**Abstract:** CAPT Beckmann discusses his time at NOTS from June 1946 to June 1947, including comments on the CO, CAPT James Sykes, the effectiveness of the laboratory workforce, and technical/scientific staff. He also describes his pre-NOTS career.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Brode, Dr. Wallace C.  
Bush, Dr. Vannevar  
Hussey, VADM George F.  
Richmond, CDR John  
Sage, Dr. Bruce  
Sykes, RADM James B.  
Thompson, Dr. Louis T. E.  
Warner, Dr. Arthur H.

**Institutions:** Naval Ordnance Test Station

**Cities:** China Lake, CA.

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**Bergstralh, Thor**

Interview of Thor Bergstralh, conducted by Dr. David H. DeVorkin

**Date of Interview:** 8300801

**Documentation:** Tapes, 3.5 hours, Transcript, 70 pp.

**Abstract:** This interview contains descriptions of Bergstralh's background and schooling, radar school at MIT and Bowdin, his recruitment by NRL after World War II, and interest in upper atmosphere research. He discusses his work on the V-2, procedures at White Sands, co-workers, the Viking and Aerobee projects, rocket impact point prediction systems, cosmic ray research, and the NRL nuclear reactor. He describes his later position at Ford Aeronautics, and Ford's involvement with lunar and planetary exploration.

**Repositories:** NASM

**Individuals mentioned:** Rosen, Milton  
Alter, Dr. Dinsmore  
Blifford, I. H.  
Havens, Dr. Ralph J.  
Tombaugh, Clyde  
Krause, Dr. Ernst H.  
Tousey, Dr. Richard

**Institutions:** Naval Research Laboratory  
Massachusetts Institute of Technology  
Bowdin  
University of Minnesota  
Ford Aeronautics

**Subjects:** Physics  
Navigation  
Rocketry  
Nuclear Reactors  
Telemetry

**Cities:** White Sands, NM.

**Other added entries:** Ranger Hard Lander  
Solar Spectrograph  
Lunar Research  
Starfish  
Cosmic Ray Research  
Aerobee Rocket  
Viking Rocket  
V-2 Rocket  
NAVSTAR

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Berman, Dr. Alan

Interview of Dr. Alan Berman, conducted by Dr. Vincent Ponko, Jr.

**Date of Interview:** 800922

**Documentation:** 2 Tapes, Index, Transcript 30 pp.

**Interview number:** DNL-T27

**Abstract:** Dr. Berman talks about his motivation for accepting the position as Director of Research, NRL, his background at Hudson Laboratories, Columbia University, and the efficiency and productivity of the Navy R&D effort. He comments on placing Navy labs under the CNM, the establishment of the DNL/DLP, and military-civilian relationships in the labs. Berman evaluates the Civil Service Commission's policies on R&D, compares NRL with other labs, and describes his personal research and his management philosophy. He talks about the possible effects of putting NRL under the DNL, why it wasn't placed there in 1966, and the impact of visiting committees, reviews, and studies on NRL. He discusses technical guidance from the higher levels, coordination with other labs, and the use of colleges and universities. Berman compares the U. S. and Soviet R&D efforts, describes the Advanced Research Projects Agency, and suggests changes in the Navy's R&D organizational approach.

**Repositories:** DTNSRDC

**Individuals mentioned:** Probus, Dr. James H.  
Lawson, Dr. Joel  
Morse, Dr. Robert W.  
Smith, Howard

**Institutions:** Advanced Research Projects Agency  
Chief of Naval Material  
Director of Navy Laboratories  
Director of Laboratory Programs  
Naval Research Laboratory  
Office of Naval Research

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Dr. Alan A. Berman (left) former Technical Director, and Captain Edward E. Henifin, former Commanding Officer of the Naval Research Laboratory.

Berman, Dr. Alan

Interview of Dr. Alan Berman, conducted by Dr. John A. S. Pitts, and Dr. David K. Allison

**Date of Interview:** 821118

**Other interview dates:** 820603, 820610, and 820619

**Documentation:** 9 Tapes, 12 Sides, Transcript 140 pp.

**Interview number:** NRL 1

**Abstract:** Dr. Berman gives his perspective on Naval R&D policy making, R&D management initiatives at Hudson Laboratories and NRL, and Navy R&D requirements from 1952 to 1982. He also discusses the main thrusts of Hudson Labs' and NRL's research programs.

**Repositories:** DTNSRDC, NRL

**Institutions:** Naval Research Laboratory  
Hudson Laboratories

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Beshany, VADM Philip A.

Interview of VADM Philip A. Beshany, conducted by Paul Stillwell

**Date of Interview:** 771200

**Other interview date:** 790100

**Documentation:** Index, Transcript 504 pp, Vol. 2

**Abstract:** VADM Beshany discusses his command of Submarine Squadron 4 in the early 1960's during the transition from diesel to nuclear powered submarines, THRESHER, ground work involved in setting up bases for Polaris submarines in Rota, Spain. Director of Submarine Warfare during the development phases of the the LOS ANGELES class attack submarine, first Deputy Chief of Naval Operations (Submarine Warfare).

**Repositories:** USNI, USNA, NWCM, NHC

**Individuals mentioned:** Zumwalt, ADM Elmo Rickover, ADM Hyman

**Institutions:** Deputy Chief of Naval Operations (Submarine Warfare)

**Subjects:** Nuclear Propulsion

**Nuclear Submarines**

**Other added entries:** USS THRESHER  
USS LOS ANGELES  
Polaris Submarines

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**Birch, Dr. A. Francis**

Interview of Dr. A. Francis Birch, conducted by Albert B. Christman

**Date of Interview:** 710217

**Documentation:** Index, Transcript 31 pp.

**Interview number:** NOTS-75201-S79

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Birch describes his association with Parsons as Head of Group 01 in the Manhattan Project, an Ordnance liaison. He discusses Parsons' role as administrator and gunnery expert. Birch talks about the tests at Muroc and Tinian and the Hiroshima flight. He comments on his contacts with Parsons after the war.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Bainbridge, Dr. Kenneth  
Parsons, RADM William S.

**Cities:** Los Alamos, NM.  
Tinian  
Hiroshima, Japan  
Muroc, CA.

**Other added entries:** Manhattan Project

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Black, CAPT Robert G.

Interview of CAPT Robert G. Black, conducted by Roger Kempler

**Date of Interview:** 820621

**Documentation:** Index, Transcript 24 pp.

**Interview number:** NPRDC-4

**Abstract:** CAPT Black talks about his initial exposure to Naval research, his assignment as Director of the Personnel Research Division of BUPERS, and the organization of Navy personnel research. He examines the research emphasis at NPRDC, Navy attitudes toward personnel research, and CAPT Black's philosophy on the subject. Black describes his major contributions to the Navy Personnel Research Program, changing the physical location of Pers-A3, and officer-civilian relationships in BUPERS.

**Repositories:** DTNSRDC, NPRDC

**Individuals mentioned:** Sjolholm, Dr. Allan A.  
Price, D. George

**Institutions:** Bureau of Naval Personnel  
Personnel Research Division  
Naval Research Advisory Committee  
Navy Personnel Research and Development Center

**Other added entries:** Personnel Research

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Blood, Dr. Howard

Interview of Dr. Howard Blood, conducted by Albert B. Christman

**Date of Interview:** 780310

**Documentation:** Transcript 16 pp.

**Interview number:** DNL-T2-78

**Abstract:** Dr. Blood talks about the merger which created the Naval Ocean Systems Center and the management problems involved. He discusses the purpose of NOSC and evaluates the products produced.

**Repositories:** NHC, DTNSRDC

**Institutions:** Naval Ocean Systems Center  
Naval Undersea Center

**Other added entries:** Laboratory Consolidations

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Bodenburg, John

Interview of John Bodenburg, conducted by Elizabeth Babcock

**Date of Interview:** 801230

**Documentation:** Index, Transcript 67 pp.

**Interview number:** S-115

**Abstract:** Mr. Bodenburg describes his background, his early work at NWC, and discusses the danger of bureaucratization at a Navy lab. He comments on NWC top management's concern for communication, morale, and productivity and the relationship between the CO and the Technical Director. Bodenburg notes a decline in the amount of innovative research and talks about the advantages of having a Rear Admiral as commander of NWC. He also states that the research end of RDT&E is a low cost, high yield field. Bodenburg explains the changing nature of Naval warfare and the political nature of weapons development. He comments on problems with the new SES system in high management, NWC's relations with Washington, and the spirit of cooperation among the labs.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Freeman, ADM Rowland G.  
Harris, ADM William L.  
Hillyer, Robert  
White, ADM Alfred J., Jr.

**Institutions:** Naval Weapons Center

**Other added entries:** Senior Executive Service  
Laboratory Management  
Weapons Development

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Bolt, Dr. Richard Henry

Interview of Dr. Richard Henry Bolt, conducted by  
Richard D. Glasow

**Date of Interview:** 800821

**Documentation:** Tapes, Transcript

**Abstract:** Dr. Bolt describes his background and education,  
his work with the OSRD and his research in acoustics.

**Repositories:** ARL

**Individuals mentioned:** Knudson, Dr. Vern  
Meyer, Irwin

**Institutions:** Office of Scientific Research and Development  
National Defense Research Committee  
University of California

**Cities:** Berkeley, CA.

**Other added entries:** Acoustics Research

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Bowen, Dr. Edward G.

Interview of Dr. Edward G. Bowen, conducted by Dr.  
David K. Allison

**Date of Interview:** 790316

**Documentation:** 4 Tapes (7 Sides), Index, 7 pp.

**Interview number:** NRL 2

**Abstract:** Dr. Bowen discusses radar development in England  
in the 1930's, radar as a source of cooperation and conflict  
between the United States and England, the development of  
radar, and radar technology during World War II.

**Repositories:** NRL

**Subjects:** Radar Research

**Other added entries:** Tizard Mission

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Bowen, VADM Harold G.

Interview of VADM Harold G. Bowen, conducted by Dr. Peter Burton and CAPT Robert L. Hansen

**Date of Interview:** 740000

**Documentation:** Index, Transcript 45 pp.

**Interview number:** BA-8

**Abstract:** VADM Bowen talks about the Navy planning system for R&D from 1945 through 1958, the DCNO (Dev)'s responsibilities, and the Development Characteristics instituted in 1953. In the post-1958 era, Bowen discusses the DCNO (Dev)'s evaluation of the TDP, OPNAV's size and consequent inefficiency, and ASN (R&D)'s responsibility for RDT&E appropriations. He describes DDR&E interference in some programs, the DCNO (Dev)'s relationship with Congressional Armed Services Committees, and the Navy's exclusion from the space program. Bowen notes that creation of the DNL was seen as an additional act of centralization and that labs want more independent R&D authority. He also talks about the difficulty of recruiting good personnel because of competition from industry.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Frosch, Dr. Robert A.  
Martell, VADM Charles B.  
McNamara, SECDEF Robert S.

**Institutions:** Deputy Chief of Naval Operations (Development)  
Assistant Secretary of the Navy (R&D)  
Director of Navy Laboratories  
Secretary of Defense  
Director of Defense Research and Engineering

**Subjects:** Research, Development, Test, and Evaluation

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Bowen, Harold G., Jr.

Interview of Harold G. Bowen, Jr., conducted by Dr. David K. Allison

**Date of Interview:** 790423

**Documentation:** 1 Tape (2 Sides), Index on four 5 x 8 cards.

**Interview number:** NRL 3

**Abstract:** This interview concerns the career and activities of VADM Harold G. Bowen, Sr.

**Repositories:** NRL

**Individuals mentioned:** Bowen, VADM Harold G.

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Bowen, Dr. Ira S.

Interview of Dr. Ira S. Bowen, conducted by Albert B. Christman

**Date of Interview:** 701005

**Documentation:** Index, Transcript 33 pp.

**Interview number:** NWC-75201-S72

**Abstract:** Dr. Bowen describes his involvement in the rocket program at CalTech, the choice of China Lake, CA., for NOTS, and the first tests at NOTS. He talks about Dr. Charles C. Lauritsen, Dr. Emory Ellis, and Dr. Robert A. Millikan, and comments on his own involvement in the war effort. Bowen details his military contacts at China Lake and recalls the accidents at Eaton Canyon and Kellogg. He also mentions the tests at Goldstone Lake.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Ellis, Dr. Emory L.  
Fowler, Dr. William  
Lauritsen, Dr. Charles C.  
Millikan, Dr. Robert A.

**Institutions:** Naval Ordnance Test Station

**Cities:** China Lake, CA.  
Goldstone Lake, CA.  
Eaton Canyon, CA.

Bowyer, Dr. C. Stewart

Interview of Dr. C. Stewart Bowyer, conducted by  
Richard F. Hirsch

**Date of Interview:** 780728

**Documentation:** 2 Tapes (4 Sides), Typed notes, 11 pp.

**Interview number:** NRL 22

**Abstract:** Dr. Bowyer, an NRL space scientist was interviewed by Richard Hirsch as part of his research for his doctoral dissertation on the beginnings of x-ray astronomy. These tapes were prepared in conjunction with the National Air and Space Museum (NASM) and the American Institute of Physics (AIP).

**Repositories:** NRL, NASM

**Institutions:** Naval Research Laboratory  
National Aeronautics and Space Administration  
Lawrence Livermore Laboratory  
Lockheed Corporation  
National Air and Space Museum  
American Institute of Physics

**Subjects:** Astronomy  
X-Ray Astronomy

**Other added entries:** Neutron Stars  
Black Holes

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Bradbury, Dr. Norris E.

Notes on Unrecorded Interview of Dr. Norris E.  
Bradbury, conducted by Albert B. Christman

**Date of Interview:** 670123

**Documentation:** Index, not taped 9 pp.

**Interview number:** NOTS-75201-S23

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Bradbury recalls that at NPG-Dahlgren, Parsons stimulated people in their work and was able to work well with people of various backgrounds. At the Manhattan Project-Los Alamos, Parsons contributed "common sense" and was probably second in command. He and Oppenheimer were natural compliments.

Bradbury also comments on Parsons after the war and, in a general way, on NOTS and the Salt Wells Pilot Plant.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S. Oppenheimer, Dr. Robert

**Institutions:** Naval Proving Ground

**Cities:** Los Alamos, NM.  
Dahlgren, VA.

**Other added entries:** Manhattan Project  
Salt Wells Pilot Plant

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Bramble, Dr. Charles C.

"Dahlgren's First Director of Research: Dr. Charles C. Bramble", conducted by Cynthia Rouse

**Date of Interview:** 770131

**Documentation:** Transcript 6 pp.

Note: This interview is Chapter VI of Dahlgren, edited by Kenneth G. McCollum.

**Abstract:** Dr. Bramble relates his first experiences at Dahlgren, in 1924 when as an instructor at the Naval Postgraduate School he would travel to Dahlgren to observe ordnance testing, his work at Dahlgren in World War II, Dr. L. T. E. Thompson, Nils Riffolt, the Aiken Relay Calculator, NORC, and the MARK I through MARK III calculators.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Thompson, Dr. Louis T. E.  
Riffolt, Nils

**Institutions:** Naval Postgraduate School  
Naval Proving Ground

**Subjects:** Computers  
Fire Control Computers  
Ordnance

**Cities:** Dahlgren, VA.

**Other added entries:** Aiken Relay Calculator  
Naval Ordnance Research Calculator

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Braun, RADM Boynton L.

"Early Work in Aviation: RADM Boynton L. Braun",  
conducted by Jack Brooks, Jr.

**Date of Interview:** 750509

**Documentation:** Transcript 23 pp.

**Note:** This interview is Chapter III in Dahlgren, edited by  
Kenneth G. McCollum

**Abstract:** RADM Braun describes his education and his early  
experiences in bombing and fire control, aerial bombing, the  
Norden bombsight, Dahlgren in the 1920s and 1930s, and  
testing procedures.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Thompson, Dr. Louis T. E.  
King, FADM Ernest  
Leary, VADM Herbert F.  
Schuyler, RADM Garret Lansing  
Furlong, RADM William Rea

**Institutions:** Naval Proving Ground

**Subjects:** Naval Aviation  
Ordnance

**Cities:** Dahlgren, VA.

**Other added entries:** Norden Bombsight  
Aerial Bombing

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Breslow, Arthur

Interview of Arthur Breslow, conducted by Albert B.  
Christman

**Date of Interview:** 661000

**Documentation:** Index, Transcript 68 pp.

**Interview number:** NOTS-75201-S17

**Abstract:** This interview was originally conducted as  
background for a biography of RADM William S. Parsons. Mr.  
Breslow describes the B-29 tests at Muroc, including

problems with the types of bombs to be loaded and training the crews. He also describes his work on the Manhattan Project; in particular, the day-to-day operations of the base at Los Alamos and the atom bomb test Trinity.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Kistiakowsky, Dr. George B.  
Parsons, RADM William S.  
Ramsey, Dr. Norman  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station

**Cities:** Muroc, CA.  
Los Alamos, NM.

**Other added entries:** Manhattan Project  
B-29 Bomber  
Fat Man Bomb  
Thin Man Bomb  
Trinity Test

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Brode, Dr. Wallace C.

Interview of Dr. Wallace C. Brode, conducted by Albert B. Christman

**Date of Interview:** 690500

**Documentation:** Index, Transcript 35 pp.

**Interview number:** NWC-75201-S66

**Abstract:** Dr. Brode discusses military-civilian relationships at Navy labs, how he came to NOTS, and his job there. He comments on discrimination problems between officers and civilians, the need for scientists to have a voice in the Navy, and the lack of contact with other scientists outside the labs. Brode also details Forrestal's visit to NOTS, his philosophy toward operating a lab, and the operation of NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Bush, Dr. Vannevar  
Forrestal, SECNAV James  
Hussey, VADM George F.  
Sykes, RADM James B.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station

**Cities:** Inyokern, CA.

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Brooks, Dr. Harvey

Interview of Dr. Harvey Brooks, conducted by Richard D. Glasow

**Date of Interview:** 800820

**Documentation:** Tapes, Transcript

**Abstract:** Dr. Brooks describes his background and education, and his work with the Harvard Underwater Sound Laboratory.

**Repositories:** ARL

**Individuals mentioned:** Hunt, Prof. Ted  
Hickman, Roger

**Institutions:** National Defense Research Committee  
Harvard University  
Underwater Sound Laboratory

**Cities:** Cambridge, MA.

**Subjects:** Sonar  
Solid State Physics

**Other added entries:** Acoustics Research  
Ordnance Research

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Bryan, Dr. Glenn L.

Interview of Dr. Glenn L. Bryan, conducted by Roger Kempler

**Date of Interview:** 820729

**Documentation:** Transcript, 26 pp.

**Abstract:** Dr. Bryan discusses the background of Navy personnel research, personnel research in the 1960s, the relationship of Navy R&D to Navy Objectives, the CO/TD organizational relationship, the Psychological Sciences Division ONR, the "Center of Excellence" as a concept, the NRAC Life Sciences Committee, the establishment of NPRDC, NPRDC becoming a NAVMAT laboratory, Human Factors R&D and

NPRDC, its impact on the fleet, and achievements in its ten years of existence.

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Rigney, Dr. Joseph  
Dudek, Dr. Edward  
Fields, Dr. Victor  
Sjoholm, Dr. Allan A.  
Collins, Dr. John J.  
Wallace, Dr. Raines  
Price, D. George

**Institutions:** Navy Personnel Research and Development Center  
Naval Research Advisory Committee  
Office of Naval Research

**Other added entries:** Personnel Research  
Center of Excellence

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Burke, ADM Arleigh A.

Interview of ADM Arleigh A. Burke

**Date of Interview:** 720900

**Documentation:** Transcript 36 pp.

**Abstract:** ADM Burke served as Chief of Naval Operations during the development of the Polaris weapons system. This is one part of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute.

**Repositories:** NHC, NWCM, USNA, USNI

**Institutions:** Chief of Naval Operations

**Subjects:** Submarine Launched Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Fleet Ballistic Missiles  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program

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Burns, Dr. Robert O.

Interview of Dr. Robert O. Burns

**Date of Interview:** 741111

**Documentation:** 2 Tapes

**Interview number:** BA-21

**Repositories:** DTNSRDC

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Burroughs, Kay (Mrs. Sherman E.)

Interview of Mrs. Kay Burroughs, conducted by John D. Gerrard-Gough

**Date of Interview:** 721101

**Documentation:** Index, Transcript 19 pp.

**Interview number:** NWC-75103-S83

**Abstract:** Mrs. Burroughs explains how she met her husband, the future ADM Burroughs, She comments on the early days of NOTS, social life there, and the men who worked around her husband. She comments on CAPT Duncan, Emory Ellis, and CDR John Richmond.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Duncan, CAPT James  
Ellis, Dr. Emory L.  
Richmond, CDR John  
Burroughs, Kay (Mrs. Sherman E.)  
Burroughs, ADM Sherman E.

**Institutions:** Naval Ordnance Test Station

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Burroughs, Mrs. Robert (former Mrs. William S. Parsons)

Interview of Mrs. Robert Burroughs, conducted by Albert B. Christman

**Date of Interview:** 660421

**Documentation:** Index, Transcribed 154 pp.

**Interview number:** NOTS-75201-S10

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Mrs. Burroughs discusses Parsons' family life, personal characteristics, and decision to enter the Navy. She describes the rapport between Parsons and Dr. L. T. E. Thompson when both were at NPG and Parsons' peculiar ability (for a Navy man) to understand and communicate with scientists. Other sections cover Parsons' work with radar, the proximity fuze, and the atomic bomb, and his relationship with Dr. Robert Oppenheimer. Mrs. Burroughs also relays Parsons' opinion on postwar R&D.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Ashworth, VADM Frederick L.  
Fuller, Clarissa Parsons  
Parsons, Mrs. William S.  
Groves, GEN Leslie  
Oppenheimer, Dr. Robert  
Parsons, RADM William S.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Research Laboratory

**Subjects:** Radar Research  
Atomic Research

**Cities:** Los Alamos, NM.  
Dahlgren, VA.

**Other added entries:** Manhattan Project  
Sidewinder Missile Project  
Proximity Fuze

Burroughs, RADM Sherman E.

Interview of RADM Sherman E. Burroughs, conducted by  
Albert B. Christman

**Date of Interview:** 660400

**Documentation:** Index, Transcript 22 pp.

**Interview number:** NOTS-75201-S2

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM Burroughs discusses the origin of NOTS, its connections with CalTech, and the choice of its location. He reminisces on his work with Dr. L. T. E. Thompson and RADM Parsons and talks about Parsons' work on the Manhattan Project and the Proximity Fuze.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Hussey, VADM George F.  
Lauritsen, Dr. Charles C.  
Parsons, RADM William S.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Proving Ground  
California Institute of Technology

**Cities:** Inyokern, CA.  
Pasadena, CA.  
Dahlgren, VA.

**Other added entries:** Proximity Fuze  
Manhattan Project

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Burroughs, RADM Sherman E.

Interview of RADM Sherman E. Burroughs, conducted by  
Albert B. Christman

**Date of Interview:** 661104

**Documentation:** Index, Transcribed 51 pp.

**Interview number:** NOTS-75201-S20

**Abstract:** RADM Burroughs talks about his early career in aviation ordnance, and his time as a member of VADM Hussey's staff. Next, he discusses the idea of NOTS as a permanent



The Naval Ordnance Test Station - California Institute of Technology team.  
Left to right: Commander John O. Richmond, Dr. Charles C. Lauritsen,  
Captain Sherman E. Buttroughs, Jr., Commander John T. Hayward,  
Dr. William A. Fowler, and Dr. Emory L. Ellis.

R&D facility. He describes the relationship between military men, engineers, and scientists at NOTS and profiles the first group of officers stationed at NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Blandy, ADM George  
Byrnes, CAPT James  
Duncan, CAPT James  
Halsey, ADM William F.  
Hayward, ADM John T.  
Lauritsen, Dr. Charles C.  
Moses, William  
Richmond, CDR John  
Schoeffel, RADM Malcom F.

**Institutions:** Naval Ordnance Test Station

**Cities:** Inyokern, CA.  
China Lake, CA.

**Other added entries:** Naval Aviation  
Aviation Ordnance

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Byrum, E. T.

Interview of E. T. Byrum, conducted by Richard Hirsh

**Date of Interview:** 760000

**Documentation:** Tapes

**Repositories:** AIP

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Camp, Victor W.

Interview of Victor W. Camp, conducted by Roger Kempler

**Date of Interview:** 820707

**Documentation:** Index, Transcript 23 pp.

**Interview number:** NP-3

**Abstract:** Mr. Camp discusses the Navy's attitude toward personnel research in the 1940's and 1950's, his association with ADM Rickover's staff, and the Personnel Research Division under the Assistant Chief for Personnel -- Plans and Programs. He talks about R&D budgeting under Pers-A3.

relations between field activities and agencies in Washington, and the effect of personnel research on systems design. Camp describes the role of John J. Collins in the establishment of NPRDC, his own role in planning NPRDC, and his place in the NPRDC organization. He comments on the change in management from BUPERS to the CNM and the improved quality of Navy Personnel Research.

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Price, D. George  
Ramses, Dr. Eugene  
Collins, Dr. John J.

**Institutions:** Navy Personnel Research and Development Center  
Bureau of Naval Personnel  
Chief of Naval Material

**Cities:** San Diego, CA.

**Other added entries:** Technical Director  
Personnel Research

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Carome, Dr. Edward F.

Interview of Dr. Edward F. Carome, conducted by Dr. David K. Allison

**Date of Interview:** 800805

**Documentation:** 2 Tapes, 3 sides, Index, 1 p.

**Abstract:** NRL pioneered in fiber optics research and has been the Navy's lead laboratory for the tri-service Fiber Optics Sensor System (FOSS) development program. Dr. Carome discusses early experiments at NRL's Schlieren laboratory, coworkers, and initial patents for a optical fiber hydrophone.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory  
Schlieren Laboratory  
John Carroll University  
Stanford University  
Thompson Ramo-Wooldridge Corporation

**Individuals mentioned:** Davis, Dr. Charles M.  
Berman, Dr. Alan

**Subjects:** Fiber Optics

**Other added entries:** Fiber Optics Sensor System  
Acoustics Research  
Fiber Optic Hydrophone  
Hydrophones

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Carstater, Dr. Eugene D.

Interview of Dr. Eugene D. Carstater, conducted by  
Roger Kempler

**Date of Interview:** 820723

**Documentation:** Transcript 19 pp.

**Interview number:** NP-7

**Abstract:** Dr. Carstater discusses his entry into Navy personnel research, and the leadership of the Navy personnel research program. He talks about the organization of Pers-15, its major accomplishments, and the military staffing within Pers-15. Dr. Carstater discusses the expansion of Navy personnel research programs in Washington and San Diego in the 1960's.

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Price, D. George  
Brundage, Dr. Everett G.

**Institutions:** Navy Personnel Research and Development Center  
Bureau of Naval Personnel  
Personnel Research Division

**Other added entries:** Personnel Research

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Christman, Albert B.

Interview of Albert B. Christman, conducted by Robert  
J. Taormina

**Date of Interview:** 800108

**Documentation:** 2 Tapes, Transcript 59 pp.

**Interview number:** DNL-T-22

**Abstract:** Mr. Christman discusses pre-World War I R&D --

including the need for R&D work in the Navy, new developments in the Fleet, and means of attracting civilians to Navy research work, and obsolescence of weapons. He also comments on R&D during the two World Wars, particularly scientists' understanding of Fleet needs and the difficulty of getting new technologies introduced into the Fleet. Christman talks about the difficulties involved in R. planning in the nuclear age, increasing bureaucracy in Navy R&D, and the reorganization of Navy R&D in the mid-1960's.

**Repositories:** DTNSRDC

**Institutions:** Systems Commands

**Other added entries:** Navy Research and Development Bureau System

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Chubb, Dr. Talbot A.

Interview of Dr. Talbot A. Chubb, conducted by Richard F. Hirsh

**Date of Interview:** 760000

**Documentation:** Tapes

**Repositories:** AIP

**Institutions:** Naval Research Laboratory

**Subjects:** Astronomy

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Chubb, Dr. Talbot A.

Interview of Dr. Talbot A. Chubb, conducted by Richard F. Hirsh

**Date of Interview:** 780000

**Documentation:** 2 Tapes (4 Sides), Notes, 17 pp.

**Abstract:** Dr. Chubb, an NRL space scientist was interviewed by Richard F. Hirsh as part of his research for his doctoral dissertation on the beginnings of x-ray astronomy. These tapes were produced in conjunction with the National Air and Space Museum (NASM) and the American Institute of Physics (AIP).

**Repositories:** NRL, NASM



Dr. Talbot A. Chubb (left) and Dr. Herbert Friedman shock testing a Deacon rocket payload.

**Institutions:** Naval Research Laboratory  
National Air and Space Museum  
American Institute of Physics

**Individuals mentioned:** Bowyer, D. C. Stewart

**Subjects:** X-Ray Astronomy  
Nebulae

**Other added entries:** Aerobee Rocket  
Neutron Stars  
Nike-Dan Rockets  
ASP Munition

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Cleeton, Dr. Claud E.

Interview of Dr. Claud E. Cleeton, conducted by Dr. David K. Allison

**Date of Interview:** 790122

**Documentation:** 2 Tapes (4 Sides), list of questions on two 5 x 7 cards

**Interview number:** NRL-4

**Abstract:** Dr. Cleeton gives his perspective on Naval electronics research and applications from 1936-1972. Cleeton conducted pioneering research in microwave communications and digital electronic circuits, and directed NRL programs in radar identification, advanced radar development and applications, particularly in relation to the Space Surveillance System.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Subjects:** Radar  
Space Surveillance System  
Digital Systems  
Electronic Equipment  
Microwave Communications

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Collins, Dr. John J.

Interview of Dr. John J. Collins, conducted by Roger Kempler

**Date of Interview:** 820727

**Documentation:** Index, Transcript 43 pp.

**Interview number:** NP-6

**Abstract:** Dr. Collins discusses key people in the Personnel Research Division of BUPERS, the Personnel Research Field Activity, and the attitude of BUPERS toward personnel research. He talks about supervision of PRFA, differences between the San Diego and Washington branches of PRFA, and criticism of the existence of two personnel research units. Collins talks about new developments in human factors engineering, growth in personnel research in the 1960's, the opposition to the formation of NPRDC. He describes his role in NPRDC's formation, the work of others in its formation, and his relationship with the Office of Naval Research. Collins explains the major problems that NPRDC faced at its inception, NPRDC as a CNM managed lab, and his views on the possible merger of NPRDC with another lab.

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Price, D. George  
Frosch, Dr. Robert A.  
Regan, Dr. James J.

**Institutions:** Navy Personnel Research and Development Center  
Personnel Research Field Activity  
Personnel Research Division  
Bureau of Naval Personnel  
Chief of Naval Material  
Office of Naval Research

**Cities:** San Diego, CA.  
Washington, DC.

**Other added entries:** Personnel Research  
Human Factors Engineering



Dr. John J. Collins of the Navy Personnel Research and Development Center.

Colvard, Dr. James E.

Interview of Dr. James E. Colvard, conducted by Dr. Vincent Ponko, Jr.

**Date of Interview:** 801103

**Documentation:** 2 Tapes, Index, Transcript 40 pp.

**Interview number:** DNL-T28

**Abstract:** Dr. Colvard describes his first work assignments at NOTS in the 1950's, his time at the Applied Physics Laboratory, Johns Hopkins, working on satellite trackers for nuclear subs, and his return to NOTS in 1962. He talks about NOTS' relations with Washington, his association with Exploratory Development projects at China Lake, and the adverse effects on fire control systems of taking the lab out of the Naval Ordnance Systems Command. Colvard comments on CNM command of the labs, the establishment of the Office of the Director of Navy Laboratories, his promotion to division head at China Lake, and McLean at NOTS' Technical Director. He describes his transfer to the Naval Weapons Center at Dahlgren, VA., in 1969, his promotion to Technical Director, and the combination of NWC and NOL-White Oak into one center, the Naval Surface Weapons Center. He explains the NSWC organization and comments on the problems he had at NSWC. He talks generally about the Navy in-house laboratory system as a whole, civilian-military relationships in the Navy, and the current Navy R&D situation.

**Repositories:** DTNSRDC

**Individuals mentioned:** Amlie, Dr. Thomas S.  
Gralla, VADM Arthur R.  
McLean, Dr. William B.  
Smith, Bernard

**Institutions:** Applied Physics Laboratory  
Naval Ordnance Test Station  
Director of Navy Laboratories  
Naval Surface Weapons Center  
Naval Weapons Center

**Cities:** China Lake, CA.  
Dahlgren, VA.  
White Oak, MD.

**Other added entries:** Technical Director  
Laboratory Consolidations

Connolly, VADM Thomas

"25 Years of Value"

**Date of Interview:** 681108

**Documentation:** Index, transcript 16 pp.

**Interview number:** S57

**Abstract:** VADM Connolly makes a testimonial speech to the employees, former employees, and friends of the Naval Weapons Center.

**Repositories:** NWC, DTNSRDC, NHC

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

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Cooper, Dr. Eugene P.

Interview of Dr. Eugene P. Cooper, conducted by J. D. Gerrard-Gough

**Date of Interview:** 751024

**Documentation:** Index, Transcript 18 pp.

**Interview number:** 5313 S-101

**Abstract:** Dr. Cooper remembers the controversy over the location of NOTS and discusses his background in theoretical and nuclear physics. He describes fire control problems with aircraft and tells why he left NOTS. Cooper comments on his time at the University of Oregon and his return to NOTS-Pasadena. He expostulates on underwater ordnance research, his time as Associate Head of the Underwater Ordnance Department, and his feelings about NOTS at China Lake and at Pasadena.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.  
Saylor, William  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station

**Cities:** China Lake, CA.  
Pasadena, CA.

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Couperus, Pierce G.

Interview of Pierce G. Couperus, conducted by Richard D. Glasow

**Date of Interview:** 800823

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Couperus describes his background and education, and his work with the Harvard Underwater Sound Laboratory.

**Repositories:** ARL

**Individuals mentioned:** Smith, Fred

**Institutions:** Harvard University  
Underwater Sound Laboratory

**Cities:** Cambridge, MA.

**Other added entries:** Acoustics Research

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Cozzens, Ernest G.

Interview of Ernest G. Cozzens, conducted by Leroy L. Doig, III

**Date of Interview:** 810625

**Documentation:** Index, Transcript 47 pp.

**Interview number:** S-126

**Abstract:** Mr. Cozzens explains his background, his involvement with Sidewinder, and comments on recent developments in air-to-air weaponry. He talks about relationships with contractors, quality control, and the cost and effectiveness of weapons. Cozzens discusses NWC's relationships with other labs and with the Naval hierarchy in Washington and reflects on Tom Amlie's tenure as Technical Director. He lists NOTS/NWC's contributions to the Navy.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Amlie, Dr. Thomas  
McLean, Dr. William B.

Thompson, Dr. Louis T. E.

**Institutions:** Naval Weapons Center  
Naval Ordnance Test Station

**Other added entries:** Sidewinder Missile Project

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Crary, Dr. Albert P.

Interview of Dr. Albert P. Crary

**Date of Interview:** 620000

**Documentation:** Transcript 87 pp.

**Abstract:** Dr. Crary talks about his work in oceanography and geophysics, involvement with the IGY, early LORAN and SOFAR, air acoustics and balloons.

**Repositories:** COL

**Institutions:** International Geophysical Year

**Subjects:** Oceanography  
Hyperbolic Navigation

**Other added entries:** Sound Fixing and Ranging  
Long Range Navigation

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Crosbie, Richard

Interview of Richard Crosbie, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820703

**Documentation:** 2 Tapes, Index 4 pp.

**Interview number:** NADC-5,6

**Abstract:** Mr. Crosbie talks about the Human Centrifuge at NADC, the dynamic flight simulation of the X-15 Rocket Airplane, Boeing 707, and flight simulation training for the Project Mercury astronauts. He comments on the LBJ Space Center in Houston, Texas, and the development of the NADC in-house computer, Typhoon. Crosbie describes NADC's relations with the University of Pennsylvania, AMAL Projects, and Human Centrifuge projects, including the world's record of 31.25 G's for five seconds, set by R.



Richard Crosbie of the Naval Air Development Center.

Flanagan Gray. He discusses the Directorate Programs and the Systems Approach.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Gray, R. Flanagan  
Poppin, CAPT Jack R.  
Hardy, Dr. James D.

**Institutions:** Naval Air Development Center  
Boeing Airplane Company  
Johnson Space Center  
American Medical Acceleration Laboratory  
University of Pennsylvania  
Bureau of Medicine and Surgery

**Subjects:** Centrifuges  
Aerospace Medicine  
Space Simulation Chambers  
Computers

**Other added entries:** Systems Approach  
Federal Contract Research Centers  
Human Centrifuge  
Typhoon Project

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Cummins, Dr. William E.

Interview of Dr. William E. Cummins, conducted by  
Albert B. Christman

**Date of Interview:** 780328

**Documentation:** 1 Tape

**Repositories:** DTNSRDC

**Institutions:** Naval Ship Research and Development Center

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Cummins, Dr. William E.

Interview of Dr. William E. Cummins, conducted by Dr. David K. Allison

**Date of Interview:** 820802

**Documentation:** 7 Tapes, Index, Transcript 92 pp.

**Abstract:** Dr. Cummins relates his early training in naval architecture, working conditions at the Experimental Model Basin and the David Taylor Model Basin in the 1940's, and his views on the engineering ability and management style of CAPT Harold Saunders. He mentions the GUPPY program, submarine hull design, seaworthiness studies for several types of ships, describes testing procedures and the Polaris program in detail, reorganizations during the 1960's and relations between NAVSEA and DTNSRDC.

**Repositories:** DTNSRDC

**Institutions:** David Taylor Model Basin  
David Taylor Naval Ship Research and Development Center  
Experimental Model Basin  
Naval Sea Systems Command  
Naval Ship Research and Development Center  
Society of Naval Architects  
Webb Institute

**Individuals mentioned:** Ellsworth, William  
Janes, Charlie  
St. Denis, Manley  
Hill, Johnny  
Landweber, Dr. Louis  
Saunders, CAPT Harold E.  
Schoenherr, Dr. Karl E.

**Subjects:** Cavitation  
Hull Design  
Hydrodynamics  
Hydromechanics  
Torpedos  
Submarines  
Seaworthiness  
Waveforms  
Waveform Generators

**Cities:** Washington, DC.  
Washington Navy Yard  
Carderock, MD.

**Other added entries:** FIDO Torpedo  
Model Basins

Model Testing  
Greater Underwater Propulsive Power  
Seakeeping  
Polaris Program

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Custer, CAPT Benjamin Scott

Interview of CAPT Benjamin Scott Custer

**Date of Interview:** 650000

**Documentation:** Transcript, 1,022 pp.

**Abstract:** Of interest in this interview are CAPT Custer's recollections of his career in early Naval aviation, his flying boat squadron, command of the NORTON SOUND and involvement with the Manhattan project.

**Repositories:** COL, NHC

**Other added entries:** USS NORTON SOUND

Naval Aviation  
Flying Boats  
Manhattan Project

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Davis, Dr. Charles M.

Interview of Dr. Charles M. Davis, conducted by Dr. David K. Allison

**Date of Interview:** 820701

**Documentation:** 2 Tapes, Index, 1 p., Transcript of selections from interview "FOSS: A Glance at the Past", 28 pp.

**Abstract:** NRL pioneered in fiber optics research and has been the Navy's lead laboratory for the tri-service Fiber Optics Sensor System (FOSS) development program. Dr. Davis discusses early experimentation, cultivating support and trying to obtain funding from DARPA, NRL and NAVMAT, how the program was managed, co-workers, and the difficulty of recruiting qualified personnel.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory  
Defense Advanced Research Projects Agency  
John Carroll University

Naval Material Command  
Office of Naval Research  
Thompson Ramo-Wooldridge Corporation

**Individuals mentioned:** Berman, Dr. Alan  
Bucaro, Joe  
Carome, Dr. Edward F.  
Donovan, Jack  
Giallorenzi, Dr. Thomas G.  
Henifin, CAPT Edward E.  
Probus, Dr. James H.  
Shajenko, Peter  
Windsor, Harry

**Subjects:** Fiber Optics  
Hydrophones  
Hydroacoustics

**Other added entries:** Systems Commands  
Fiber Optics Sensor System  
Fiber Optic Hydrophone

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Diehl, CAPT Walter S.

Interview of CAPT Walter Stuart Diehl

**Date of Interview:** 650000

**Documentation:** Transcript 93 pp.

**Abstract:** CAPT Diehl recalls his work in aerodynamics and aeronautics, designing and testing Navy airplanes, his participation in World Wars I and II, and his work at the David Taylor Model Basin.

**Repositories:** COL, NHC

**Institutions:** Experimental Model Basin  
David Taylor Model Basin

**Subjects:** Aerodynamics  
Aeronautics

**Cities:** Pensacola, FL.

**Other added entries:** Aircraft Design  
Naval Aviation

DiPol, C. John

Interview of C. John DiPol, conducted by Leroy L. Doig  
III

**Date of Interview:** 810209

**Documentation:** Index, Transcript 23 pp.

**Interview number:** S-119

**Abstract:** Mr. DiPol comments on his arrival at NWC, the mission of the ranges, and range improvements. He mentions changes in NWC work, trends for the future, and NWC relationships with other agencies and labs. DiPol discusses the contributions of NWC, his personal philosophy on the RDT&E environment, and the people that make up China Lake and its surrounding communities.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.

**Institutions:** Naval Weapons Center

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Drummer, Dr. Louis F.

Interview of Dr. Louis F. Drummer, conducted by Dr.  
David K. Allison

**Date of Interview:** 791220

**Other interview dates:** 800114 and 800118

**Documentation:** 6 Tapes (7 Sides)

**Abstract:** Dr. Drummer gives his perspective on NRL optic tests and on organization and management of NRL research programs. Drummer played a key role in the development of NRL's programs in optical science and technology, in particular optical radiometry, quantum optics, and high-energy lasers. The interviews are supplemented by a collection of papers.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Subjects:** Optical Radar  
Radiometry  
High Energy Laser

**Other added entries:** Quantum Optics

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Duncan, ADM Donald

Interview of ADM Donald Duncan

**Date of Interview:** 640000

**Documentation:** Transcript 981 pp.

**Abstract:** ADM Duncan reminisces about his education at the University of Michigan and the Naval Academy, his service in World War I and early Naval aviation, his experience in ordnance and communications, work in the BUAER Plans Division, his involvement in the Manhattan Project and NACA.

**Repositories:** COL, NHC

**Institutions:** National Advisory Committee on Aeronautics  
Bureau of Aeronautics

**Subjects:** Missiles

**Cities:** Pensacola, FL.

**Other added entries:** Manhattan Project  
Naval Aviation

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Duncan, CAPT James

Interview of CAPT James Duncan, conducted by Albert B. Christman

**Date of Interview:** 660426

**Documentation:** Index, Transcript 61 pp., Appendix 7 pp.

**Interview number:** NOTS-75201-S9

**Abstract:** CAPT Duncan describes the building and equipping of NOTS in Inyokern, CA. He discusses how Prof. Michelson came to work there, Dr. Louis T. E. Thompson's influence, and CAPT Burroughs' tenure as commanding officer.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
Byrnes, CAPT James  
Hayward, ADM John T.

McLean, Dr. William B.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Proving Ground

**Cities:** Dahlgren, VA.  
Inyokern, CA.

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Dunlap, Jack

Interview of Jack Dunlap

**Date of Interview:** 721000

**Documentation:** Transcript 32 pp.

**Abstract:** Mr. Dunlap was a member of the civilian steering committee for Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

**Repositories:** NHC, NWCM, USNA, USNI

**Subjects:** Submarine Launched Ballistic Missiles  
Fleet Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program

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Ebaugh, Paul

Interview of Paul Ebaugh, conducted by Richard D. Glasow

**Date of Interview:** 800715

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Ebaugh describes his background and education, his work with the Harvard Underwater Sound Laboratory, and the Applied Research Laboratory.

**Repositories:** ARL

**Institutions:** Harvard University  
Underwater Sound Laboratory

Ordnance Research Laboratory  
Applied Research Laboratory  
Pennsylvania State University

**Other added entries:** Acoustics Research  
Ordnance Research

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Ebbert, CAPT Edwin L.

Interview of CAPT Edwin L. Ebbert, conducted by Dr.  
John A. S. Pitts

**Date of Interview:** 820622

**Documentation:** 2 Tapes (4 Sides), Index 4 pp.

**Abstract:** CAPT Ebbert discusses NRL's Commanding Officers and Technical Directors and reflects upon the problems involved when translating Navy operational needs into R&D programs.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

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Ekas, RADM Claude P.

Interview of RADM Claude P. Ekas, conducted by CAPT  
Robert L. Hansen

**Date of Interview:** 750000

**Documentation:** 1 Tape, Index, Transcript 42 pp.

**Interview number:** BA-13

**Abstract:** RADM Ekas discusses the project history of the Harpoon missile, NAVAIR-NAVORD cooperation on the project, and communication between the Harpoon Program Managers and the technical workers involved. He talks about the problems of coordination between the SYSCOM commander, CNM, and CNO. He also comments on major trends in Navy R&D, including SARS, SYSCOM and CNM methods of program management, and cradle-to-grave technical continuity.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** McNamara, SECDEF Robert S.

**Institutions:** Chief of Naval Operations  
Bureau of Aeronautics  
Bureau of Ordnance

**Other added entries:** Harpoon Missile Project  
Selected Acquisition Reporting System

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Ellis, Dr. Emory L.

Interview of Dr. Emory L. Ellis, conducted by Albert B. Christman

**Date of Interview:** 680500

**Documentation:** Index, Transcript 43 pp.

**Interview number:** NWC-75201-S54

**Abstract:** Dr. Ellis describes his own background as a biochemist at CalTech, his assignment to Eaton Canyon, and his experiences at Goldstone Lake. He discusses how he came to be at NOTS, the first rocket tests there, and the camp's facilities. Ellis comments on the establishment of NOTS, the location of the lab, its military direction, and its transition to a civil service operation.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
McClaren, CDR

**Institutions:** Naval Ordnance Test Station  
California Institute of Technology

**Cities:** Inyokern, CA.  
Goldstone Lake, CA.  
Eaton Canyon, CA.

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Dr. Emory L. Ellis (left) and Haskell G. Wilson of the Naval Ordnance Test Station.

Ellis, Dr. Emory L.  
Ellis, Marion (Mrs. Emory L.)

Interview of Dr. Emory and Marion Ellis, conducted by  
J. D. Gerrard-Gough

**Date of Interview:** 721100

**Documentation:** Index, Transcript 31 pp.

**Interview number:** NWC-75201-S84

**Abstract:** Dr. and Mrs. Ellis discuss the transfer of management at NOTS from CalTech to the Navy in late 1944, the problem of military-civilian relationships, and the command of CAPT Sykes. They talk about NOTS' principles of operation and the turnover in personnel. The Ellises comment on the work of Dr. Louis T. E. Thompson, facilities at NOTS, and research on submarine guns and rockets. They also describe living conditions at China Lake and the White Star Mine.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Beckmann, CAPT Alcorn G.  
Armitage, LT John M.  
Burroughs, ADM Sherman E.  
Hayward, ADM John T.  
Hussey, VADM George F.  
Lauritsen, Dr. Charles C.  
Sykes, RADM James B.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
California Institute of Technology

**Cities:** China Lake, CA.

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Entwistle, RADM Frederick I.

Interview of RADM Frederick I. Entwistle, conducted by  
Albert B. Christman

**Date of Interview:** 670300

**Documentation:** Index, Transcript 48 pp.

**Interview number:** NOTS-75201-S39

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM

Entwistle gives his impressions of RADM Parsons as a person and as an officer. He talks about the role of NOTS in the Navy and the role of scientists in the military. Entwistle also reflects on the contributions of Dr. Louis T. E. Thompson.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Sage, Dr. Bruce  
Parsons, RADM William S.  
Thompson, Dr. Louis T. E.  
Tuve, Dr. Merle

**Institutions:** Naval Ordnance Test Station  
Naval Proving Ground  
California Institute of Technology  
General Tire and Rubber Co.

**Cities:** Inyokern, CA.  
Dahlgren, VA.

**Other added entries:** Proximity Fuze  
Manhattan Project

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Eyster, Dr. Eugene H.

Interview of Dr. Eugene H. Eyster, conducted by Albert B. Christman

**Date of Interview:** 6670100

**Documentation:** Index, Transcript 21 pp.

**Interview number:** NOTS-75201-S24

**Abstract:** Dr. Eyster talks about the weapons produced at Los Alamos, their specifications, and the role of NOTS, Los Alamos, and the Burlington Plant. He discusses the full-scale development and manufacture of atomic weapons. Eyster also comments on the accomplishments of the Salt Wells Pilot Plant and the reasons for its existence.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Longwell, Paul  
Sage, Dr. Bruce

**Institutions:** Naval Ordnance Test Station  
Salt Wells Pilot Plant

**Cities:** Los Alamos, NM.

**Other added entries: Manhattan Project**

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Fallgatter, Calvin J.

Interview of Calvin J. Fallgatter, conducted by Carolyn Ogilvie

**Date of Interview:** 761006

**Documentation:** Index, Transcript 33 pp.

**Interview number:** S-110

**Abstract:** Mr. Fallgatter comments on housing problems when NOTS opened. He talks about factors in employee turnover and discusses NOTS' first commanders.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Etheridge, CAPT Melvin R.  
McLaughlin, Jack  
Richmond, CDR John

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

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Ferguson, Mary

Interview of Mary Ferguson, conducted by Susan Frutkin

**Date of Interview:** 740705

**Documentation:** 1 Tape. Index 4 pp.

**Interview number:** BA-24

**Abstract:** This interview is a taped review of a document on Navy financial management put together for Booz-Allen & Hamilton's review of Navy R&D Management 1946-1973. Mrs. Ferguson discusses the effect of the National Security Acts of 1947 and 1949 on the budget process, relationships between the Comptroller of the ONR and the DoD, how funding changes created the program planning process, who controls appropriations, and difficulties for women in the military establishment.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Livermore, Cliff

Bennett, RADM Rawson

**Institutions:** Office of Naval Research  
Comptroller of the Office of Naval Research  
Comptroller of the Navy

**Other added entries:** National Security Act  
Research and Development Funding  
Fiscal Management  
Franke Board  
Sexual Discrimination

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Ferguson, Mary

Interview of Mary Ferguson

**Date of Interview:** 830219

**Other interview date:** 830305

**Documentation:** Tapes, Transcript, 112 pp.

**Abstract:** This interview is part of the "Women in the Federal Government Project", sponsored by the Arthur and Elizabeth Schlesinger Library on the History of Women in America and funded by the National Endowment for the Humanities. Ms. Ferguson describes her career, beginning as a grade 1 typist in the Department of Agriculture and retiring as a grade 17 Comptroller of the Office of Naval Research. As Comptroller of ONR, she also served as special assistant for financial management to the ASN (R&D) and as a witness in the presentation of the Navy's RDT&E budget proposals submitted to Congress.

**Repositories:** RAD

**Institutions:** Office of Naval Research  
Comptroller of the Office of Naval Research

**Other added entries:** Comptroller  
Budget  
Funding  
Research and Development

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Fields, Dr. Victor

Interview of Dr. Victor Fields, conducted by Roger Kempler

**Date of Interview:** 820729

**Documentation:** Transcript, 33 pp.

**Abstract:** Dr. Fields relates his initial involvement with Government work, introduction to the Navy personnel research work and the special challenges associated with the military environment, the general Navy attitude toward personnel research in the 1950s and leading researchers in that era, post-war problems for the Research Division and its relationship with Bureau of Naval Personnel. He comments on applied versus basic research, the degree of supervision applied to field activities, problems associated with recruiting and utilizing research people, trends in DoD R&D, the attitude of ONR toward NPRDC, major accomplishments of NPRDC, and the "Center of Excellence" concept.

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Friedman, Sidney  
Brundage, Dr. Everett G.  
Price, D. George  
Carstater, Dr. Eugene D.  
Brown, Paul  
Sjoholm, Dr. Allan A.  
Zimanski, CAPT Frank  
Bryan, Dr. Glenn L.

**Institutions:** Office of Naval Research  
Navy Personnel Research and Development Center  
Bureau of Naval Personnel

**Other added entries:** Personnel Research  
Center of Excellence

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Fitzpatrick, William

Interview of of William Fitzpatrick

**Date of Interview:** 780000

**Documentation:** 1 Tape

**Interview number:** DNL-T14

**Repositories:** DTNSRDC

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Foladare, Dr. Joseph

Interview of Dr. Joseph Foladare, conducted by Albert B. Christman

**Date of Interview:** 700220

**Documentation:** Index, Transcript 22 pp.

**Interview number:** NWC-75201-S70

**Abstract:** Dr. Foladare discusses the early history of CalTech in Naval research and the key people involved in it at the start of World War II. He talks about the tests at Goldstone Lake and Eaton Canyon, the spirit of the CalTech people working in weapons research, and the budgeting and documentation of various programs at NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Fowler, Dr. William  
Gardner, Trevor  
Lauritsen, Dr. Charles C.  
Millikan, Dr. Robert A.  
Potter, Russell  
Sage, Dr. Bruce  
Watson, Dr. Earnest C.  
Winger, Dr. Ralph

**Institutions:** California Institute of Technology  
Naval Ordnance Test Station

**Cities:** Inyokern, CA.  
Goldstone Lake, CA.  
Eaton Canyon, CA.

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Fowler, Dr. William

Interview of Dr. William Fowler, conducted by Albert B. Christman

**Date of Interview:** 690100

**Documentation:** Index, Transcript 45 pp.

**Interview number:** NWC-75201-S59

**Abstract:** Dr. Fowler discusses his work before he came to NOTS at the Naval Proving Ground and on the National Defense Research Committee. He talks about the need for rocket rocket research, the CalTech research organization, and the necessity of a West Coast research facility. Fowler describes rocket work at the Goldstone Lake Range and the start of NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Bowen, Ike  
Burroughs, ADM Sherman E.  
Ellis, Dr. Emory L.  
Hickman, Dr. Roy Scott  
Lauritsen, Dr. Charles C.  
Lauritsen, Dr. Thomas  
Renard, RADM Jack C.  
Sage, Dr. Bruce  
Skinner, COL

**Institutions:** Naval Ordnance Test Station  
National Defense Research Committee  
California Institute of Technology  
Naval Proving Ground

**Cities:** Goldstone Lake, CA.  
Inyokern, CA.  
Dahlgren, VA.  
Indian Head, MD.

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Fresh, J. Norman

Interview of J. Norman Fresh, conducted by Dr. David K. Allison

**Date of Interview:** 840501

**Documentation:** Three Tapes (5 sides), Index

**Abstract:** Mr. Fresh reminisces about the history of, and his career with DTNSRDC. He describes the difficulties and political maneuvering involved in getting new wind tunnels at the Carderock laboratory; airflow tests on buildings and bridges, and designs for rigid airships in the old tunnel in the Washington Navy Yard. He talks of coworkers, famed aeronautical engineers, and work on advanced naval vehicles, DTMB's relationship with BUAER, and CAPT Harold Saunders tenure as Commanding Officer. Additional information on the Aerodynamics Laboratory may be found in Mr. Fresh's publication The Aerodynamics Laboratory (The First 50 Years), DTMB Aero Report 1070, January 1964.

**Repositories:** DTNSRDC

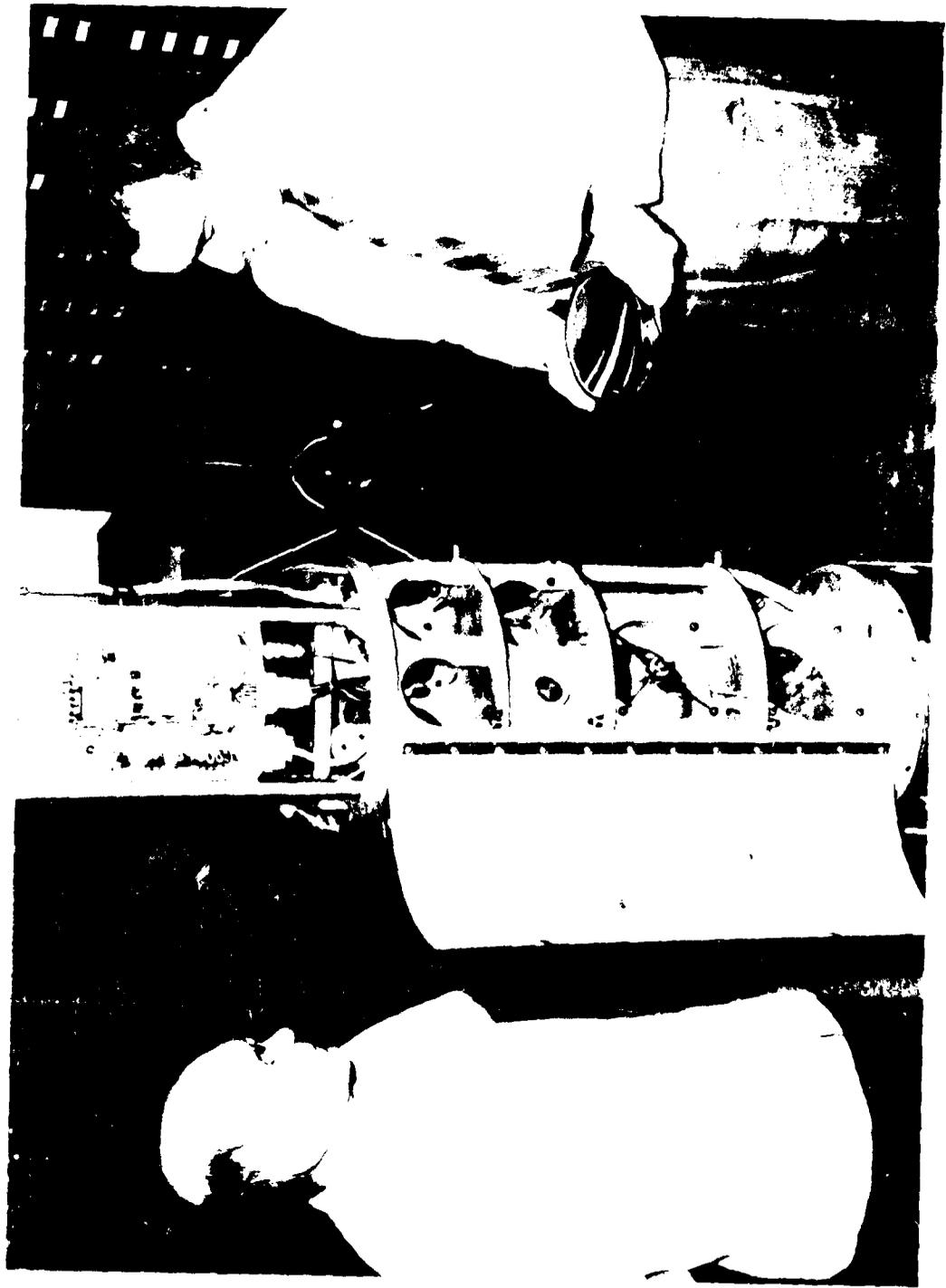
**Individuals mentioned:** Saunders, CAPT Harold E.  
Truscott, Starr  
Zahm, Dr. Albert F.  
Chaplin, Dr. Harvey R.  
McCrary, John A.  
de los Santos, Dr. Socrates  
Saunders, CAPT Harold E.  
Keil, Dr. Alfred H.  
Diehl, CAPT Walter S.  
Richardson, CAPT Holden C.

**Institutions:** Experimental Model Basin  
Bureau of Aeronautics  
David Taylor Model Basin  
Naval Ship Research and Development Center  
National Advisory Committee on Aeronautics  
Naval Air Development Center  
Bureau of Ships  
Bureau of Construction and Repair  
David Taylor Naval Ship Research and Development Center

**Subjects:** Aerodynamics  
Hydrodynamics

**Cities:** Carderock, MD.  
Langley, VA.

**Other added entries:** Wind Tunnels  
Air Cushion Vehicles



Dr. Herbert Friedman (right) and E.T. Byrum with an Aerobee rocket package.

**Repositories:** NASM

**Individuals mentioned:** Wood, R. W.  
Franck, Dr. James  
Kaiser, Herman F.  
Braun, Wernher von  
Stuhlinger, E.  
Lindsay, John

**Institutions:** Naval Research Laboratory  
Johns Hopkins University

**Subjects:** Satellites  
Optics  
Physics  
Astrophysics

**Other added entries:** SOLRAD Program  
Solar Spectroscopy  
Rockoon  
V-2 Rocket  
Aerobee Rocket  
Project Rainbarrel  
Rocket-Sonde

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Friedman, Sidney

Interview of Sidney Friedman, conducted by Roger Kempler

**Date of Interview:** 8112209

**Documentation:** Index, Transcript 16 pp.

**Abstract:** Mr. Friedman discusses his contacts with NPRDC, Navy personnel research, in general, and the positions he had held in the Navy.

**Repositories:** DTNSRDC, NPRDC

**Individuals mentioned:** Brundage, Dr. Everett G.  
Price, D. George  
Ramses, Dr. Eugene  
Collins, Dr. John J.

**Institutions:** Navy Personnel Research and Development Center

**Other added entries:** Personnel Research

Frosch, Dr. Robert A.

Interview of Dr. Robert A. Frosch, conducted by Dr. David H. DeVorkin

**Date of Interview:** 810710

**Documentation:** Tapes, 15.5 hours, Transcript, 256 pp.

**Abstract:** Dr. Frosch discusses his education, work and directorship of Hudson Laboratories, PERT, ocean floor modeling, the search for the THRESHER, his work at ARPA, his position as ASN, the Navy in Space and Naval R&D, SOLRAD and Navy satellites, the effect of the Mansfield Amendment and his decision to leave the Navy. Much of the interview deals with NASA, the Space Shuttle, and the Space Telescope.

**Repositories:** NASM

**Individuals mentioned:** Rabi, Isidor I.  
Foley, Dr. Henry M.  
Press, Frank  
Nitze, SECNAV Paul

**Institutions:** Naval Research Laboratory  
Columbia University  
Hudson Laboratories  
Bell Laboratories  
Woods Hole Oceanographic Institute  
National Aeronautics and Space Administration  
Advanced Research Projects Agency  
Assistant Secretary of the Navy

**Subjects:** Satellites  
Space Astronomy  
Seismology

**Other added entries:** Research and Development  
Mansfield Amendment  
Project Artemis  
Project Media  
Project Vela  
Nuclear Test Detection  
Program Evaluation Review Technique  
JASON  
Ocean Floor Modeling  
USS THRESHER

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Left to right: ASN (R&D) Dr. Robert A. Frosch; Dr. R.E. Gibson, Director Johns Hopkins Applied Physics Laboratory; Vice President Hubert H. Humphrey; Dr. Richard B. Kershner; SECNAV Paul R. Ignatius; RADM Levering Smith, 19 October, 1967.

Frosch, Dr. Robert A.

Interview of Dr. Robert A. Frosch, conducted by Dr. Vincent Ponko

**Date of Interview:** 810107

**Documentation:** Index, Transcript 64 pp.

**Interview number:** NL-T34

**Abstract:** Dr. Frosch compares Navy and private laboratories in terms of flexibility, mission, size, and the effect of bureaucracy. He describes ARPA's work and comments on the role of the ASN (R&D), including his personnel management philosophy, control over channels of command and R&D Budget, and philosophical observations about the Navy R&D decision-making process. Frosch evaluates the first two DNL/DLP's and talks about his influence in selecting TD's and CO's. He describes budget problems, the optimal CO-TD relationship, and McNamara and Laird's influences on Navy R&D.

**Repositories:** DTNSRDC

**Individuals mentioned:** Chaffee, John  
Connolly, VADM Thomas  
Johnson, Dr. Gerald  
Laird, SECDEF Melvin  
McNamara, SECDEF Robert S.

**Institutions:** Director of Navy Laboratories  
Director of Laboratory Programs  
Advanced Research Projects Agency

**Other added entries:** Technical Director

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Fuller, Mrs. Clarissa Parsons

Interview of Mrs. Clarissa Parsons Fuller, conducted by Albert B. Christman

**Date of Interview:** 670100

**Documentation:** Index, Transcript 106 pp.

**Interview number:** NOTS-75201-S32

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Mrs. Fuller, RADM Parsons' sister, talks about the Parsons' move from Illinois to New Mexico, the Parsons children's early

schooling, and RADM Parsons' admission to the Naval Academy at Annapolis. She discusses her brother's role on the Manhattan Project and her contacts with him at the time. Also included are sections on the Proximity Fuze, Parsons' sea duty, and his flight to Hiroshima on the Enola Gay.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Burroughs, Martha Parsons  
Oppenheimer, Dr. Robert  
Parsons, Clarissa  
Parsons, Clare  
Parsons, Critchell

**Institutions:** U. S. Naval Academy

**Cities:** Annapolis, MD.  
Los Alamos, NM.  
Ft. Sumner, NM.  
Chicago, IL.

**Other added entries:** Manhattan Project

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Furth, RADM Frederick R.  
Priori, Dr. E.

Interview of RADM Frederick R. Furth and Dr. E. Priori

**Date of Interview:** 740723

**Documentation:** 3 Tapes

**Interview number:** BA-17

**Repositories:** DTNSRDC

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Gates, SECNAV Thomas S.

Interview of SECNAV Thomas S. Gates

**Date of Interview:** 720900

**Documentation:** Transcript 71 pp.

**Abstract:** Thomas S. Gates was Secretary of the Navy during the development of Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

**Repositories:** NHC, NWCM, USNA, USNI

**Institutions:** Secretary of the Navy

**Subjects:** Submarine Launched Ballistic Missiles  
Fleet Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program

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Giallorenzi, Dr. Thomas G.

Interview of Dr. Thomas G. Giallorenzi, conducted by Dr. David K. Allison

**Date of Interview:** 800926

**Documentation:** 1 Tape, 3 5X7 cards of questions asked

**Abstract:** NRL pioneered in fiber optics research and has been the Navy's lead laboratory for the tri-service Fiber Optics Sensor System (FOSS) development program.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Subjects:** Fiber Optics

**Other added entries:** Fiber Optics Sensor System  
Acoustics Research  
Fiber Optic Hydrophone  
Hydrophones

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Gebhard, Dr. Louis A.

Interview of Dr. Louis A. Gebhard, conducted by Dr. David K. Allison

**Date of Interview:** 771003

**Documentation:** 6 Tapes (11 Tapes), Index, Bound Transcript "An Interview with Dr. Louis Gebhard"

**Other interview dates:** 770912, 770919

**Abstract:** Dr. Gebhard discusses radio-electronic research in the Navy and at NRL from 1917-1977. Gebhard joined NRL in 1923 and his research resulted in more than 90 patents and significant advances in radar, radio communications, direction finding, and electronics.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Subjects:** Electronics  
Radar  
Radio Communications

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Gleiter, Werner

Interview of Werner Gleiter, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820708

**Documentation:** 1 Tape, Index 2 pp.

**Interview number:** NADC-8

**Abstract:** Mr. Gleiter discusses his background, his service in the Navy in World War II, and how and why he came to NADC. He describes NADC sonobuoy research, the SSQ-15 Sonobuoy, cooperation between government and industry, and technical difficulties with sonobuoys. Gleiter talks about the Columbia University Sonobuoy and ASW programs, the rise of Air ASW, and NADC's relations with BUAER. He also mentions NADC's contacts with local universities.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Krutter, Dr. Harry  
Mason, Russell  
Howard, Jim

Wallace, John D.

**Institutions:** Naval Air Development Center  
Underwater Sound Laboratory  
Standards and Calibration Laboratory  
Bureau of Aeronautics  
Columbia University

**Subjects:** Antisubmarine Warfare  
Antisubmarine Aircraft  
Sonobuoys

**Cities:** Orlando, FL.  
New London, CT.

**Other added entries:** SSQ-15 Sonobouy

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Goddard, Mrs. Robert

Interview of Mrs. Robert Goddard, conducted by Albert  
B. Christman

**Date of Interview:** 710128

**Documentation:** Index, No transcript, Notes 6 pp.

**Interview number:** NWC-75201-S75

**Abstract:** This interview is recorded in note form and not intended for general use. Mrs. Goddard discusses Dr. Robert Goddard's disposition, his relationship with Navy officers, and the influence on him of Prof. Webster of Clark University. She comments on Goddard's rivals at CalTech and his relationship with Dr. Louis T. E. Thompson.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Webster, Dr. A. G.  
Karman, Dr. Theodore von  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Proving Ground

**Cities:** Dahlgren, VA.

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Goss, Dr. Wilbur  
Porter, Henry

Interview of Dr. Wilbur Goss and Henry Porter,  
conducted by A. B. Christman

**Date of Interview:** 660504

**Documentation:** Index, Transcript 40 pp.

**Interview number:** NOTS-75201-S14

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Goss and Porter discuss Parsons' personal attributes, his confidence in people, his ability to do a top-flight job, and his knack for working with other people. They also recall the planning, testing, and deployment in Europe and the Far East of the Proximity fuzes.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Tuve, Dr. Merle

**Other added entries:** Proximity Fuze

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Gould, Gerald

Interview of Gerald Gould

**Date of interview:** 780000

**Interview number:** DNL T-20

**Documentation:** 1 Tape

**Repositories:** DTNSRDC

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Gouldman, Harold M. Jr.

"Community Relations: Harold M. Gouldman", conducted by  
Cynthia Rouse

**Date of Interview:** 760727

**Documentation:** Transcript 14 pp.

Note: This interview is Chapter IX of Dahlgren, edited by  
Kenneth G. McCollum

**Abstract:** Mr. Gouldman, a lifelong resident of Dahlgren,  
discusses community relations, education for base children,  
facilities, and funding.

**Repositories:** NSWC, DTNSRDC

**Institutions:** Naval Proving Ground  
Naval Surface Weapons Center

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Gralla, VADM Arthur R.

Interview of VADM Arthur Gralla, conducted by Vincent  
Ponko, Jr.

**Date of Interview:** 801104

**Documentation:** 2 Tapes, Index, Transcript 31 pp.

**Interview number:** DNL-T30

**Abstract:** VADM Gralla describes his pre-1946 work in R&D,  
including torpedo research, time in CNO, a period as CO of  
the USS NORTON, and work in BUORD and BUWEPS. He discusses  
his tenure as the first head of the Naval Ordnance Systems  
Command: his opposition to the formation of DNL/DLP, his  
evaluation of Dr. Gerald Johnson as the first DNL/DLP, and  
the need for military control of the labs. Gralla questions  
the logic of placing the laboratories under the DNL and  
states that they should be placed under the Systems  
Commands. He adds that he would limit the power of the ASN  
(R&D) and the CNM, make the labs compete with private  
industry for work, and keep the labs from doing any more  
than pure research. Gralla details Naval Ordnance Systems  
Command operations, in particular, the funding process and  
the problems of the material Navy administratively and  
technically. He mentions some key people in Navy R&D -  
William Raney, Dr. Joel Lawson, and SECNAV Paul Nitze.

**Repositories:** DTNSRDC

**Individuals mentioned:** Frosch, Dr. Robert A.  
Johnson, Dr. Gerald  
Nitze, SECNAV Paul  
Raney, Dr. William

**Institutions:** Naval Ordnance Systems Command  
Chief of Naval Material  
Bureau of Ordnance  
Bureau of Weapons

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Granum, RADM Alfred M.

Interview of RADM Alfred M. Granum, conducted by A. B. Christman

**Date of Interview:** 670100

**Documentation:** Index, Transcript 11 pp.

**Interview number:** NOTS-75201-S29

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM Granum describes Parsons as a young Ensign under his command on the USS IDAHO. He talks about Parsons' practicality, common sense, moral courage, and leadership ability.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Blandy, ADM George

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Grodsky, Jim

Interview of Jim Grodsky

**Date of Interview:** 750122

**Documentation:** 1 Tape

**Interview number:** BA-26

**Repositories:** NHC

Groves, LTGEN Leslie

Interview of LTGEN Leslie Groves, conducted by Albert B. Christman

**Date of Interview:** 670500

**Documentation:** Index, Transcript 55 pp.

**Interview number:** NOTS-75201-S42

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. GEN Groves discusses in detail RADM (then CAPT) Parsons' role in the Manhattan Project from Los Alamos to Alamogordo to Tinian and Hiroshima. He also recalls the dropping of the Nagasaki bomb, in particular, the role of ADM (then CAPT) F. L. Ashworth. Groves talks about military-scientific relations today and during the Manhattan Project.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Ashworth, VADM Frederick L.  
Oppenheimer, Dr. Robert  
Purnell, RADM William R.  
Tibbets, COL Paul

**Institutions:** Naval Ordnance Test Station

**Cities:** Inyokern, CA.  
Los Alamos, NM.  
Alamogordo, NM.  
Tinian  
Nagasaki, Japan  
Hiroshima, Japan

**Other added entries:** Manhattan Project

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Guthrie, Dr. Robert C.

Interview of Dr. Robert C. Guthrie, conducted by Dr. David K. Allison

**Date of Interview:** 780413

**Documentation:** 3 Tapes (6 Sides), Index 5 pp.

**Abstract:** Dr. Guthrie talks about the development of radar at NRL, the first major demonstration of the 28 megacycle equipment in 1936, the installation of an experimental 200 megacycle net in the USS LEXY, the comparison of British

and American radar work in the 1930's, and independence from the research of the U. S. Army, the Tizard Mission, NDRC, AEW development in conjunction with the Naval Air Modification Unit, and NRL Research Management.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory  
Radio Corporation of America  
National Defense Research Committee  
Naval Air Modification Unit  
U. S. Army Signal Corps

**Subjects:** Radar  
Radio Transmitters

**Other added entries:** Radar Research  
Airborne Early Warning Systems  
Tizard Mission  
USS LEARY

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Habicht, Frank

Interview of Mr. Frank Habicht, conducted by Albert B. Christman

**Date of Interview:** 670500

**Documentation:** Index, Transcript 54 pp.

**Interview number:** NOTS-75201-S44

**Abstract:** Mr. Habicht describes Army rocket tests at Elgin Field in late 1942 and early 1943 and the first American use of rockets in combat. He talks about his arrival at NOTS, his position as Administrative Assistant under CAPT Burroughs, and the leadership at NOTS and in the Bureau of Ordnance. He discusses problems at NOTS, including those of construction and discipline and how NOTS received its funds.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
Hayward, ADM John T.  
Parsons, RADM William S.  
Richmond, CDR John  
Vieweg, RADM Walter V. K.

**Institutions:** Naval Ordnance Test Station  
U. S. Army  
Bureau of Ordnance

**Cities:** Inyokern, CA.

**Other added entries:** Rocket Research

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Haff, CAPT William B.

Interview of CAPT William B. Haff, conducted by Leroy L. Doig, III

**Date of Interview:** 810624

**Documentation:** Transcript 33 pp.

**Interview number:** S-125

**Abstract:** CAPT Haff explains the changes in the character of air-to-air combat, including new weapons and electronic warfare. He discusses the future of NWC, the place of Navy labs versus that of the contractor in R&D, and relations with contractors and people in Washington. Haff comments on military-civilian relationships at NWC and lab responses to Fleet needs. He talks about NWC's top management, his philosophy on RDT&E, and NWC as a command.

**Repositories:** NWC, DTNSRDC, NHC

**Institutions:** Naval Weapons Center

**Other added entries:** Electronic Warfare

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Hafstad, Dr. Lawrence R.

Interview of Dr. Lawrence R. Hafstad, conducted by Albert B. Christman

**Date of Interview:** 710200

**Documentation:** Index, Transcript 21 pp.

**Interview number:** NWC-75201-S76

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Hafstad discusses his early contacts with Parsons at NRL, their early atomic work, and the proximity fuze. He talks about Parsons' leadership and technical ability on the proximity fuze project, the influence of Dr. Charles C. Lauritsen on Parsons, and Lewis Strauss' role as Navy Financial Advisor.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Strauss, Lewis L.  
Tuve, Dr. Merle  
Lauritsen, Dr. Charles C.

**Institutions:** Naval Research Laboratory

**Subjects:** Radar

**Other added entries:** Proximity Fuze

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Hall, Dr. John L.

Interview of Dr. John L. Hall, conducted by Dr. David  
H. DeVorkin

**Date of Interview:** 790221

**Documentation:** Tapes, 1 1/2 hrs., Transcript 29 pp.

**Abstract:** Dr. Hall speaks about his family background and education, early contacts and interests in photoelectric photometry, red sensitive cell photometry, work at the Radiation Laboratory at MIT during World War II, research at the Naval Observatory, and co-discovery of interstellar polarization.

**Repositories:** AIP

**Institutions:** Naval Observatory  
Massachusetts Institute of Technology

**Subjects:** Astronomy

**Other added entries:** Photoelectric Photometry

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Hardy, CAPT John I.

Interview of CAPT John I. Hardy, conducted by Albert B.  
Christman

**Date of Interview:** 670213

**Documentation:** Index, Transcript 39 pp.

**Interview number:** NOTS-75291-S34

**Abstract:** CAPT Hardy explains how his Navy background helped

him during two tours, one as CO of NOTS. He discusses the role of NOTS as both a quick fix for the Fleet and a long-term R&D Center. Hardy talks about the community surrounding the Center and the support NOTS gets from the Navy Department in Washington.

**Repositories:** NWC, DTNSRDC, NHC

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Other added entries:** Naval Research  
Commanding Officer

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Hartmann, Dr. Gregory

Interview of Dr. Gregory K. Hartmann, conducted by Mrs. Susan Frutkin and CAPT Robert L. Hansen

**Date of Interview:** 740000

**Documentation:** 6 Tapes, Index, Transcript 149 pp.

**Interview number:** BA-4-74

**Abstract:** In this extensive and broad ranging interview, Dr. Hartmann recalls a few specific experiments he was involved in, including the Bikini bomb tests. He talks about BUORD's mine and torpedo work, the establishment of NOL, and the Naval Gun Factory and magnetic mines. He talks about R&D in BUORD, particularly the mission of NOL, the Naval Proving Ground at Dahlgren, Va., and Atomic Energy Commission work at NOL. Hartmann comments on laboratory management, the distinction between the CO and TD, the Bureaus' attempts to create a lab management office, laboratory-SYSCOM dialogues, and the Research and Development Board. He discusses Dr. Chalmers Sherwin's opinions of lab project management, DDR&E's drive to improve the labs, and examples of aborted R&D projects.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Bennett, Dr. Ralph  
Foster, Dr. John S.  
Frosch, Dr. Robert A.  
Johnson, Dr. Gerald  
McLean, Dr. William B.  
McNamara, SECDEF Robert S.  
Raborn, RADM William F.  
Rothman, Dr. Samuel  
Sherwin, Dr. Chalmers

**Institutions:** Director of Defense Research and Engineering  
Bureau of Ordnance  
Atomic Energy Commission  
Naval Ordnance Laboratory  
Director of Navy Laboratories  
Naval Electronics Laboratory  
Systems Commands

**Subjects:** Limpet Weapons  
Antivehicle Weapons  
Naval Mine Warfare

**Other added entries:** Project REFLEX  
SUBROC Missile Project  
Navy Industrial Fund  
Operation Crossroads

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Harwit, Dr. Martin  
Kondracki, Henry

Interview of Dr. Martin Harwit and Henry Kondracki,  
conducted by Dr. David H. Devorkin

**Date of Interview:** 830209

**Documentation:** Tapes, 1.5 hours, Transcript, 67 pp.

**Abstract:** This double interview with Kondracki and Harwit centers on their work in the design and construction of an infrared Aerobee rocket payload, and includes discussion of other rocket groups at NRL, use of Atlas missiles, and NASA's doubts about helium-cooled payloads.

**Repositories:** NASM

**Institutions:** Naval Research Laboratory  
Cornell  
National Aeronautics and Space Administration

**Subjects:** Astronomy

**Other added entries:** Aerobee Rocket  
Atlas Missile

Harwit, Dr. Martin

Interview of Dr. Martin Harwit, conducted by Dr. David H. DeVorkin

**Date of Interview:** 830419

**Documentation:** Tapes, 9 hours, Transcript, 170 pp.

**Other dates of interviews:** 830620 and 830622

**Abstract:** Dr. Harwit discusses his background and education, service in the Army Chemical and Signal Corps, thesis on interferometry, post-graduate education at Cambridge, work at Cornell and contact with NRL, building rocket sonde packages, debate over satellites versus balloons versus sounding rockets, relationship with NASA, infrared systems and Hadamard Transform spectroscopy.

**Repositories:** NASM

**Individuals mentioned:** Friedman, Dr. Herbert  
Gold, Thomas  
Bondi, Hermann

**Institutions:** Naval Research Laboratory  
North Atlantic Treaty Organization  
U. S. Army Signal Corps  
Oberlin College  
University of Michigan  
Massachusetts Institute of Technology  
U. S. Army Chemical Corps  
National Aeronautics and Space Administration  
Cornell  
U. S. Army

**Subjects:** Infrared Astronomy  
Astronomy

**Other added entries:** Rockoon  
Atmospheric Research  
Rocket-Sonde  
Hadamard Transform Spectroscopy

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Hattabaugh, William R.

Interview of William R. Hattabaugh, conducted by Leroy L. Doig III and Joseph M. Burge

**Date of Interview:** 810709

**Documentation:** Index, Transcript 31 pp.

**Interview number:** S-127

**Abstract:** Mr. Hattabaugh reflects on his early association with NWC, NWC's relations with contractors, and changes in the Center's role in the Navy. He comments on the interaction of the R&D and T&E sides of the lab and relations with and support of the Fleet. Hattabaugh also notes the changes in the type of work at NNWC and talks about NWC's role in the surrounding community. He discusses Dr. William B. McLean.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.  
Hillyer, Robert

**Institutions:** Naval Weapons Center

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Havens, Dr. Ralph J.

Interview of Dr. Ralph J. Havens, conducted by Dr. David H. DeVorkin

**Date of Interview:** 831006

**Documentation:** Tapes, 1.25 hours, Transcript, 20 pp.

**Abstract:** The interview with Havens covers his education, employment at NRL after World War II, meteorological research in V-2 and Rockoon experiments, the development of the Havens cycle gauge for air pressure, his contacts with NACA, and move to Ford Aeronautics.

**Repositories:** NASM

**Institutions:** Naval Research Laboratory  
Ford Aeronautics  
University of Michigan  
National Advisory Committee on Aeronautics

**Subjects:** Meteorology  
Rocketry

Astronomy

**Other added entries:** V-2 Rocket  
Atmospheric Research  
Viking Rocket

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Hay, Marley Fotheringham

Interview of Marley Fotheringham Hay

**Date of Interview:** 500000

**Documentation:** Transcript 19 pp.

**Abstract:** Concerns submarine construction and submarine warfare in World War I.

**Repositories:** COL, NHC

**Subjects:** Naval Architecture

**Other added entries:** Submarine Design

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Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by Albert B. Christman

**Date of Interview:** 660500

**Documentation:** Index, Transcript 38 pp.

**Interview number:** NOTS-75201-S6

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Hayward first describes the search for a new ordnance test sight. He talks about Parsons' "technical vision", and their contacts on the Manhattan Project. Hayward talks about ordnance work during and after World War II. Next is the problem of keeping scientists at NOTS after the war. Finally, he discusses Parsons the man - scientist and officer combined.

**Repositories:** DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
Lauritsen, Dr. Charles C.  
Parsons, RADM William S.

Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Office of Scientific Research and Development  
California Institute of Technology

**Cities:** China Lake, CA.

**Other added entries:** Manhattan Project  
Research Management

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Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by J. D. Gerrard-Gough

**Date of Interview:** 730726

**Documentation:** Index, Transcript, Part I 59 pp. Part II 6 pp.

**Interview number:** NWC-S86

**Note:** This includes another interview conducted on 731115

**Abstract:** In part one, VADM Hayward discusses the role of rocket weapons in the Pacific during World War II, the intermixing of ordnance and rocket research, and tests at Armitage Field. Hayward describes his one assignment to NOTS, aircraft armament, and facilities at NOTS. He explains his responsibilities there, his trip to Japan after the war with Dr. Charles Lauritsen, and the choice of a successor for ADM Burroughs at NOTS. He also talks about ADMs Sykes and Switzer. In part two, Hayward makes broad comments about the educational system for dependents for NOTS employees and postwar research programs at NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Brown, Dr. Ira Sprague  
Burroughs, ADM Sherman E.  
Fowler, Dr. William  
Hussey, VADM George F.  
Lauritsen, Dr. Charles C.  
Parsons, RADM William S.  
Ramsey, RADM DeWitt  
Switzer, VADM W. G.  
Sykes, RADM James B.  
Temple, RADM H. B.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station

**Other added entries:** Ordnance Research  
Rocket Research

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Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by CAPT Robert L. Hansen, and Dr. Peter Bruton

**Date of Interview:** 741009

**Documentation:** Index, Transcript 45 pp.

**Interview number:** BA-11

**Abstract:** VADM Hayward discusses the establishment of the Assistant Chief of Naval Operations (R&D), the ACNO's relationship with the Bureaus, budget requirement for R&D in the 1950's, and how the R&D Review Board revised programs. He comments on the Libby Board study - in particular, the proposed merger of BUORD and BUAER, how inter-bureau technical committees operated, and ACNO (R&D) responsibility. Hayward also describes ACNO's effect on Navy programs, the impact of DDR&E, DCNO's duties as appropriations officer, and SECDEF McNamara's feelings on Navy R&D.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Bennett, RADM Rawson  
Burke, ADM Arleigh A.  
Franke, William B.  
Furth, RADM Frederick R.  
Libby, VADM R. E.  
McNamara, SECDEF Robert S.

**Institutions:** Assistant Secretary of Defense (R&D)  
Bureau of Ordnance  
Bureau of Aeronautics  
Deputy Chief of Naval Operations (Development)  
Director of Defense Research and Engineering  
Office of Naval Research

**Other added entries:** Libby Board  
Technical Development Plan

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Hayward, VADM John T.

Interview of VADM John T. Hayward, conducted by Dr. Evelyn M. Cherpak

**Date of Interview:** 770506

**Documentation:** Transcript 62 pp., 1 vol.

**Interview number:** O.H. 24

**Abstract:** VADM Hayward discusses his education at the U. S. Naval Academy, his flight training, service on the USS LANGLEY, and work as the Assistant Chief Engineer at the Naval Aircraft Factory in Philadelphia, PA. He recalls being Experimental Officer at NOTS, the development of the atom bomb, and serving as the Commanding Officer of the Naval Ordnance Laboratory, 1954-1956.

**Repositories:** NWCM

**Institutions:** Naval Aircraft Factory  
Bureau of Ordnance  
Bureau of Aeronautics  
Naval Ordnance Laboratory  
Naval Ordnance Test Station

**Subjects:** Naval Aviation  
Ordnance

**Cities:** Inyokern, CA.  
Philadelphia, PA.  
Pensacola, FL.

**Other added entries:** Commanding Officer  
Manhattan Project

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Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by Nelson Wood

**Date of Interview:** 780815

**Documentation:** Tapes, Transcript

**Abstract:** ADM Hayward talks about torpedo research and development and the Mark 48 Torpedo.

**Repositories:** ARL

**Institutions:** Naval Underwater Systems Center

**Cities:** Newport, RI.

**Subjects:** Torpedos

**Other added entries:** Torpedo Mark 48  
Torpedos

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Henderson, J.

Interview of J. Henderson, conducted by Nelson Wood

**Date of Interview:** 770520

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Henderson, a former director of the Johns Hopkins Applied Physics Laboratory, describes its operations.

**Repositories:** ARL

**Institutions:** Johns Hopkins University  
Applied Physics Laboratory

**Subjects:** Physics

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Henifin, CAPT Edward E.

Interview of CAPT Edward E. Henifin, conducted by Dr. David K. Allison

**Date of Interview:** 800118

**Documentation:** 1 Tape, 5 pp. summary

**Abstract:** CAPT Henifin reflects on R&D management in the Navy and at NRL. He also talks about management changes and what led to them.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory  
Research Management  
Laboratory Management

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Herget, Dr. Paul

Interview of Dr. Paul Herget, conducted by Dr. David H. DeVorkin

**Date of Interview:** 770419

**Other date of interview:** 770420

**Documentation:** Tapes, 6 1/2 hrs., Transcript 96 pp.

**Abstract:** Dr. Herget discusses his family, background, schooling, work at the Cincinnati observatory, and the Rechen Institute. He speaks about his work during World War II, his position at the Nautical Almanac Office, and research through the 1950s. [Dr. Herget's papers are in the collection of the U. S. Naval Observatory]

**Repositories:** AIP

**Institutions:** Nautical Almanac Office  
Naval Observatory

**Subjects:** Astronomy

**Other added entries:** Nautical Almanac

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Highberg, Dr. Ivar E.

Interview of Dr. Ivar E. Highberg, conducted by Leroy L. Doig, III

**Date of Interview:** 810401

**Documentation:** Index, Transcript 26 pp.

**Interview number:** S-121

**Abstract:** Dr. Highberg discusses his work at NOTS in the late 1940's, the dedication of the Michelson lab, and changes in the use of NOTS facilities over the years. He describes early rocket missile test work at the lab and NOTS involvement in satellite tracking. Highberg talks about the use of computer simulation, digital fuze control work on missiles and guns, and the political ramifications for NOTS of the 1966 division of BUWEPS into NAVORDSYSCOM and NAVSHIPSYSCOM. He comments on the leadership of Dr. Louis T. E. Thompson and his personal philosophy of research and development.

**Repositories:** NHC, DTNSRDC, NWC

**Individuals mentioned:** McLean, Dr. William B.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center  
Naval Ships Systems Command  
Naval Ordnance Systems Command  
Michelson Laboratory

**Subjects:** Computer Simulation

**Other added entries:** Digital Fuze Control  
Satellite Tracking  
Systems Commands

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Hillyer, Robert

Interview of Mr. Robert M. Hillyer, conducted by Leroy  
L. Doig, III

**Date of Interview:** 820517

**Documentation:** Index, Transcript 77 pp.

**Interview number:** S-134

**Abstract:** Mr. Hillyer talks about the NOTS-Naval Ordnance Lab-Corona merger, the fuze department at NWC, and gains and losses of the 1967 lab consolidation. He comments on the role of the Technical Director at NWC, appropriate and inappropriate areas of research for the lab, and military-civilian relationships in the Navy. Hillyer discusses NWC Commanders, NWC relationships with DON in Washington, and his reasons for becoming DCNM(L). He describes his managerial philosophy, the outstanding contributions of NWC to the Navy, and the problem of declining productivity. Hillyer also expostulates on NWC's future and offers advice to NWC's new managers.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Freeman, ADM Rowland G.  
Harris, ADM William L.  
Lahr, CAPT John Jude  
McLean, Dr. William B.

**Institutions:** Naval Weapons Center  
Deputy Chief of Naval Material (Laboratories)  
Director of Navy Laboratories

**Cities:** China Lake, CA.



Retirement party for Dr. Margurite M. "Peggy" Rogers. Left to right: Robert M. Hillyer, former Technical Director of the Naval Weapons Center and Director of Navy Laboratories 1982-1984, and Dr. Rogers, former Laboratory Director (Acting), and Head, Systems Development Department; March 27, 1980.

Corona, CA.

**Other added entries:** Technical Director  
Commanding Officer  
Laboratory Consolidations

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Himes, Allen W.

Interview of Allen W. Himes, conducted by Albert B. Christman

**Date of Interview:** 780414

**Documentation:** 1 Tape, Transcript 25 pp.

**Interview number:** DNL-T13-78

**Abstract:** Mr. Himes discusses the effect of the Bell Report, Project 97, and the Sherwin Plan. He comments on the establishment of the DNL, the first DNL - Dr. Gerald Johnson, and the SYSCOMS' attitude toward the DNL. Himes talks about the consolidation of the labs, Dr. Joel Lawson as the DNL, and Navy R&D cutbacks and consolidations in the early 1970's. He describes his and Lawson's relations with Dr. Robert A. Frosch, former ASN (R&D), personnel problems in the DNL office, and his term as Deputy Assistant to the DNL.

**Repositories:** DTNSRDC

**Individuals mentioned:** Lawson, Dr. Joel  
Frosch, Dr. Robert A.  
Johnson, Dr. Gerald

**Institutions:** Chief of Naval Material  
Director of Navy Laboratories  
Systems Commands

**Other added entries:** Project 97  
Bell Report  
Sherwin Report  
Laboratory Management  
Laboratory Consolidations

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Himes, Allen W.

Interview of Allen W. Himes, conducted by Dr. David K. Allison

**Date of Interview:** 830810

**Documentation:** 2 Tapes, Transcript 36 pp.

**Abstract:** Mr. Himes discusses the consolidation of the labs into the eight NAVMAT R&D Centers, headquarters administration of the labs, linkage of the labs to the acquisition process, and the organizational evolution of the DNL from 1965-1983. He comments on the leadership styles of the six DNL's and internal organization of the office.

**Repositories:** DTNSRDC

**Individuals mentioned:** Probus, Dr. James H.  
Lawson, Dr. Joel  
Hillyer, Robert  
Parrish, CAPT David  
Whittle, ADM Alfred J., Jr.  
Law, Howard  
Swiggum, George  
Huang, Theodore S.  
Langille, CAPT John

**Institutions:** Deputy Chief of Naval Material (Laboratories)  
Director of Navy Laboratories  
Chief of Naval Material

**Subjects:** Laboratory Management  
Laboratory Consolidations  
Laboratory Administration

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History of Radio-Radar-Sonar

"History of Radio-Radar-Sonar", papers of RADM Stanford Caldwell Hooper

**Documentation:** 156 Tapes, Transcripts

**Abstract:** This series of tape recordings is part of the papers collection of RADM Stanford Caldwell Hooper donated to the Naval Historical Foundation and deposited in the Manuscript Collection of the Library of Congress. Hooper was head of the Radio Division of the Bureau of Engineering (1918-1923). This series contains 156 consecutively numbered tapes recorded by Hooper and his associates concerning the history of naval developments in radio,

sonar, and radar. Typed transcripts exist for interviews 1-93, and there are additional notes and background materials. tapes 150 and 151 are interviews with Dr. Leo C. Young of NRL and are duplicated in the NRL oral history collection.

**Individuals mentioned:** Hooper, RADM Stanford C.  
Young, Dr. Leo C.

**Institutions:** Naval Research Laboratory  
Bureau of Engineering

**Subjects:** Radar  
Sonar  
Radio Communications  
Radio

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Hollings, Anthony J.

Interview of Anthony J. Hollings, conducted by Dr.  
David K. Allison

**Date of interview:** 800104

**Other interview date:** 080108

**Documentation:** 5 Tapes (9 Sides), typewritten index, 8 pp.

**Abstract:** Mr. Hollings discusses his career in the Royal Navy, harbor defense and shock and vibration programs at NRL, the difference between American and British methods of research, and the management of the NRL search program for THRESHER. He talks about research at NRL, ONR and NIF funding, and major organizational and management changes there between 1963 and 1980. The interview is supported by a collection of papers.

**Repositories:** NRL

**Individuals mentioned:** Klein, Dr. Elias  
Bagley, Jim  
Berman, Dr. Alan  
Cleeton, Dr. Claud E.  
Waterman, Dr. Peter  
Mutch, Warren  
Owen, RADM Thomas B.  
Noel, Lee  
Henifin, CAPT Edward E.  
Sapp, Earl

**Institutions:** Naval Research Laboratory

Woods Hole Oceanographic Institute  
Office of Naval Research  
Royal Navy

**Subjects:** Oceanography

**Other added entries:** USS THRESHER  
Navy Industrial Fund  
Shock  
Vibration

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Hooker, Ruth

Interview of Ruth Hooker, conducted by Dr. David K. Allison

**Date of Interview:** 791011

**Documentation:** 2 Tapes (3 Sides)

**Abstract:** Ms. Hooker discusses the establishment of the NRL technical library. She was originally hired as a physicist.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

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Hooper, VADM Edwin B.

Interview of VADM Edwin B. Hooper, conducted by Albert B. Christman

**Date of Interview:** 710200

**Documentation:** Index, Transcript 78 pp.

**Interview number:** S-78

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Hooper describes his personal background and his contact with Parsons at the Naval Proving Ground at Dahlgren, Va. He discusses Parsons' influence on the post-war structure of Navy R&D. Hooper comments on his post-war contacts with Parsons on the Atomic Energy Commission, Military Liaison Committee, and socially. He also talks about the Salt Wells Pilot Plant.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Rivero, ADM Horacio  
Smith, VADM Levering

**Institutions:** Naval Ordnance Test Station  
Naval Proving Ground  
Atomic Energy Commission

**Other added entries:** Salt Wells Pilot Plant

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Hooper, VADM Edwin B.

Interview of VADM Edwin B. Hooper, conducted by CAPT Robert L. Hansen, Dr. Peter Bruton, and Mrs. Susan Frutkin

**Date of Interview:** 740000

**Documentation:** 4 Tapes, Transcript 135 pp.

**Interview number:** BA-10

**Abstract:** This interview contains VADM Hooper's opinions on management of Navy R&D since the end of World War II. Topics include Bureau of Ordnance management, inter-bureau relationships, and the future of Navy R&D.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Forrestal, SECNAV James  
McNamara, SECDEF Robert S.

**Institutions:** Naval Weapons Center  
Office of Naval Research  
Bureau of Ordnance

**Other added entries:** Foundational Funding

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Hooper, ADM Edwin B.

Interview of ADM Edwin B. Hooper, conducted by Richard D. Glasow and Nelson Wood

**Date of Interview:** 780822

**Documentation:** Tapes, Transcript

**Abstract:** ADM Hooper discusses his post-graduate ordnance training at the Naval Post Graduate School, and MIT, and ordnance research during World War II.

**Repositories:** ARL

**Individuals mentioned:** Rivero, ADM Horacio  
Ward, ADM A. G.

**Institutions:** Massachusetts Institute of Technology  
U. S. Naval Academy

**Subjects:** Ordnance

**Other added entries:** Ordnance Training

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Hopper, COMO Grace Brewster (Murray)

Interview of COMO Grace Brewster Hopper, conducted by  
Mike Wallace

**Date of Interview:** 830000

**Documentation:** Transcript

**Abstract:** This is a transcript of the "60 Minutes" interview  
of COMO Hopper by Mike Wallace. COMO Hopper discusses her  
background and training, relatives in the Navy, her work  
with the first computers in the Navy, and her contributions  
to the development of computer language.

**Repositories:** RAD

**Institutions:** Office of Naval Research

**Subjects:** Computers  
Computer Language

**Other added entries:** COBOL

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Hopper, COMO Grace Brewster (Murray)

Interview of COMO Grace Brewster (Murray) Hopper

**Date of Interview:** 830200

**Documentation:** 6 Tapes

**Abstract:** This interview is part of the "Women in the  
Federal Government Project", sponsored by the Arthur and  
Elizabeth Schlesinger Library on the History of Women in  
America and funded by the National Endowment for the  
Humanities. COMO Hopper discusses her work with the first

Navy computers and her contributions in developing computer language.

**Repositories:** RAD

**Institutions:** Office of Naval Research

**Subjects:** Computers  
Computer Language

**Other added entries:** COBOL

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Howard, Jim

Interview of Jim Howard, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820609

**Documentation:** 1 Tape, Index 2 pp.

**Interview number:** NADC-1

**Abstract:** Mr. Howard discusses airplane use in antisubmarine warfare, the systems approach to sonobuoy development from 1952 to the present, and the technical navigator, TACO. He talks about the design of the P-3C aircraft, including the incorporation of computers and TACO, LOFAR and DIFAR. Howard comments on present goals of NADC, including the Advanced Signal Processor, Very High Speed Integrated Circuitry, changes in sonobuoy research, and the Julie sonobuoy.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Gleiter, Werner

**Institutions:** Naval Air Development Center

**Subjects:** Antisubmarine Warfare Research  
Antisubmarine Warfare  
Sonobuoy Research  
Sonobuoys  
Antisubmarine Aircraft  
Low Frequency Radar

**Other added entries:** Julie Sonobuoy Project

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Jim Howard of the Naval Air Development Center.

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Hulburt, Dr. Edward O.

Interview with Dr. Edward O. Hulburt, conducted by Dr. David K. Allison

**Date of Interview:** 770908

**Documentation:** 5 Tapes (8 Sides), Transcript 49 pp.

**Other interview date:** 770822

**Abstract:** Dr. Hulburt talks about his background and education, work with the Signal Corps Radio Laboratory in Paris during World War I, and listening stations at the front, employment at Johns Hopkins and the University of Iowa, early days of working at NRL, short radio waves and skip distances, ionospheric research, naval camouflage, infrared signaling and detection, the Optics Division, laboratory build-up before World War II, rocket studies and the Vanguard Program, work with World War II scientific societies, his involvement with the International Geophysical Year, and comments on on management of research at NRL from 1949-1955.

**Repositories:** NRL

**Individuals mentioned:** Taylor, Dr. A. Hoyt  
Gunn, Dr. Ross  
Tousey, Dr. Richard  
Maris, Harry  
Dawson, Dr. Leo H.  
Bittenger, Charles  
Karle, Dr. Jerome  
Karle, Dr. Isabella Lugoski

**Institutions:** Naval Research Laboratory  
International Geophysical Year  
U. S. Army Signal Corps  
Johns Hopkins University

**Subjects:** Optics  
Camouflage

**Other added entries:** Optics Research  
V-2 Rocket  
Vanguard Program  
Space Research



Dr. Edward O. Hulbert, first Director of Research of the Naval Research Laboratory.

Hunsaker, Jerome Clarke

Interview with Jerome Clarke Hunsaker

**Date of Interview:** 600000

**Documentation:** Transcript 112 pp.

**Abstract:** This interview mentions the Naval Academy, 1904-1908, naval architecture, MIT, research in Europe, stability analysis and wind tunnels, his Navy duty in World War I, flying boats, the first aircraft carrier 1922, non-rigid air ships, and his position as coordinator of research for the Navy, 1940.

**Repositories:** COL

**Institutions:** Coordinator of Research and Development (Navy)

**Subjects:** Naval Architecture  
Aircraft Design  
Wind Tunnels

**Other added entries:** Flying Boats  
Airships

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Hunt, F. L. "Pete"

Interview of F. L. "Pete" Hunt, conducted by Albert B. Christman

**Date of Interview:** 801100

**Documentation:** 2 Tapes, Transcript 45 pp.

**Interview number:** DNL-T36

**Abstract:** Mr. Hunt talks about how he came to the New London lab as a scientist from Columbia University, other scientists from Columbia at the time, and the influence of Harvard University there. He describes wartime work done in New London in sonar, submarine research, and the testing of new concepts and discoveries. Other topics include: Dr. Harold Nash, Dr. Horton, the Commanding Officers at New London, postwar R&D, and the merger of the New London and Newport labs into the Naval Underwater Systems Center in 1970.

**Repositories:** DTNSRDC

**Individuals mentioned:** Nash, Dr. Harold  
Horton, Dr.

Pryor, CAPT William L.  
Ide, John

**Institutions:** Naval Underwater Systems Center  
Columbia University  
Office of Scientific Research and Development  
Harvard University

**Subjects:** Sonar

**Cities:** New London, CT.  
Newport, RI.

**Other added entries:** Submarine Research

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Hunter, Dr. Hugh

Interview of Dr. Hugh Hunter, conducted by Elizabeth Babcock

**Date of Interview:** 750530

**Documentation:** Index, Transcript 26 pp.

**Interview number:** S-95

**Abstract:** Dr. Hunter discusses the formation of the Technical Research Board by Dr. Louis T. E. Thompson at NOTS. He talks about Dr. Frederick W. Brown as Technical Director and the relationship between Levering Smith, the Associate TD, and Dr. Thompson when he was TD. Hunter comments on his own move from the Research Division to the Central Staff at NOTS and how the Ballistics Division at NOTS disappeared. Hunter reflects on his move to the Propulsion Division and the importance of varied career experience at NOTS. There is a second interview with Hunter, numbered S-95A, which was conducted on 14 August 1975.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Brown, Dr. Frederick W.  
Smith, VADM Levering  
McLean, Dr. William B.  
Sage, Dr. Bruce  
Shenk, Dr. John H.  
Thompson, Dr. Louis T. E.  
Wilson, Dr. Haskell G.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

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Hunter, Dr. Hugh

Interview of Dr. Hugh Hunter, conducted by Albert B. Christman

**Date of Interview:** 750814

**Documentation:** Index, Transcript 21 pp.

**Interview number:** S-95B

**Abstract:** Dr. Hunter makes general comments on R&D and NOTS/NWC, including working under Dr. William B. McLean, CAPT Hardy, and Dr. Haskell G. Wilson. He comments on the selection of leadership, organizational changes, and the need to justify research at NOTS/NWC. He comments on the transfer of NOTS research findings to the outside world, travel restrictions for NOTS employees, and the future of R&D in the Navy.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Bennett, Dr. Ira  
Hollingsworth, Dr. Guilford L.  
LaBerge, Dr. Walter  
McLean, Dr. William B.  
Wilson, Dr. Haskell G.  
Hardy, CAPT John I.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

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Hussey, VADM George F.

Interview of VADM George F. Hussey

**Date of Interview:** 650000

**Documentation:** Transcript 582 pp.

**Abstract:** VADM Hussey talks about his education at the Naval Academy, particularly courses in ordnance and ballistics, and the work in the Bureau of Ordnance Armor and Projectile Section. He discusses his service as Proof Officer at the Naval Proving Ground, in Mine research, and as Assistant Chief and Chief of the Bureau of Ordnance, and gives his opinions of contractor-operated ordnance plants and postwar ordnance research.

**Repositories:** COL, NHC

**Institutions:** Naval Proving Ground  
Bureau of Ordnance

**Subjects:** Ordnance

**Cities:** Dahlgren, VA.

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Hussey, VADM George F.  
Thompson, Dr. Louis T. E.

Interview of VADM George F. Hussey and Dr. Louis T. E. Thompson, conducted by Albert B. Christman

**Date of Interview:** 660400

**Documentation:** Index, Transcript 110 pp.

**Interview number:** NOTS-75201-S5

**Abstract:** This extensive interview includes a history of Navy ordnance bases from around 1910 to after World War II. It includes a discussion of whether NOTS should be a research or a test station. Thompson and Hussey also describe RADM William S. Parsons' relations with scientific community and his work on the Proximity Fuze Project. They comment on ADM Hussey's time as head of BUORD and James Forrestal's tenure as Secretary of the Navy.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Blandy, ADM George  
Burroughs, ADM Sherman E.  
Forrestal, SECNAV James  
Michelson, Dr. Albert A.  
Moulton, Prof. Forest Ray  
Parsons, RADM William S.  
Schoeffel, RADM Malcom F.  
Schuyler, CAPT Michael  
Tuve, Dr. Merle

**Institutions:** Naval Ordnance Test Station

**Subjects:** Ordnance

**Other added entries:** Proximity Fuze

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Hustvedt, VADM Olaf M.

Interview of VADM Olaf M. Hustvedt, conducted by Fred Durant, Paul Garber, Lou Casey, and Erling Hustvedt.

**Date of Interview:** 720211

**Documentation:** Transcript 37 pp.

**Interview number:** S-80

**Abstract:** VADM Hustvedt comments on his associations with Dr. Robert Goddard and the Navy-Army bombing tests against OSTFRIELAND and FRANKFURT -- old German warships. He discusses the actions of COL (later GEN) Billy Mitchell during those tests and talks about the explosion of the dirigible, SHENANDOAH, in 1925.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Goddard, Dr. Robert  
Mitchell, GEN William  
Landsdown, Mrs.

**Institutions:** Bureau of Ordnance  
Bureau of Ordnance Experimental Section

**Other added entries:** Aerial Bombing  
Airships  
USS SHENANDOAH (ZR)  
Rocket Research

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Jackson, VADM Andrew McBurney, Jr.

Interview of VADM Andrew McBurney Jackson, Jr.

**Date of Interview:** 711100

**Other interview date:** 720400

**Documentation:** Index, Transcript 385 pp.

**Abstract:** Naval aviator, project officer in design of Grumman F6F Hellcat at Bureau of Aeronautics, later served with Atomic Energy Commission.

**Repositories:** NHC, NWCM, USNA, USNI

**Institutions:** Atomic Energy Commission  
Bureau of Aeronautics

**Other added entries:** Grumman F6F  
Aircraft Design

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James, Richard

Interview of Richard James, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820719

**Documentation:** 1 Tape, Index 2 pp.

**Interview number:** NADC-13

**Abstract:** Mr. James discusses his personal background and the organization and history of the LAMPS project from 1968 to the present. Included in the LAMPS history are sections on LAMPS as an air and ship project, the importance of documentation in the program, and relations between NADC and NAVAIR on LAMPS. He also talks about IBM's role in LAMPS.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Janaco, Tom

**Institutions:** Naval Air Development Center  
Naval Air Systems Command  
International Business Machine Company  
Sikorsky

**Subjects:** Antisubmarine Warfare  
Antisubmarine Aircraft  
Helicopters

**Other added entries:** Light Airborne Multi-Purpose System

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Jennison, James H.

Interview of James H. Jennison, conducted by J. D. Gerrard-Gough

**Date of Interview:** 751025

**Documentation:** Transcript 27 pp.

**Interview number:** 5313-S-99

**Abstract:** Mr. Jennison discusses his background, the Mark 13 torpedo, and changes at the NOTS-Pasadena laboratory when

the Navy took it over. He describes his work with Variable Angle Launcher and the benefits of working with the NOTS-China Lake team.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Lindvall, Dr. Frederick C.  
Saylor, William  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Weapons Center  
Naval Ordnance Test Station  
Bureau of Ordnance

**Other added entries:** Torpedo Mark 13  
Variable-Angle Torpedo Launcher

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Jennison, James H.

Interview of James H. Jennison, conducted by Albert B. Christman

**Date of Interview:** 780315

**Documentation:** 1 Tape, Transcript 17 pp.

**Interview number:** DNL-T6-78

**Abstract:** Mr. Jennison discusses the recruitment of qualified scientists for the Navy's West Coast labs - in particular, the role of the Board of Scientists and the Civil Service Commission and competition with private industry. He comments on the increasing amount of bureaucracy involved in running a lab and notes a few examples. In addition, Jennison explains the problems involved in procuring supplies and awarding contracts because of recent government regulations. He talks about his work at the Pasadena Annex of NOTS, the Annex's absorption into NUC in San Diego, and his move to San Diego. He describes advantages that small labs like the Annex have over larger labs like NOTS labs still offer good opportunities for scientists and engineers who want to work in R&D and others who want to work in management

**Repositories:** NHC, DTNSRDC

**Institutions:** Naval Ordnance Test Station  
Naval Undersea Center  
Naval Ocean Systems Center  
Pasadena Annex  
Naval Weapons Center

**Cities:** Pasadena, CA.  
San Diego, CA.

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**Johnson, Charles Y.**

Interview of Charles Y. Johnson, conducted by Dr. David K. Allison

**Date of Interview:** 790525

**Documentation:** 11 Tapes (22 Sides), Typewritten index 10 pp.

**Other dates of interviews:** 790108, 790111, 790115

**Abstract:** Dr. Johnson discusses his background and education, working conditions and radar development at NRL during World War II, his transfer to the NRL Communications Security Group, upper air research, telemetry systems, buzz bomb defense, V-2 rockets, Aerobee rockets, testing at White Sands, the Viking rocket on the NORTON SOUND, cryogenic fuel problems, cosmic ray experimentation, gamma ray detectors, and the ONR Skyhook Program. He details the effect of Sputnik on research programs, the exodus from NRL to Goddard, the loss of NSF and DNA funding, satellite navigation and communications, use of mass spectrometers, the SOLRAD Hi satellite, Skylab, and ionospheric research.

**Repositories:** NRL

**Individuals mentioned:** Young, Dr. Leo C.  
Bourland, Langford  
Chubb, Dr. Talbot A.  
Reed, Edith  
Pressly, Eleanor  
Holmes, Julian  
Kegley, Larry  
Taylor, Dr. A. Hoyt  
Gebhard, Dr. Louis A.  
Cleeton, Dr. Claud E.  
Hagen, Dr. John P.

**Institutions:** Naval Research Laboratory  
Office of Naval Research  
National Aeronautics and Space Administration

**Subjects:** Telemetry  
Cosmic Rays  
Gamma Rays  
Radar  
Radio Communications  
Radio Transmitters

Satellites

Cities: White Sands, NM.

**Other added entries:** Atmospheric Research

Viking Rocket

V-2 Rocket

Aerobee Rocket

Kawai Rocket

Saturn Rocket

Skylab

Ionospheric Research

USS NORTON SOUND

Skyhook

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Johnson, Charles Y.

Interview of Charles Y. Johnson, conducted by Peg Shea and Allan Needell

**Date of Interview:** 820303

**Documentation:** Tapes, 5.5 hours, Transcript, 61 pp.

**Other date of interview:** 820421

**Abstract:** These interviews trace Johnson's work at NRL, beginning with World War II assignments, his contact with the atomic bomb, post work in the rocket-sonde division, and the V-2 program, the organizational structure of NRL, his involvement with the IGY, Project Vanguard, the formation of NASA, and NASA's relationship with NRL, the NRL satellite program, Aerobee and Viking projects, and continuing work in cosmic ray physics.

**Repositories:** NASM

**Individuals mentioned:** Krause, Dr. Ernst H.

Hagen, Dr. John P.

Rosen, Milton

Newell, Dr. Homer E.

Tousey, Dr. Richard

Friedman, Dr. Herbert

**Institutions:** Naval Research Laboratory

International Geophysical Year

National Aeronautics and Space Administration

**Subjects:** Ionospheric Physics

Rocketry

Radar

**Satellites**

**Cities:** White Sands, NM.

**Other added entries:** Vanguard Program  
Cosmic Ray Physics  
Aerobee Rocket  
Viking Rocket  
Manhattan Project  
Rocket-Sonde

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Johnson, Dr. Frances Severin

Interview of Dr. Frances Severin Johnson

**Date of Interview:** 820623

**Documentation:** Tapes, 3 hours, Transcript, 58 pp.

**Abstract:** The interview covers Johnson's early life and education in Canada, his training in physics at the University of Alberta, and graduate school at Berkeley and UCLA. He discusses work on the V-2 rocket research program with Tousey, Hulburt, and Krause at NRL.

**Repositories:** NASM

**Individuals mentioned:** Hulburt, Dr. Edward O.  
Tousey, Dr. Richard  
Krause, Dr. Ernst H.

**Institutions:** Naval Research Laboratory  
University of Alberta

**Subjects:** Solar Physics  
Meteorology

**Other added entries:** V-2 Rocket  
Solar Spectrograph

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Johnson, ADM Roy L.

Interview of ADM Roy L. Johnson

**Date of Interview:** 801200

**Documentation:** Index, Transcript 350 pp.

**Abstract:** ADM Johnson, a Naval aviator, discusses the seaplane as weapons system, and the effectiveness of PBY flying boats.

**Repositories:** NHC, NWCM, USNA, USNI

**Subjects:** Flying Boats  
Seaplanes

**Other added entries:** PBY Flying Boat

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Jones, Dr. Earl

Interview of Dr. Earl Jones, conducted by Albert B. Christman

**Date of Interview:** 780315

**Documentation:** Transcript 27 pp.

**Interview number:** DNL-T-3-78

**Other interview date:** 780310

**Abstract:** Dr. Jones discusses his personal background, personnel research in World War I and World War II, and the rationale behind and need for personnel research. He comments on the effect of policy decisions on the labs, the differences in personnel research in the 1960's and 1970's, manpower problems, and the effect of computers on personnel research. Jones talks about the creation of NPRDC, its equipment needs, and location. He explores the sources for new research, personnel research in wars and crises, and high-tech personnel requirements of the Navy. Jones also reflects on NPRDC's history and the influence of Dr. Edward Dudek.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Dudek, Dr. Edward  
Zumwalt, ADM Elmo

**Institutions:** Navy Personnel Research and Development Center

**Other added entries: Personnel Research  
Manpower Modeling**

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**Keener, Charles E.**

Interview of Charles E. Keener, conducted by Tom Misa  
and Ed Todd

**Date of Interview: 820628**

**Documentation: 1 Tape, Index 2 pp.**

**Interview number: NADC-3**

**Abstract:** Mr. Keener discusses his arrival at NADC in 1945, his educational background, and the uses of radar in World War II. He describes his career at NADC, including work with AEEL, AWRD, and his position as Director of the Technical Intelligence Department. Keener comments on NADC from 1945 to the early 1950's, the rise of contract monitoring functions of NADC, and the re-organization of AWRD into SAED. He talks about overall re-organizations at the center and the systems approach.

**Repositories: NADC, DTNSRDC**

**Institutions: Naval Air Development Center  
Air Warfare Research Department  
Applied Electrical and Electronics Laboratory  
Systems Analysis and Electronics Department  
Naval Air Modification Unit**

**Subjects: Systems Approach  
Communications  
Radar  
Aircraft Antennas**

**Other added entries: Polaris Program  
Submarine Communications  
Very Low Frequency Communications**

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Keil, Dr. Alfred H.

Interview of Dr. Alfred H. Keil, conducted by Enid Kumin

**Date of interview:** 751010

**Documentation:** Transcript 79 pp.

**Abstract:** Dr. Keil describes how he was offered a job by the United States War Department in 1947 after working for the German Navy during World War II, how he worked for BUSHIPS and later the David Taylor Model Basin where he was in charge of the structures laboratory and later became the Technical Director, his involvement in long-range planning for weapons systems, ocean technology, his later work at MIT, work on various committees, and thoughts on naval architecture.

**Repositories:** MIT, DTNSRDC

**Institutions:** David Taylor Model Basin  
Massachusetts Institute of Technology  
National Science Foundation  
Marine Science Council  
Naval Ship Research and Development Center

**Other added entries:** Ocean Technology  
Deep Submersibles  
Long Range Planning

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Kelly, CAPT James F.

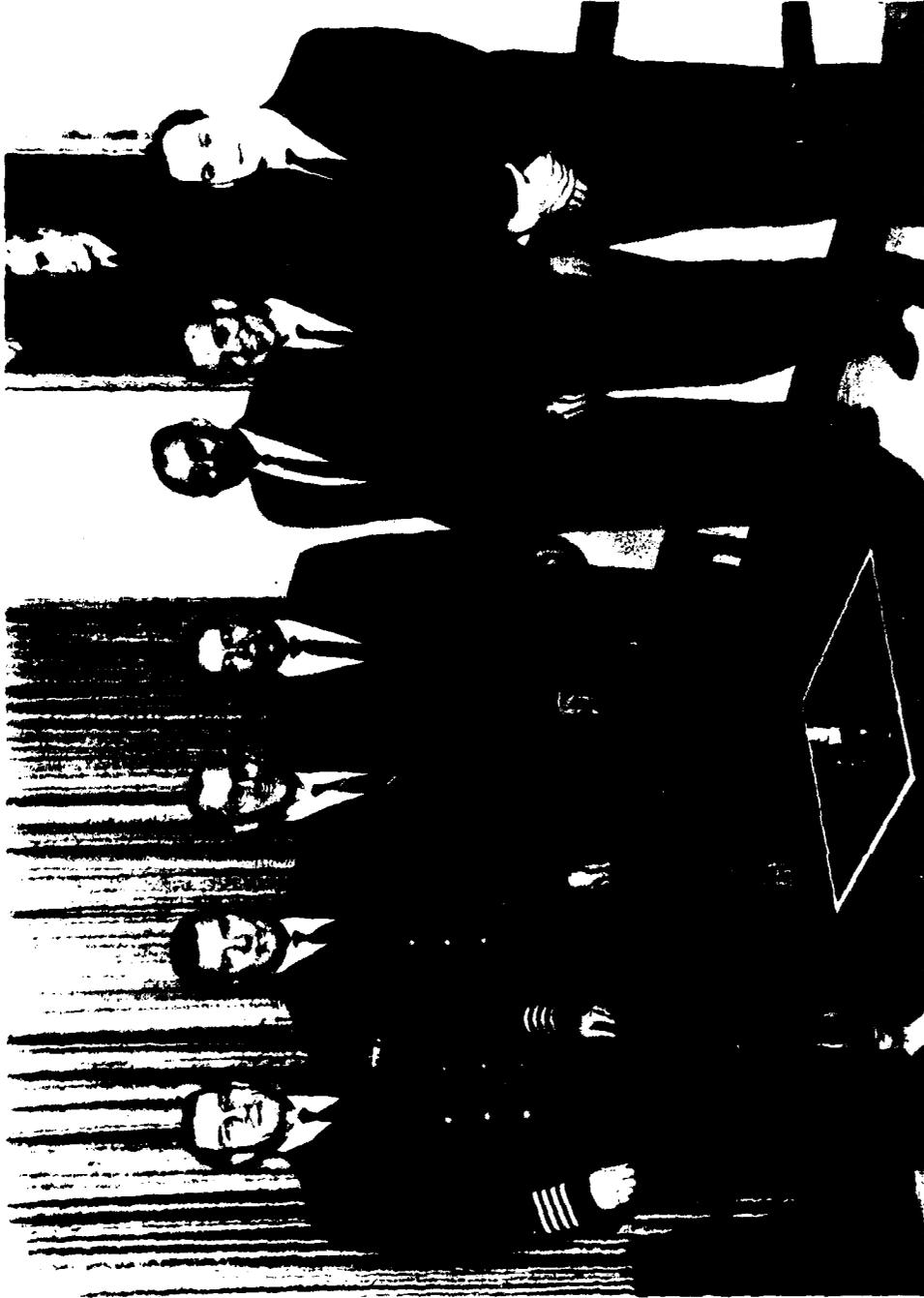
Interview of CAPT James F. Kelly, conducted by Roger Kempler

**Date of Interview:** 820922

**Documentation:** Index, Transcript 32 pp.

**Abstract:** CAPT Kelly describes his appointment as Commanding Officer of NPRDC, how NPRDC is perceived in Washington, and human factors engineering. He talks about orienting the SYSCOMs, re-organizing NPRDC, and the serious the expansion of NPRDC, the organizational location of NPRDC, and competition for funds with R&D labs. He comments on the possible merger of NOSC and NPRDC, the NAVMAT Inspector General's report on NPRDC, and major contributions of NPRDC over the last ten years.

**Repositories:** DTNSRDC, NPRDC



David Taylor Model Basin Technical Directorate, Summer 1966. Left to right:  
Captain D.K. Ela, Commanding Officer and Director; Captain D.J. O'Meara, Head,  
Aerodynamics Laboratory; Dr. Alfred H. Keil, Technical Director; Dr. William E.  
Cummins, Head, Hydromechanics Laboratory; Mr. Gene H. Gliessner, Head, Applied  
Mathematics Laboratory; Dr. William W. Murray, Head, Structural Mechanics  
Laboratory; Dr. Alan Powell, Head, Acoustics and Vibration Laboratory.



Dr. James W. Tweedale, Technical Director, and Captain James F. Kelly, Jr.,  
Commanding Officer of the Navy Personnel Research and Development Center.

**Individuals mentioned:** wnittle, ADM Alfred J., Jr.  
Regan, Dr. James J.

**Institutions:** Navy Personnel Research and Development Center  
Naval Ocean Systems Center  
Naval Material Command

**Cities:** San Diego, CA.

**Other added entries:** Technical Director  
Commanding Officer  
Inspector General  
Personnel Research

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Kendig, Dr. Paul M.

Interview of Dr. Paul M. Kendig, conducted by Richard  
D. Glasow

**Date of Interview:** 800213

**Documentation:** Tapes, Transcript

**Abstract:** Dr. Kendig describes his background and education,  
and his work at the Harvard Underwater Sound Laboratory and  
the Applied Research Laboratory.

**Repositories:** ARL

**Individuals mentioned:** Pielemeier, Dr. Walter H.  
Walker, Eric A.

**Institutions:** Pennsylvania State University  
Harvard University  
Underwater Sound Laboratory  
Applied Research Laboratory

**Other added entries:** Acoustics Research

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Kirk, ADM Alan Goodrich

Interview of ADM Alan Goodrich Kirk

**Date of Interview:** 610000

**Documentation:** Transcript 386 pp.

**Abstract:** ADM Kirk recalls his career in the Navy, including his education at the Naval Academy, and work at the Naval Proving Ground and the Bureau of Ordnance.

**Repositories:** COL. NHC

**Institutions:** Naval Proving Ground

**Subjects:** Ordnance

**Cities:** Dahlgren, VA.

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Koesey, Calvin

Interview of Calvin Koesey, conducted by Albert B. Christman

**Date of Interview:** 780000

**Documentation:** Tape, Transcript 13 pp.

**Interview number:** DNL-T21-78

**Abstract:** Mr. Koesey talks about his role at the Naval Underwater Systems Center, including R&D work during the Vietnam War. Research topics covered are mine work, harbor defense, and problems of coastal navies. He also discusses laboratory representatives in Vietnam and the Navy's role in Korea.

**Repositories:** DTNSRDC

**Institutions:** Naval Underwater Systems Center

**Other added entries:** Vietnam Laboratory Assistance Program

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Krause, Dr. Ernst H.

Interview of Dr. Ernst H. Krause, conducted by Dr. David H. DeVorkin

**Date of Interview:** 820810

**Documentation:** Tapes, 6 hours, Transcript, 122 pp.

**Other date of interview:** 830701

**Abstract:** Dr. Krause talks about his education, training in physics, and interests in nuclear physics and spectroscopy. At NRL during World War II, he worked in the Communications Security Section, optics, and development of pulse guidance systems, and was involved in the interrogation of German missile scientists and Operation Paperclip. He describes the organization of the Rocket-Sonde section, his role in the V-2 program, co-workers, contacts with Federal Contract Research Centers, and his research in cosmic ray physics.

**Repositories:** NASM

**Individuals mentioned:** Toftoy, BG Holger N.  
Friedman, Dr. Herbert  
Malina, Dr. Frank J.  
Braun, Wernher von  
Tousey, Dr. Richard  
Schein, Prof. Marcel  
Pickering, Dr. William H.  
Schwinger, Dr. Julian S.

**Institutions:** Naval Research Laboratory  
Applied Physics Laboratory  
California Institute of Technology  
Jet Propulsion Laboratory

**Subjects:** Physics  
Cosmic Rays  
Space Astronomy

**Cities:** White Sands, NM.

**Other added entries:** Rocket-Sonde  
Operation Paperclip  
Research Management  
Cosmic Ray Research  
Dynasoar  
V-2 Rocket  
Neptune  
Viking Rocket  
Aerobee Rocket

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Kron, Dr. Gerald Edward

Interview of Dr. Gerald Edward Kron, conducted by Dr. David H. DeVorkin

**Date of interview:** 780520

**Documentation:** Tapes, 1 1/2 hrs., Transcript 28 pp.

**Abstract:** Dr. Kron speaks about his education and background, work at Berkeley and Lick Observatory, World War II at MIT and Caltech, post-war employment, and work at the Naval Observatory.

**Repositories:** AIP

**Institutions:** Naval Observatory

**Subjects:** Astronomy

**Other added entries:** Photoelectric Photometry

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Krutter, Dr. Harry

Interview of Dr. Harry Krutter, conducted by Albert B. Christman

**Date of interview:** 780400

**Documentation:** Transcript 23 pp.

**Interview number:** DNL-T18-78

**Abstract:** Dr. Krutter talks about his background at the Massachusetts Institute of Technology, his arrival at NADC in 1949, and NADC's early chief scientists. He comments on his time as Technical Director from 1956 to 1972. the direction of Navy R&D work, and the Bureau of Aeronautics and later the Naval Air Systems Command. Dr. Krutter discusses the Navy re-organization of 1965-1966, the cooperation between Navy labs, and his reasons for retiring from NADC. He expostulates in particular on the role of the Director of Navy Laboratories and Chief of Naval Material in running the labs and the major accomplishments of NADC.

**Repositories:** DTNSRDC, NADC

**Institutions:** Naval Air Development Center  
Director of Navy Laboratories

Naval Air Systems Command  
Bureau of Aeronautics  
Chief of Naval Material

**Other added entries:** Technical Director

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Krutter, Dr. Harry

Interview of Dr. Harry Krutter, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820628

**Documentation:** 2 Tapes, Index 3 pp.

**Interview number:** NADC-2, 3

**Abstract:** Dr. Krutter describes his academic background, his time at an NRL field station, and his professorial days at Penn State. He discusses the Bureau of Aeronautics' consolidation of facilities at Johnsville, Pa., the NRL field station's switch to becoming the Radar Division of the Aeronautical Electronics and Electrical Laboratory, and projects of the center in the early 1950's. Krutter comments on the formation of the Anti-Submarine Warfare Laboratory in 1958, BUAER's relationship to NADC, and his appointment as chief scientist of NADC in 1956. He talks about center re-organizations, the systems approach, and Navy lab re-organization, in general, from 1965 to 1968. He mentions the Phoenix Missile System, its predecessor, the Eagle Missile System, and the hybrid digital-analog computer, Typhoon. Krutter reflects on the change in the nature of NADC's work and his career as Technical Director.

**Repositories:** NADC

**Individuals mentioned:** Gloeckler, Fred W.  
Black, Dr. K. C.  
Tremblay, Harold  
McNamara, SECDEF Robert S.  
Driggs, Ivan

**Institutions:** Naval Air Development Center  
Bureau of Aeronautics  
Naval Research Laboratory  
Aeronautical Instruments Laboratory  
Aircraft Armament Laboratory  
Anti-Submarine Warfare Laboratory  
Aeronautical Electronics and Electrical Laboratory

**Subjects:** Antisubmarine Warfare Research



Dr. Harry Krutter of the Naval Air Development Center.

Fire Control Systems  
Antisubmarine Warfare  
Missile Systems  
Airborne Early Warning Radar  
Systems Approach  
Computers  
Radar

**Cities:** Johnsville, PA.

**Other added entries:** Technical Director  
Airborne Height Finder  
Typhoon Project  
Eagle Missile Project  
Phoenix Missile Project

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Kunz, D. A.

Interview of D. A. ("Bud") Kunz, conducted by J. D. Gerrard-Gough

**Date of Interview:** 751023

**Documentation:** Index, Transcript 9 pp.

**Interview number:** S-104

**Abstract:** Mr. Kunz comments on the Navy's problems with torpedos during World War II and the group put together to solve them. He talks about the Variable-Angle Launcher and acoustic torpedo built at Morris Dam. Kunz describes administration problems at NOTS, his nuclear work and the role of the General Tire and Rubber Company.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Saylor, William

**Institutions:** Naval Ordnance Test Station

**Subjects:** Torpedos  
Acoustic Torpedos

**Other added entries:** Variable-Angle Torpedo Launcher

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Land, ADM Emory S.

Interview of ADM Emory S. Land

**Date of Interview:** 630000

**Documentation:** Transcript 227 pp.

**Abstract:** In this interview ADM Land discusses his study at the Naval Academy and MIT, naval architecture, his work in the Bureau of Ships, and Bureau of Aeronautics, Harry Guggenheim and air research, his service as Chief of the Bureau of Ships, and shipbuilding for the National Defense Agency.

**Repositories:** COL, NHC

**Individuals mentioned:** Guggenheim, Harry

**Institutions:** Bureau of Ships  
Bureau of Aeronautics  
National Defense Agency  
Massachusetts Institute of Technology  
U. S. Naval Academy

**Subjects:** Naval Architecture  
Naval Construction

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Landweber, Dr. Louis

Interview of Dr. Louis Landweber, conducted by Seth Hawkins

**Date of Interview:** 831028

**Documentation:** 2 Tapes, 1 Diskette, Transcript 30 pp.

**Abstract:** Dr. Landweber describes his work at the Experimental Model Basin in the Washington Navy Yard starting in 1932, including coworkers, towing tank conferences, experiments in cable towing and ship rolling, early work by Scott Russell and William Froude, eliminating vibration of submarine periscopes, construction of the model basin at Carderock, and explosives testing.

**Repositories:** DTNSRDC

**Individuals mentioned:** Schoenherr, Dr. Karl E.  
Tase, Johnny  
Russell, Scott  
Froude, William

Mumma, RADM Albert G.  
Saunders, CAPT Harold E.  
Rabinowitz, Leo  
Thorne, George  
Norley, William  
Hewins, Dr. Lyman

**Institutions:** Experimental Model Basin  
David Taylor Naval Ship Research and Development Center  
David Taylor Model Basin

**Cities:** Washington, DC.  
Carderock, MD.

**Other added entries:** Model Testing

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Langenbeck, Earl H.

Interview of Earl H. Langenbeck, conducted by Albert B. Christman

**Date of Interview:** 780331

**Documentation:** 1 Tape, Transcript 16 pp.

**Interview number:** DNL-T11-78

**Abstract:** Mr. Langenbeck discusses his time at the Naval Gun Factory and the Navy Yard during World War II and after and compares the amount of bureaucracy and the ability to get things done during the war with the postwar period. He talks about problems involved in contracting defense research out, added regulations created for labs by non-R&D oriented people, and the consolidation of the Navy lab system. Langenbeck also recommends people for future interviews.

**Repositories:** DTNSRDC

**Individuals mentioned:** Probus, Dr. James H.  
Bennett, Dr. Ralph  
Hartmann, Dr. Gregory

**Institutions:** Naval Surface Weapons Center  
Naval Ordnance Laboratory  
Naval Weapons Laboratory  
Naval Gun Factory

**Cities:** White Oak, MD.  
Dahlgren, VA.  
Washington, DC.

**Other added entries:** Contracting  
Laboratory Consolidations

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**Laser History**

Laser History, conducted by Dr. David K. Allison

**Date of Interview:** 810304

**Other date of interview:** 810312

**Documentation:** 3 Tapes (6 Sides)

**Abstract:** This is a series of interviews done to document laser technology at NRL. The interviews consist of descriptions and explanations of individual photographs of equipment. The tapes are keyed to photographs in storage at the Washington National Records Center in Suitland, MD.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Other added entries:** Laser Research  
Laser History

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Lauritsen, Dr. Charles C.  
Hardy, CAPT John I.  
Robinson, K. H.

Dedication of Weapon Exhibit Center

**Date of Interview:** 641104

**Documentation:** Index, Transcript 18 pp.

**Interview number:** NOTS-75201-S3

**Abstract:** This is a transcript of a speech made at the dedication of Weapon Exhibits Center at NOTS in Inyokern, CA. Among the topics discussed are RADM Parsons' proximity fuze, the submarine as a menace to U. S. ships, and the United Kingdom's use of submarine detectors. In addition, Lauritsen talks about the establishment of NOTS and its top officers.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.

**Institutions:** Naval Ordnance Test Station  
National Defense Research Committee

**Other added entries:** Rocket Research  
Submarine Detectors  
Proximity Fuze

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Lauritsen, Dr. Charles C.

Interview of Dr. Charles C. Lauritsen, conducted by  
Albert B. Christman

**Date of Interview:** 660400

**Documentation:** Index, Transcript 28 pp.

**Interview number:** NOTS-75201-S4

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Lauritsen discusses his overall impression of Parsons, his early contacts with him, and Parsons' work on the Proximity Fuze Project. In addition, Lauritsen reflects on Parsons' Manhattan Project involvement and his early connection with NOTS. He talks about CAPT Burroughs' role at NOTS and British-American scientific cooperation during World War II.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Burroughs, ADM Sherman E.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Office of Scientific Research and Development  
California Institute of Technology

**Other added entries:** Proximity Fuze  
Manhattan Project

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Lauritsen, Dr. Thomas

Interview of Dr. Thomas Lauritsen, conducted by Albert B. Christman

**Date of Interview:** 690626

**Documentation:** Index, Transcript 20 pp.

**Interview number:** NWC-75201-S68

**Abstract:** Dr. Thomas Lauritsen comments on his father, Dr. Charles Lauritsen - his allegiance to the U. S., his ability to make decisions, his personal characteristics, and his international outlook. Thomas Lauritsen discusses Nils Bohr, British rocket research, and NDRC and OSRD. He talks about project work at CalTech, propellant problems for rockets, and a disappointing rocket test at Goldstone Lake. He also describes RADM William S. Parsons' influence on Navy R&D and military-civilian relationships, in general.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Bohr, Dr. Nils  
Fowler, Dr. William  
Lauritsen, Dr. Charles C.  
Parsons, RADM William S.

California Institute of Technology  
Naval Ordnance Test Station

**Cities:** Goldstone Lake, CA.

**Other added entries:** Rocket Research  
Rocket Propellents

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Law, Howard

Interview of Howard Law, conducted by Dr. David K. Allison

**Date of Interview:** 830812

**Documentation:** 2 Tapes, Diskette, Transcript 41 pp.

**Abstract:** Mr. Law describes his education, military experience in the Bureau of Ordnance, work at NWC and the Naval Ordnance Plant in Georgia, and employment in 1965 with BUWEPS in Washington, DC. He comments on the difference between BUWEPS laboratory management and the early days of the DNL organization, his work in 6.5 funding, management

styles and changes, "shore establishment realignments" - the consolidations of NSRDC, NOSC, NSWC, and NUSC, the role of the Facilities Division, the FCRCs, program reviews, Corporate Planning, the VLAP and NSAP programs, SHORESTAMPS, and the need for the laboratories to work harder at developing leaders.

**Repositories:** DTNSRDC

**Individuals mentioned:** Lawson, Dr. Joel  
Hillyer, Robert  
Kidd, ADM Issac C., Jr.  
Kleback, Thomas  
Johnson, Dr. Gerald  
Smith, Howard  
Towle, CAPT Bernard  
Probus, Dr. James H.

**Institutions:** Director of Navy Laboratories  
Federal Contract Research Centers  
Systems Commands  
Bureau of Ordnance  
Bureau of Weapons  
Naval Ship Research and Development Center  
Naval Ocean Systems Center  
Naval Surface Weapons Center  
Naval Underwater Systems Center

**Other added entries:** Shore Establishment Realignments  
Vietnam Laboratory Assistance Program  
Navy Science Assistance Program  
Corporate Plan  
Navy Industrial Fund  
Laboratory Consolidations

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Lawson, Dr. Joel

Interview of Dr. Joel Lawson, conducted by Dr. Samuel Rothman and Mrs. Susan Frutkin

**Date of Interview:** 750000

**Documentation:** 2 Tapes, Transcript 64 pp.

**Interview number:** BA-2-75

**Abstract:** Dr. Lawson comments on his position as Special Assistant for Electronics, and on Robert A. Frosch as ASN (R&D). He talks about becoming Director of Navy Laboratories, his views on the DNL/DLP charter, block funding, and his management objectives. Lawson discusses his

role as DNL, competition between the labs, and bringing CO's and TD's together. He describes the impact of the consolidation of the labs, the DNL as intercessor between the labs and their resources, and the labs problems in general. He explains lab budgeting, talks about work that is contracted out, and the relationship between the DNL and the Chief of Naval Operations. He comments on the effects of the SYSCOMs losing control of the labs. Also included are sections on Project REFLEX, the effect of numerous studies of the labs, and trends in lab management.

**Repositories:** DTNSRDC, NHC

**Individuals mentioned:** Foster, Dr. John S.  
Frosch, Dr. Robert A.  
Morse, Dr. Robert W.  
Zumwalt, ADM Elmo  
Kidd, ADM Issac C., Jr.

**Institutions:** Director of Navy Laboratories  
Chief of Naval Material  
Assistant Secretary of the Navy (R&D)  
Chief of Naval Development  
Director of Defense Research and Development  
Systems Commands

**Other added entries:** Project REFLEX  
Laboratory Consolidations

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Lewis, Russell

Interview of Russell Lewis, conducted by Albert B. Christman

**Date of Interview:** 780000

**Documentation:** 1 Tape, Transcript 21 pp.

**Interview number:** DNL-T16-78

**Abstract:** Mr. Lewis comments on his work with sonar during World War II at New London, CT., his time on the USS ISLAND, and the influence of Columbia University and Harvard University scientists on the New London lab. He talks about the consolidation of the New London and Newport labs into NUSC, Navy sonar work at New London in the postwar era and its use in the Fleet, and the labs' role in the Vietnam War.

**Repositories:** DTNSRDC

**Individuals mentioned:** Clearwater, Walter

Horton, Dr.

**Institutions:** Naval Underwater Systems Center

**Subjects:** Sonar

**Other added entries:** Vietnam War  
Laboratory Consolidations

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Lockhart, Dr. Luther

Interview of Dr. Luther Lockhart, conducted by Dr.  
David K. Allison

**Date of Interview:** 790703

**Documentation:** 4 Tapes, Index 6 pp.

**Other interview date:** 790710

**Abstract:** Dr. Lockhart talks about his background and education, conditions at NRL during World War II, airplane anti-static wicks, lense coatings for binoculars, restructuring of Chemistry Division after the war, research in atmospheric radioactivity, laser research, work on chemical coatings.

**Repositories:** NRL

**Individuals mentioned:** Zisman, Dr. William A.

**Institutions:** Naval Research Laboratory

**Other added entries:** Spectroscopy  
Polymers  
Spectrometry  
Laser Technology  
Chemical Coatings

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Lockwood, VADM Charles A.

Interview of VADM Charles A. Lockwood

**Date of Interview:** 650000

**Documentation:** Transcript 720 pp.

**Abstract:** VADM Lockwood recalls his career and developments in submarine technology, including captured German submarines, SQUALUS rescue operations, periscope photography, the inventions of sonar, radar, and nuclear propulsion, and the development of the atomic submarine.

**Repositories:** COL, NHC

**Subjects:** Nuclear Propulsion

Sonar

Radar

**Other added entries:** USS SQUALUS

Atomic Submarines

Captured German Equipment

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McDowell, Rensler

Interview of Rensler McDowell, conducted by Richard D. Glasow

**Date of Interview:** 800820

**Documentation:** Tapes, Transcript

**Abstract:** Mr. McDowell describes his role in acoustics research at the Newport Naval Torpedo Station.

**Repositories:** ARL

**Institutions:** Naval Torpedo Station

**Cities:** Newport, RI.

Goat Island, RI.

**Subjects:** Torpedos

**Other added entries:** Acoustics Research

Ordnance Research

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Lyddane, Dr. Russell H.

"Times of Crisis: Dr. Russell H. Lyddane", conducted by  
Cynthia Rouse

**Date of Interview:** 770124

**Documentation:** Transcript 14 pp.

**Abstract:** This interview is Chapter VII in Dahlgren, edited  
by Kenneth G. McCollum

**Abstract:** Dr. Lyddane discusses the work environment at  
Dahlgren, the work of the Naval Gun Factory, ballistics  
tables, projectile testing, torpedo fuzes, the Computation  
Laboratory, the Armor and Projectile Laboratory, problems in  
position classification, the Fleet Ballistic Missile  
Program, the change in name in 1959 and relationship with  
NOL, White Oak.

**Repositories:** NSWC, DTNSRDC

**Institutions:** Naval Proving Ground  
Naval Ordnance Laboratory  
Naval Gun Factory

**Subjects:** Ordnance  
Ballistics

**Other added entries:** Fleet Ballistic Missile Program  
Technical Director

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McKibbin, Mrs. Joseph (Dorothy)

Interview of Mrs. Joseph McKibbin, conducted by Albert  
B. Christman

**Date of Interview:** 670100

**Documentation:** Index, Transcript 29 pp.

**Interview number:** NOTS-75201-S28

**Abstract:** This interview was originally conducted as  
background for a biography of RADM William S. Parsons. Mrs.  
McKibbin discusses Parsons' attitude toward the office, his  
family life, his appearance, and what others thought of him.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Carmondy, Hazel

Parsons, RADM William S.  
Oppenheimer, Dr. Robert  
Parsons, Martha

**Cities:** Los Alamos, NM.

**Other added entries:** Manhattan Project

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McLean, Edith LaVerne (Mrs. William B.)

Interview of Mrs. LaVerne McLean, conducted by William  
F. Wright

**Date of Interview:** 800318

**Documentation:** Index, Transcript 48 pp.

**Interview number:** S-113

**Abstract:** Mrs. McLean discusses Dr. William B. McLean's personal habits, social abilities, and relationships with Navy personnel. She describes his work habits, his role in the Sidewinder Missile Project, and his appointment as Technical Director of NWC. Mrs. McLean conveys McLean's feelings on war, in general, and on the use of Sidewinder in Korea and Vietnam. She also talks about McLean's delegation of authority when necessary, particularly to Dr. Haskell G. Wilson.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.  
McLean, Edith LaVerne (Mrs. William B.)  
Wilson, Dr. Haskell G.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Other added entries:** Sidewinder Missile Project  
Korean War  
Vietnam War

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McLean, Edith LaVerne (Mrs. William B.)

Interview of Mrs. Edith LaVerne ("LaV") McLean,  
conducted by Starla E. Hall

**Date of Interview:** 800617

**Documentation:** Transcript 38 pp.

**Interview number:** DNL-T23-80

**Abstract:** Mrs. McLean discusses the personal life of her husband, Dr. William B. McLean, who was the Technical Director of NOT/NWC and NUC. Included are sections on McLean's relationships with his sons, his hobbies at home, McLean as a husband. Mrs. McLean comments on life at NOTS, her husband as TD there, and the other scientists that made up the NOTS/NWC team. She talks about their family's move to San Diego, the establishment of NUC, and her husband's health; also his interests outside of science and the Sidewinder Missile Project.

**Repositories:** DTNSRDC

**Individuals mentioned:** McLean, Dr. William B.  
McLean, Mark  
McLean, Edith LaVerne (Mrs. William B.)  
McLean, Jack

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center  
Naval Undersea Center

**Other added entries:** Sidewinder Missile Project

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McLean, Dr. William B.

Interview with Dr. William B. McLean, conducted by  
Albert B. Christman

**Date of Interview:** 731116

**Documentation:** Index, Transcript 30 pp.

**Interview number:** S-88

**Abstract:** Dr. McLean discusses the development of various Naval missile projects at NOTS, including the Sidewinder and Walleye Missiles. He describes their tracking and launching methods and the politics involved in developing a missile.



Military-civilian conference at Armitage Field, Naval Ordnance Test Station. Fourth from left, Dr. Louis T.E. Thompson (NOTS Technical Director); fifth from left, Dr. William B. McLean (Head, Aviation Ordnance Department); far right, Captain Walter V.R. Vieweg (NOTS Commander); April 1950.



Naval Ordnance Test Station Code 40 (Weapons Development Department) principals. Left to right: Frank Knemeyer, Leroy L. Doig II, Leroy Riggs, circa 1964.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Crawford, Jack A.  
Ward, Dr. Newton E.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Subjects:** Guided Missiles  
Air to Air Missiles

**Other added entries:** Sidewinder Missile Project  
Walleye Missile Project

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McLean, Dr. William B.

Interview of Dr. William B. McLean, conducted by Albert  
B. Christman

**Date of Interview:** 750700

**Documentation:** Index, Transcript 44 pp.

**Interview number:** 5313-S-97

**Abstract:** Dr. McLean recalls his first association with NOTS, his work in the Fire Control Laboratory, and the need for the Sidewinder Missile. He details his role in the Sidewinder design, his tenure as Head of Aviation Ordnance, and comments on technical layering at NOTS. McLean remembers his time as Technical Director of NOTS, reflects on the role of a TD, and his management style. McLean states that the laboratory re-organization of 1967 failed and talks about the Navy's future; in particular, the need for more submarines.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Hussey, VADM George F.  
Lauritsen, Dr. Charles C.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center  
Naval Undersea Center  
Fire Control Laboratory

**Other added entries:** Sidewinder Missile Project  
Submarine Research  
Technical Director

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McLean, Dr. William B.

Interview of Dr. William B. McLean, conducted by Dr. Samuel Rothman and Mrs. Susan Frutkin

**Date of Interview:** 741212

**Documentation:** 2 Tapes, Transcript 33 pp.

**Interview number:** BA-1-75

**Abstract:** Dr. McLean gives a broad overview of naval laboratories since World War II. First, he comments on the state of NOTS and NOL at the end of World War II. McLean discusses the transfer of the labs to the chief of Naval Material in 1966, the Sherwin Plan, and changes in the Office of the Director of Navy Laboratories. He talks about the effect Congress has on the labs, NIF Funding, and Special Project Offices and Project Managers. He also explains the effect of frequent leadership changes on R&D, significant lab problems from 1958 to 1973, and how to evaluate the results of R&D in peacetime. In addition McLean details the effect of civil service regulations on the labs and how to attract qualified civilians to work on military programs.

**Repositories:** DTNSRDC, NHC

**Individuals mentioned:** Thompson, Dr. Louis T. E.  
Sherwin, Dr. Chalmers  
Lawson, Dr. Joel  
Rexroth, John  
Hayward, ADM John T.  
Kidd, ADM Issac C., Jr.

**Institutions:** Director of Navy Laboratories  
Chief of Naval Material  
Systems Commands  
Naval Ordnance Test Station  
Naval Ordnance Laboratory  
Department of Defense Research and Engineering

**Other added entries:** Navy Industrial Fund  
Sherwin Plan

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McMillan, Dr. Edwin M.

Interview of Dr. Edwin M. McMillan, conducted by Albert B. Christman

**Date of Interview:** 670300

**Documentation:** Index, Transcript 22 pp.

**Interview number:** NOTS-75201-S36

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. McMillan describes his and Dr. Robert Oppenheimer's early connections with the Manhattan Project. He reflects on ADM (then CAPT) Parsons' arrival at Los Alamos, NM. and the time he spent working with him. McMillan discusses Parsons' personal character and Parsons' relationship with Oppenheimer.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S. Groves, GEN Leslie Oppenheimer, Dr. Robert

**Cities:** Los Alamos, NM.

**Other added entries:** Manhattan Project

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Martell, VADM Charles B.

Interview of VADM Charles B. Martell

**Date of Interview:** 740000

**Documentation:** 3 Tapes

**Interview number:** BA-16

**Repositories:** DTNSRDC

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Marten, William H.

Interview of William H. Marten, conducted by Roger Kempler

**Date of interview:** 820730

**Documentation:** Transcript, 42 pp.

**Abstract:** Mr. Marten describes his initial exposure to Navy personnel research, the early efforts at billet analysis in the Fleet, beginning and problems in organizing the Navy Personnel Research Activity in San Diego, typical work assignments. describing movie industry jobs for applications in Armed Forces Radio and Television, program development in the 1950s, establishment of NPRDC, NRAC's involvement, coordination with Washington, choosing a Technical Director, and major accomplishments.

**Repositories:** DTNSRDC

**Individuals mentioned:** Van Swearingen, CAPT Earl K.  
Turney, Robert F.  
Rimland, Dr. Bernard  
Jones, Dr. Earl  
Price, D. George  
Sprague, ADM Thomas L.  
Zumwalt, ADM Elmo

**Institutions:** Navy Personnel Research and Development Center  
Naval Research Advisory Committee

**Other added entries:** Personnel Research  
Billet Analysis

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Masterson, VADM Kleber S.

Interview of VADM Kleber S. Masterson

**Date of Interview:** 721100

**Other date of interview:** 730400

**Documentation:** Index, Appendices, Transcript 493 pp.

**Abstract:** VADM Masterson served as executive member of the Navy Ballistic Missiles Committee, which played a major role in developing Polaris, Chief of the Bureau of Weapons, and as Director of the Weapons Systems Evaluation Group, OSD.

**Repositories:** NHC, NWCM, USNA, USNI



William H. Marten of the Navy Personnel Research and Development Center.

**Institutions:** Navy Ballistic Missiles Committee  
Bureau of Weapons  
Secretary of Defense  
Weapons Systems Evaluation Group

**Subjects:** Submarine Launched Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program

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Meyers, Wesley W.

"The Manhattan and Elsie Projects: Wesley W. Meyers,  
conducted by Cynthia Rouse

**Date of Interview:** 761201

**Documentation:** Transcript 13 pp.

Note: This interview is Chapter VIII of Dahlgren, edited by  
Kenneth G. McCollum

**Abstract:** Mr. Meyers discusses the Manhattan Project and the  
part Dahlgren and Dahlgren personnel played, the "Sewer  
Pipe" bomb, testing of atomic projectiles (the Elsie  
Project), security of atomic devices, and dropping the test  
bombs.

**Repositories:** NSWC, DTNSRDC

**Institutions:** Naval Proving Ground

**Other added entries:** Manhattan Project  
Elsie Project  
Atomic Weapons

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Miller, Laymon N.

Interview of Laymon N. Miller, conducted by Richard D. Glasow

**Date of Interview:** 800821

**Documentation:** 2 Tapes, Transcript

**Abstract:** Mr. Miller talks about his work in acoustics and torpedo quieting at the Ordnance Research Laboratory.

**Repositories:** ARL

**Institutions:** Ordnance Research Laboratory  
Pennsylvania State University

**Subjects:** Torpedos

**Other added entries:** Acoustics Research

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Moran, VADM William J.

Interview of VADM William J. Moran, conducted by CAPT Robert L. Hansen.

**Date of Interview:** 750000

**Documentation:** 1 Tape, Index, Transcript 31 pp.

**Interview number:** BA-5-75

**Abstract:** VADM Moran comments on his relationships with various ASN (R&D)'s, changes in the relationship between the ASN (R&D) and OPNAV, and ADM Zumwalt's use of the CNO Executive Board. He recalls his time at NOTS and talks about the shift of lab control to the CNM, the roles of CO's and TD's, and the Navy's success in working with civilians. Moran discusses his tenure as Director of the Office of RDT&E - Particularly the need to increase interaction with the DCNM's Office, the Ordnance Systems Command's ability to response to new requirements, and the layering of management in Navy R&D.

**Repositories:** DTNSRDC, NHC

**Individuals mentioned:** Foster, Dr. John S.  
Zumwalt, ADM Elmo

**Institutions:** Assistant Secretary of the Navy (R&D)  
Chief of Naval Material

Chief of Naval Operations  
Defense Systems Acquisition Review Council  
Naval Ordnance Systems Command  
Chief of Naval Operations

**Other added entries:** Technical Director

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Morton, RADM Thomas

Interview of RADM Thomas Morton

**Date of Interview:** 751090

**Other interview date:** 760290

**Documentation:** Index, Transcript 484 pp.

**Abstract:** RADM Morton served as a gunnery officer on the USS NORTH CAROLINA during World War II, and was the Commanding Officer of the Naval Weapons Laboratory at Dahlgren, Va. from 1960-1961.

**Repositories:** NHC, NWCM, USNA, USNI

**Individuals mentioned:** McNamara, SECDEF Robert S.

**Institutions:** Naval Weapons Laboratory  
Naval Surface Weapons Center

**Subjects:** Ballistic Research Laboratories  
Ordnance Laboratories  
Ordnance

**Cities:** Dahlgren, VA.

**Other added entries:** Commanding Officer

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Naval Research Laboratory Meeting

Naval Research Laboratory Meeting

**Date of Interview:** 810700

**Documentation:** Tapes, Transcript, 112 pp.

**Repositories:** NASM

**Subjects:** Astronomy

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Newell, Dr. Homer E.

Interview of Dr. Homer E. Newell, conducted by Dr. Richard F. Hirsh

**Date of interview:** 8007018

**Documentation:** Tapes, 3 hrs., Transcript

**Abstract:** Dr. Newell discusses war work and the rocket-sonde program at NRL, the atomic bomb, upper atmospheric research, establishment of the V-2 Panel, Edward Hulburt and Herbert Friedman, the Vanguard Satellite Program, IGY, reaction to the launch of Sputnik, creation of NASA in 1958, his career with NASA, the effects of Vietnam on the space program, and the Space Telescope and Space Shuttle.

**Repositories:** AIP

**Individuals mentioned:** Hulburt, Dr. Edward O.  
Friedman, Dr. Herbert

**Institutions:** Naval Research Laboratory  
International Geophysical Year  
National Aeronautics and Space Administration

**Subjects:** Astronomy  
Space Astronomy  
Space Telescope

**Other added entries:** Rocket-Sonde  
Atmospheric Research  
Sputnik  
V-2 Rocket  
Vietnam War  
Vanguard Program  
Space Shuttle

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Niedermair, John Charles

Interview of John Charles Niedermair

**Date of Interview:** 750600

**Other interview date:** 760400

**Documentation:** Index, Appendices, Transcript 349 pp.

**Abstract:** Mr. Niedermair discusses his role in the salvage of the S-4 and S-51 submarines during the 1920's, his many years in the Bureau of Ships, and his design of the tank landing ship (LST). He mentions RADM David W. Taylor's work at the Experimental Model Basin, Taylor's book "The Speed and Power of Ships", and CAPT Harold Saunders' contributions to naval architecture and the science of hydrodynamics.

**Repositories:** NHC, NWCN, USNA, USNI

**Individuals mentioned:** Taylor, RADM David W. Saunders, CAPT Harold E.

**Institutions:** Bureau of Ships  
Experimental Model Basin  
David Taylor Model Basin

**Subjects:** Submarines  
Salvage  
Naval Architecture  
Hydrodynamics  
Ship Design  
Tank Landing Ships

**Other added entries:** S-4 Submarine  
S-51 Submarine

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Niemann, Ralph A.

"Development of Computer Technology: Ralph A. Niemann",  
conducted by Cynthia Rouse

**Date of Interview:** 781026

**Documentation:** Transcript 15 pp.

**Note:** This interview is Chapter X of Dahlgren, edited by  
Kenneth G. McCollum

**Abstract:** Mr. Niemann discusses the first IBM card-feed computers at Dahlgren, the Aiken Relay Computer, computer-generated ballistics tables, the 60 desk calculators used by

WAVES in World War II, the NORC, and advances in speed of computers, use of the NORC in NRL's Vanguard Program, the IBM STRETCH computer, the effect of the Fleet Ballistic Missile Program on computer work at Dahlgren, constructing a facility to house the computers, and management problems.  
**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Cohen, Dr. Charles J.  
Bramble, Dr. Charles C.  
Ryland, Robert  
Walker, John  
Gleissner, Gene H.  
Burke, William

**Institutions:** Naval Research Laboratory  
Naval Proving Ground  
Naval Weapons Laboratory  
International Business Machine Company

**Subjects:** Computers  
Fire Control Computers

**Cities:** Dahlgren, VA.

**Other added entries:** Naval Ordnance Research Calculator  
Fleet Ballistic Missile Program  
Vanguard Program  
Polaris Program

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Nutt, Mr. Harold V.

Interview of Harold V. Nutt, conducted by Dr. David K. Allison

**Date of Interview:** 821022

**Documentation:** 7 Tapes, 2 Diskettes, Transcript 125 pp.

**Abstract:** Mr. Nutt tells about his background and education, his work in private industry developing greases and lubricating oils, and his interest in aeronautical engineering. He accepted a job at the Engineering Experiment Station in 1938, and speaks of the change during the war years from testing material manufactured by industry to research, testing captured equipment, the post-war reduction in force, and becoming superintendent of the Internal Combustion Laboratory. He also discusses the relationship between EES and BUSHIPS, the Metallurgical Laboratory, experimental submarine engines, early work with titanium, and how the loss of the THRESHER stimulated the development of SDRVs. He speaks of his involvement in VLAP, the

reorganization during the 1960s, and the change in name to Marine Engineering Laboratory, and the consolidation of MEL and NSRDC.

**Repositories:** DTNSRDC

**Individuals mentioned:** Joakim, W. F.

Argora, Larry  
Zumwalt, ADM Elmo  
Vincent, CAPT Manuel da Costa  
Smith, Clane  
Smith, Watt  
King, FADM Ernest  
Taylor, RADM David W.

**Institutions:** Marine Engineering Laboratory  
Office of Naval Research  
Engineering Experiment Station  
David Taylor Naval Ship Research and Development Center  
Bureau of Ships

**Subjects:** Fuel  
Metallurgy  
Bearings  
Submarine Propulsion Systems  
Lubrication  
Titanium

**Other added entries:** Submarine Snorkels  
Vietnam Laboratory Assistance Program  
USS THRESHER  
Submarine Deep Rescue Vehicles  
Ship Storage  
Hydrogen Peroxide Engines  
Technical Director

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O'Neill, William

Interview of William O'Neill, conducted by Dr. David K. Allison

**Date of Interview:** 811214

**Documentation:** 1 Tape, Index

**Abstract:** This interview centers on the history of hydrofoil development in the Navy. Mr. O'Neill mentions the original mission studies and testing by NELC of the ships PLAINVIEW and HIGH POINT, and the propulsion system and design of the hydrofoil gunboats TUCUMCARI and FLAGSTAFF. He discusses early work by ONR and MIT, the program at DTNSRDC, how it

was funded, and key players at the Center.

**Repositories:** DTNSRDC

**Individuals mentioned:** Johnson, Robert  
Ellsworth, William  
Buckley, William H.  
Schab, Henry  
Kelly, Jim

**Institutions:** Naval Electronics Laboratory Center  
David Taylor Model Basin  
Naval Ship Research and Development Center  
David Taylor Naval Ship Research and Development Center  
Boeing Airplane Company  
Office of Naval Research

**Subjects:** Hydrofoils  
Hydroelasticity  
Cavitation  
Hydrodynamics

**Other added entries:** Hydrodynamic Research  
USS HIGH POINT  
USS FLAGSTAFF  
USS TUCUMCARI  
USS PLAINVIEW

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Owen, RADM Thomas B.

Interview of RADM Thomas B. Owen

**Date of Interview:** 740000

**Documentation:** 3 Tapes

**Interview number:** BA-20

**Repositories:** DTNSRDC

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Page, Dr. Robert Morris

Interview with Dr. Robert Morris Page, conducted by Dr. David K. Allison

**Date of Interview:** 781027

**Documentation:** 9 Tapes (16 Sides), Transcript 217 pp.

**Other interview date:** 781026

**Abstract:** Dr. Page discusses his background and education, taking the Civil Service Examination and being offered a job at NRL, work on frequency measurement and the invention of the frequency meter, work on radar from 1930-1934, assignment to radio detection in 1934, pulse radar, the Signal Corps radar project, microwave radar, invention of the radar duplexer, test of equipment on the LEARY, NEW YORK, and TEXAS, the Tizard Mission, airborne radar, British radar development, and opposition to the NDRC Radiation Laboratory. He also talks about the publication of the Ridenour Report, fire control radar, monopulse radar, the effect of ONR on research money, over-the-horizon radar, administrative problems at NRL, patents to NRL employees, his feelings about being Director of Research, reflections on the relationships between civilian scientists and naval officers, Vanguard Project, the Long Range Modernization Program, and his role in bringing ocean sciences to NRL.

**Repositories:** NRL

**Individuals mentioned:** Crosley, Al

Friedman, Dr. Herbert

Hulburt, Dr. Edward O.

Bowen, ADM Harold G.

Guthrie, Dr. Robert C.

Gebhard, Dr. Louis A.

Philpott, LaVerne

Davis, Tommy

Adams, SECNAV Charles F.

Taylor, Dr. A. Hoyt

Young, Dr. Leo C.

**Institutions:** Naval Research Laboratory

Radio Corporation of America

Bureau of Engineering

National Defense Research Committee

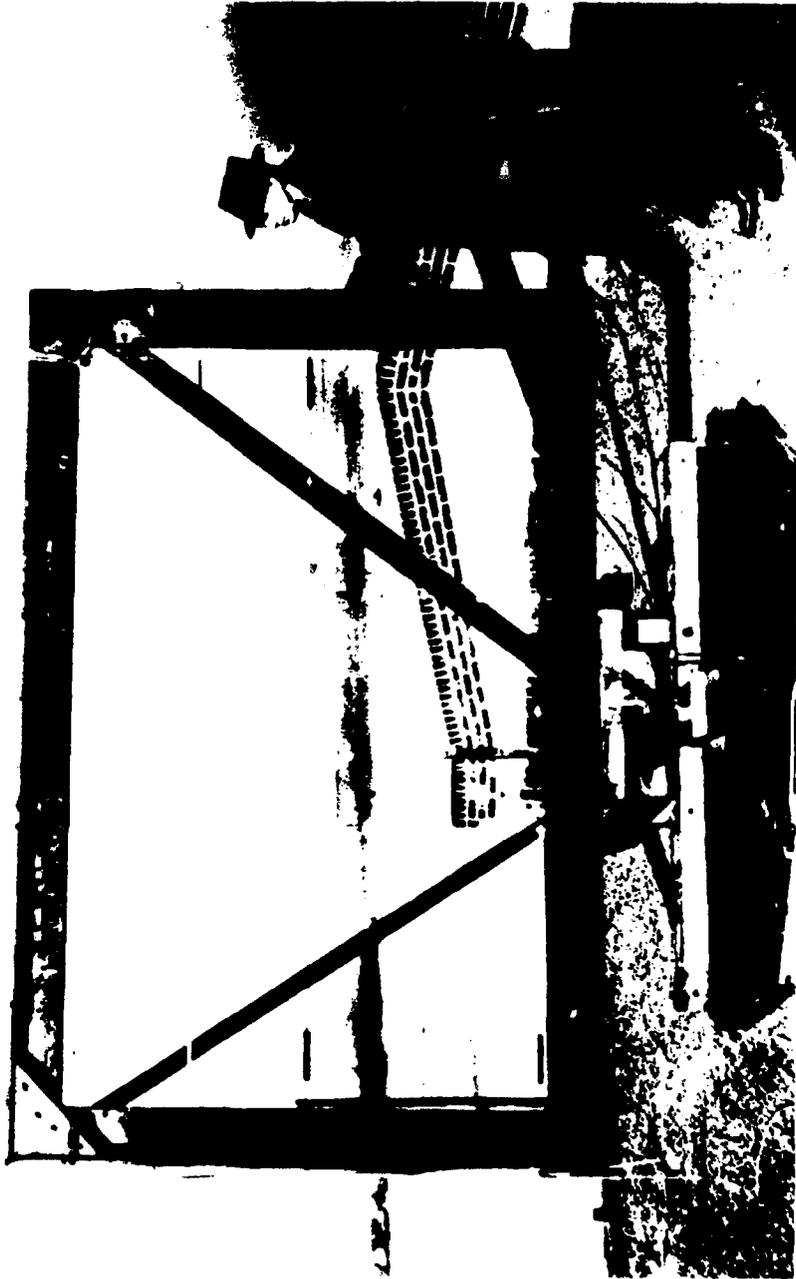
U. S. Army Signal Corps

Bureau of Ships

**Subjects:** Radar

Radio Detection

Fire Control Radar



Dr. Robert Morris Page with an early radar antenna.

Airborne Radar  
Microwave Radar

**Other added entries:** Radar Research  
USS NEW YORK  
USS TEXAS  
USS LEARY  
Tizard Mission  
Ridenour Report

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Parsons, Harry R.

Interview of Harry R. Parsons, conducted by Albert B. Christman

**Date of Interview:** 670100

**Documentation:** Index, Transcript 29 pp.

**Interview number:** NOTS-75201-S31

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Harry Parsons describes his relationship with his brother, his father's influence on the family, and the family's move West from Chicago to Ft. Sumner, NM. He recalls his father's career, the social life of Ft. Sumner, and RADM Parsons around the time of his death.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Parsons, Clarissa  
Parsons, Critchell

**Cities:** Ft. Sumner, NM.

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Pehrson, Gordon

Interview of Gordon Pehrson

**Date of Interview:** 720200

**Documentation:** Transcript 66 pp.

**Abstract:** Mr. Pehrson headed the Plans and Program Division of the Special Projects Office for Polaris. He developed program management concepts, and the Program Evaluation Review Technique (PERT). This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

**Repositories:** NHC, NWCM, USNA, USNI

**Subjects:** Submarine Launched Ballistic Missiles  
Fleet Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program  
Program Evaluation Review Technique

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Peterkin, Ernest W.

Interview of Ernest W. Peterkin, conducted by Dr. David K. Allison

**Date of Interview:** 810720

**Documentation:** 1 Tape (2 Sides)

**Abstract:** Mr. Peterkin discusses the SOLRAD (solar radiation) satellite program. The interview is supplemented by a collection of papers on research management.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Other added entries:** SOLRAD Program

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Petersen, ADM Forrest Silas

Interview of ADM Forrest Silas Petersen, conducted by  
Dr. William J. Armstrong

**Date of Interview:** 800407

**Documentation:** 1 Tape

**Note:** ADM Petersen was COMNAVAIR from 1976-1980

**Repositories:** NAVAIR

**Institutions:** Naval Air Systems Command

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Plain, Dr. Gilbert

Interview of Dr. Gilbert Plain, conducted by Elizabeth  
Babcock

**Date of Interview:** 7512909

**Documentation:** Index, Transcript 30 pp.

**Interview number:** S-108

**Abstract:** Dr. Plain comments on his move from MIT to NOTS  
and on Dr. Brode, Dr. Sage, and Dr. Warner. He talks about  
Aircraft Sights work, the start of the Sidewinder Missile  
Project, and his position as Head of Properties of Matter.  
Plain describes the NOTS/NWC commanders since 1949 and the  
various aspects of base operation, including the effect of  
the Freedom of Information Act, morale problems at NOTS, and  
Equal Employment Opportunity.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Hunter, Dr. Hugh  
LaBerge, Dr. Walter  
McLean, Dr. William B.  
Brode, Dr. Wallace C.  
Sage, Dr. Bruce  
Wilson, Dr. Haskell G.  
Warner, Dr. Arthur H.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Cities:** China Lake, CA.

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Polin, Jerry

Interview of Jerry Polin, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820713

**Documentation:** 1 Tape, Index 2 pp.

**Interview number:** NADC-9

**Abstract:** Mr. Polin talks about human factors engineering, his personal background, and his work for Martin Marietta. He comments on his work for the state of Pennsylvania doing statistical highway modeling, his time at Philco-Ford, and his arrival at the Philadelphia Navy Yard as a GS-7 management analyst. Polin discusses the Defense Logistics Agency, the Centrifuge Department at AMRD, and NADC's outside appearance. He describes what it meant to win an NADC fellowship for graduate work at Temple University and his project assignments in human engineering at NADC.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Polin, Dr. David  
Lazo, John

**Institutions:** Naval Air Development Center  
Martin Marietta  
Philadelphia Navy Yard  
Defense Logistics Agency  
Philco-Ford Corporation  
Temple University

**Subjects:** Sonobuoys  
Antisubmarine Warfare  
Antisubmarine Aircraft

**Other added entries:** Human Factors Engineering  
Human Centrifuge  
F-14 Project  
Light Airborne ASW Vehicle  
Light Airborne Multi-Purpose System  
A-NEW Program

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Polin, Jerry

Interview of Jerry Polin, conducted by Tom Misa and Ed Todd

**Date of Interview:** 920718

**Documentation:** 1 Tape, Index, 1 p.

**Interview number:** NADC-12

**Abstract:** Mr. Polin discusses the Navy Scientist Training Exchange Program, (NSTEP) which was set up as a NAVMAT function under the DNL in 1978, and relations between NADC and NAVMAT. He describes his assignment at NAVMAT in the laboratories management area and his work with the SHORESTAMPS manpower needs assessment program.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Law, Howard

**Institutions:** Naval Air Development Center  
Naval Material Command

**Other added entries:** Navy Scientist Training Exchange Program  
Laboratory Management

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Pollak, George

Interview of Mr. George Pollak, conducted by J. D. Gerrard-Gough

**Date of Interview:** 751024

**Documentation:** Index, Transcript 8 pp.

**Interview number:** 5313-S-100

**Abstract:** Pollak describes his first, short tenure at NOTS, his two years in the Army, and his return to NOTS-Pasadena Annex as a management analyst. He recalls becoming Deputy for Administration at NOTS and the Navy re-organization of 1967. Pollak comments on relations between NOTS-China Lake and Pasadena, the duties of the officer-in-charge, and Douglas Wilcox's role as Deputy for Administration.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Wilcox, Douglas

**Institutions:** Naval Weapons Center  
Naval Ordnance Test Station  
Pasadena Annex

**Cities:** Pasadena, CA.  
China Lake, CA.

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Pollock, CAPT Thomas

Interview of CAPT Thomas Pollock, conducted by Albert  
B. Christman

**Date of Interview:** 670500

**Documentation:** Index, Transcript 41 pp.

**Interview number:** NOTS-75201-S45

**Abstract:** CAPT Pollock explains his background in rocket research and the initial work by the Navy and CalTech on forward firing rockets. He discusses rocket testing procedures, the uses of rockets in combat in the Atlantic and the Pacific during World War II, and the results of test conducted at Inyokern and Goldstone Lake. He comments on his crew, the naming of NOTS, and the risks involved in rocket research.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Anderson, Dr. Carl  
Burroughs, ADM Sherman E.  
Lauritsen, Dr. Charles C.  
Renard, RADM Jack C.

**Institutions:** Naval Ordnance Test Station  
California Institute of Technology  
Bureau of Ordnance

**Cities:** Inyokern, CA.  
Goldstone Lake, CA.

**Subjects:** Rocket Research

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Pollock, CAPT Thomas

Pollock Review Comments, Vol 2, conducted by Albert B. Christman

**Date of Interview:** 730730

**Documentation:** 3 Tapes, Transcript 53 pp.

**Interview number:** NOTS-75201-S45-A

**Abstract:** This is a taped review of the first six chapters of The Grand Experiment at Inyokern, Naval History Division, Government Printing Office, Washington, DC., 1978, by Albert B. Christman, and J. D. Gerrard-Gough.

**Repositories:** NWC, DTNSRDC, NHC

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Powers, Kenneth

Interview of Kenneth Powers, conducted by Elizabeth Babcock

**Date of Interview:** 810518

**Documentation:** Index, Transcript 34 pp.

**Interview number:** S-123

**Abstract:** Mr. Powers comments on his first assignments at NOTS, problems with contractors for the Sidewinder Missile, and relations with the Bureau of Weapons and the Bureau of Ships. He talks about the development of Sidewinder, differences between NOTS and NWC, and his time in Europe working on NATO Sidewinder. Powers describes NOTS/NWC's relationship with Navy people in Washington, the motivations of military decision makers and industry, and the reasons for the success of the Sidewinder Program. He also makes suggestions on improving management of Sidewinder.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Cartwright, Dr. Frank W.  
Knemeyer, Franklin H.  
LaBerge, Dr. Walter  
Smith, Chuck  
Wilcox, Dr. Howard A.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Other added entries:** Sidewinder Missile Project

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Price, D. George

Interview of D. George Price, conducted by Roger Kempler

**Date of Interview:** 820728

**Documentation:** Index, Transcript 53 pp.

**Abstract:** Mr. Price discusses his early background in the Navy Personnel Research Program, World War II and Personnel Research, and postwar establishment of the Personnel Research Division. He describes major figures in NPRDC, his personal philosophy, and the need for NPRDC. Price discusses funding, personnel research activities in San Diego and Washington, and relations between NPRDC and ONR. He also comments on the move toward "centers of excellence" and ADM Elmo Zumwalt.

**Repositories:** DTNSRDC, NPRDC

**Individuals mentioned:** McDowell, Perceval E. (Pete)  
Herron, RADM Edwin W.  
Van Swearingen, CAPT Earl K.  
Daley, Dr. John  
Zumwalt, ADM Elmo

**Institutions:** Chief of Naval Material  
Office of Naval Research  
Navy Personnel Research and Development Center

**Cities:** San Diego, CA.  
Washington, DC.

**Other added entries:** Personnel Research  
Center of Excellence

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Probus, Dr. James H.

Interview of Dr. James H. Probus, conducted by Dr. David K. Allison

**Date of Interview:** 830727

**Documentation:** 3 Tapes, 3 diskettes, Transcript 47 pp.

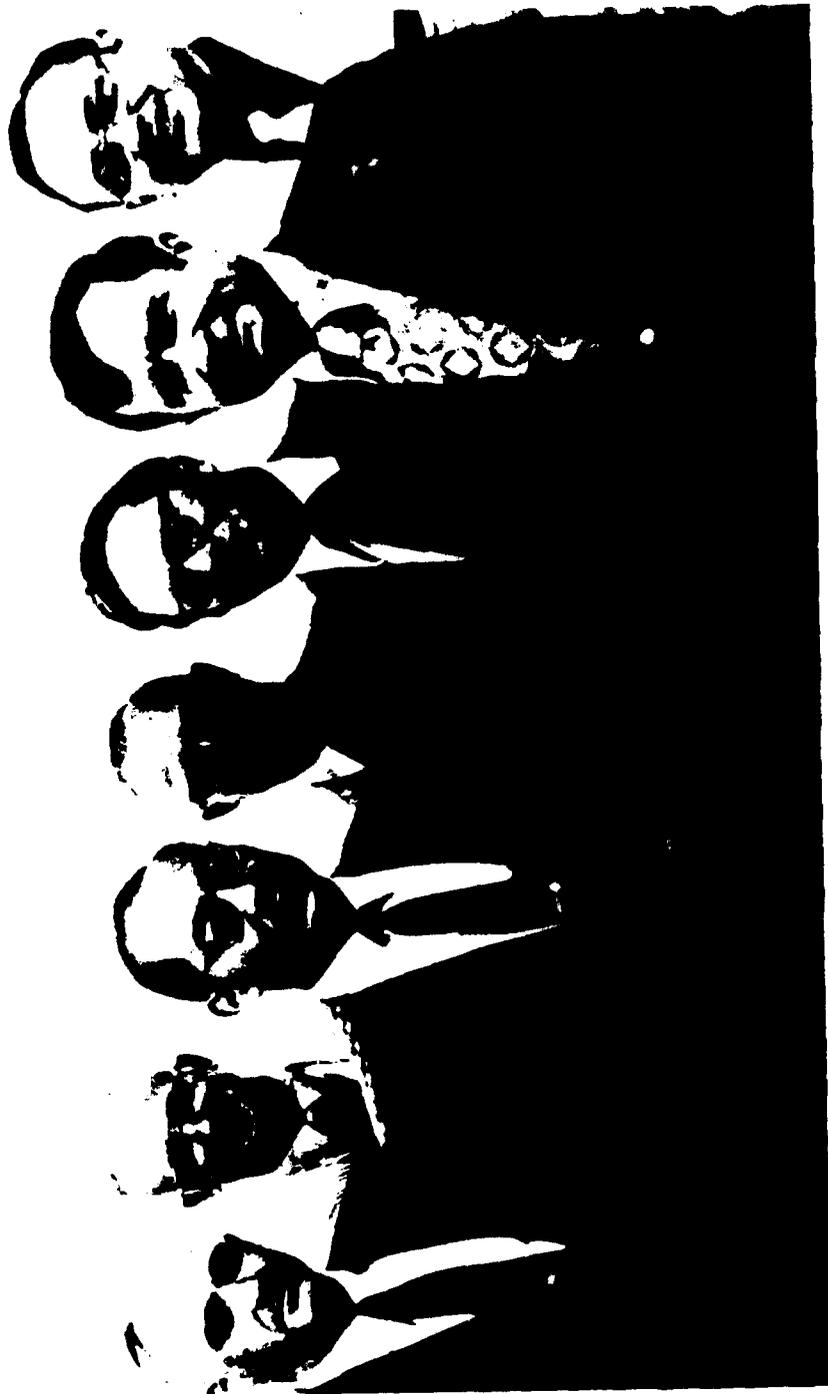
**Abstract:** Dr. Probus discusses how he became DNL and his impressions of the laboratories on assuming the position, LUS and resulting RIFs, the evolution of the center concept, problems with program oriented funding, implementing the systems approach, the role of COs and TDs in program management, career development for laboratory personnel, the influence of Dr. William McLean, Dr. Chalmers Sherwin, and Robert Morse on the office of the DNL, selection of COs and TDs, the role of the laboratories in the DSARC-DNSARC process, ATOWG, NSAP and the Corporate Plan, the value of the DNL's military deputy, laboratory inspections, and laboratories and the assessment of fleet readiness.

**Repositories:** DTNSRDC

**Individuals mentioned:** Berman, Dr. Alan  
Galantin, ADM Ignatius J.  
Hillyer, Robert  
Johnson, Dr. Gerald  
Keach, CAPT Donald  
Lawson, Dr. Joel  
Michaelis, ADM Frederick  
Parrish, CAPT David  
Whittle, ADM Alfred J., Jr.  
Morse, Dr. Robert W.

**Institutions:** Director of Navy Laboratories  
Defense Systems Acquisition Review Council  
Systems Commands  
Department of the Navy Systems Acquisition Review Council

**Other added entries:** Navy Industrial Fund  
Corporate Plan  
Laboratory Utilization Study  
Program Management  
Reduction in Force  
Advanced Technical Objectives Working Groups  
Navy Science Assistance Program



Director of Navy Laboratories and staff, circa 1976. Left to right:  
Captain Williamson, Bud Shull, Theodore S. Huang, Dr. James Probus,  
Director of Navy Laboratories, Captain Don Walsh, Allen Himes, and  
Howard Law.

Pryor, CAPT William L.

Interview of CAPT William L. Pryor, conducted by Albert B. Christman

**Date of Interview:** 780400

**Documentation:** Tape, Transcript 22 pp.

**Interview number:** DNL-T14-78

**Abstract:** CAPT Pryor discusses the establishment of the New London, CT., Laboratory, pre-World War II sonar testing, and conflicts between ADM Bowen and Dr. Vannevar Bush. He talks about the establishment of the San Diego research center, NOSC, the impact on R&D of Dr. Vern Knudson, and specifications for NOSC. Pryor describes how he came to New London, the shift of OSRD work to NRL, and his duty with the Pacific Fleet. He talks about problems at New London upon his return as CO, the need for accountability in R&D, and the failures of the previous CO. Pryor talks about the Navy officer in R&D, including dealing with civilians, officers with technical backgrounds, and the differences between officers of different bureaus. He discusses RADM William S. Parsons and the differences between laboratories.

**Repositories:** DTNSRDC

**Individuals mentioned:** Bowen, Dr. Ira S.  
Bush, Dr. Vannevar  
Parsons, RADM William S.  
Knudson, Dr. Vern

**Institutions:** Naval Research Laboratory  
Naval Ocean Systems Center  
Office of Scientific Research and Development

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Pryor, CAPT William L.

Interview of CAPT William L. Pryor, conducted by Albert B. Christman

**Date of Interview:** 810626

**Documentation:** 2 Tapes, Transcript 56 pp.

**Interview number:** DNL-T37

**Abstract:** CAPT Pryor discusses his work in sonar, radio, and submarine research. He talks about his fleet duty, both in submarines and aboard the USS WEST VIRGINIA. Pryor describes

his tenure at NRL and as Head of NUSL/New London.

**Repositories:** DTNSRDC

**Individuals mentioned:** Rickover, ADM Hyman

**Institutions:** Naval Underwater Sound Laboratory  
Naval Research Laboratory

**Subjects:** Sonar  
Radio  
Submarines

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Purcell, D.

Interview of D. Purcell, conducted by David H. Devorkin

**Date of interview:** 820329

**Documentation:** Tapes, Transcript, 85 pp.

**Repositories:** NASM

**Subject:** Astronomy

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Quarles, Gilford G.

Interview of Gilford G. Quarles, conducted by Nelson Wood

**Date of Interview:** 780424

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Quarles, a former director of the Ordnance Research Laboratory, speaks of his work there.

**Repositories:** ARL

**Institutions:** Ordnance Research Laboratory  
Pennsylvania State University

**Subjects:** Torpedos

**Other added entries:** Acoustics Research

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Raborn, VADM William F., Jr.

Interview of VADM William F. Raborn, Jr.

**Date of Interview:** 720900

**Documentation:** Transcript 71 pp.

**Abstract:** VADM Rayborn served as the Director of the Special Projects Division to develop Polaris. This is one of a series of seven interviews on concept and development of the Polaris program conducted by the U. S. Naval Institute Oral History Program.

**Repositories:** NHC, NWCM, USNA, USNI

**Subjects:** Submarine Launched Ballistic Missiles  
Fleet Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program

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Ramras, Eugene M.

Interview of Eugene M. Ramras, conducted by Albert B. Christman

**Date of Interview:** 780309

**Documentation:** 1 Tape, Transcript 16 pp.

**Interview number:** DNL-T4-78

**Abstract:** Mr. Ramras discusses the evolution of NPRDC from several field activities. He describes how a particular project works, military interfaces with NPRDC, and the impact of computers on people. Ramras explains that the Navy's main problems of the 1970's are in personnel management and comments on laboratory consolidation, significant breakthroughs, and the future of the laboratory system.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Frosch, Dr. Robert A.  
Probus, Dr. James H.

**Institutions:** Navy Personnel Research and Development Center  
Navy Personnel and Training Research Center

**Other added entries:** Personnel Management  
Personnel Research

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Ramsey, Dr. Norman

Interview of Dr. Norman F. Ramsey

**Date of Interview:** 600000

**Documentation:** Index, Transcript 358 pp.

**Abstract:** Dr. Ramsey talks about his education, research with Isidor Rabi, and Enrico Fermi, the NDRC Radiation Laboratory, MIT, the development of radar, and the Manhattan Project. He speaks of work at Los Alamos, and discussions on use of the atomic bomb and possible targets, the Trinity test, and estimates of the damage at Hiroshima.

**Repositories:** COL

**Individuals mentioned:** Oppenheimer, Dr. Robert  
Fermi, Enrico  
Rabi, Isidor I.

**Institutions:** National Defense Research Committee  
Radiation Laboratory

**Subjects:** Radar

**Cities:** Los Alamos, NM.  
Tinian  
Hiroshima, Japan

**Other added entries:** Manhattan Project  
Trinity Test

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Raney, Dr. William

Interview of Dr. William P. Raney, conducted by Dr. Vincent Ponko

**Date of Interview:** 801125

**Documentation:** 3 Tapes, Index, Transcript 47 pp.

**Interview number:** DNL-T31

**Abstract:** Dr. Raney discusses the role of the National Research Council of the National Academy of Science in

military R&D and his early years as Special Assistant to the Assistant Secretary of the Navy (R&D). This includes contacts with Dr. Chalmers Sherwin, lack of support for the Sherwin Plan, and the role of the DNL in dealing with the Sherwin Plan. Raney describes the beginnings of the DNL/DLP and its first heads, Dr. Gerald Johnson and Dr. Joel Lawson. He comments on exploratory development in Navy R&D, the systems approach to lab operations, and the role of management studies under SECDEF McNamara. Raney assesses Dr. Robert A. Frosch as ASN (R&D), his work in ONR, and talks about Thomas Amlie as Technical Director of NWC.

**Repositories:** DTNSRDC

**Individuals mentioned:** Foster, Dr. John S.  
Frosch, Dr. Robert A.  
McNamara, SECDEF Robert S.  
Johnson, Dr. Gerald  
Sherwin, Dr. Chalmers  
Lawson, Dr. Joel  
Amlie, Dr. Thomas S.

**Institutions:** Chief of Naval Operations  
Director of Navy Laboratories  
Office of Naval Research  
National Academy of Science  
Director of Laboratory Programs  
Naval Weapons Center  
National Science Foundation

**Other added entries:** Sherwin Plan

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Rees, Mina

Interview of Mina Rees

**Date of Interview:** 840100

**Documentation:** 8 Tapes

**Abstract:** This interview is part of the "Women in the Federal Government Project", sponsored by the Arthur and Elizabeth Schlesinger Library on the History of Women in America and funded by the National Endowment for the Humanities. Ms. Rees describes her career with the Navy.

**Repositories:** RAD

**Institutions:** Office of Naval Research

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Regan, Dr. James J.

Interview of Dr. James J. Regan, conducted by Roger Kempler

**Date of interview:** 820716

**Other interview date:** 821117

**Documentation:** Transcript, 49 pp.

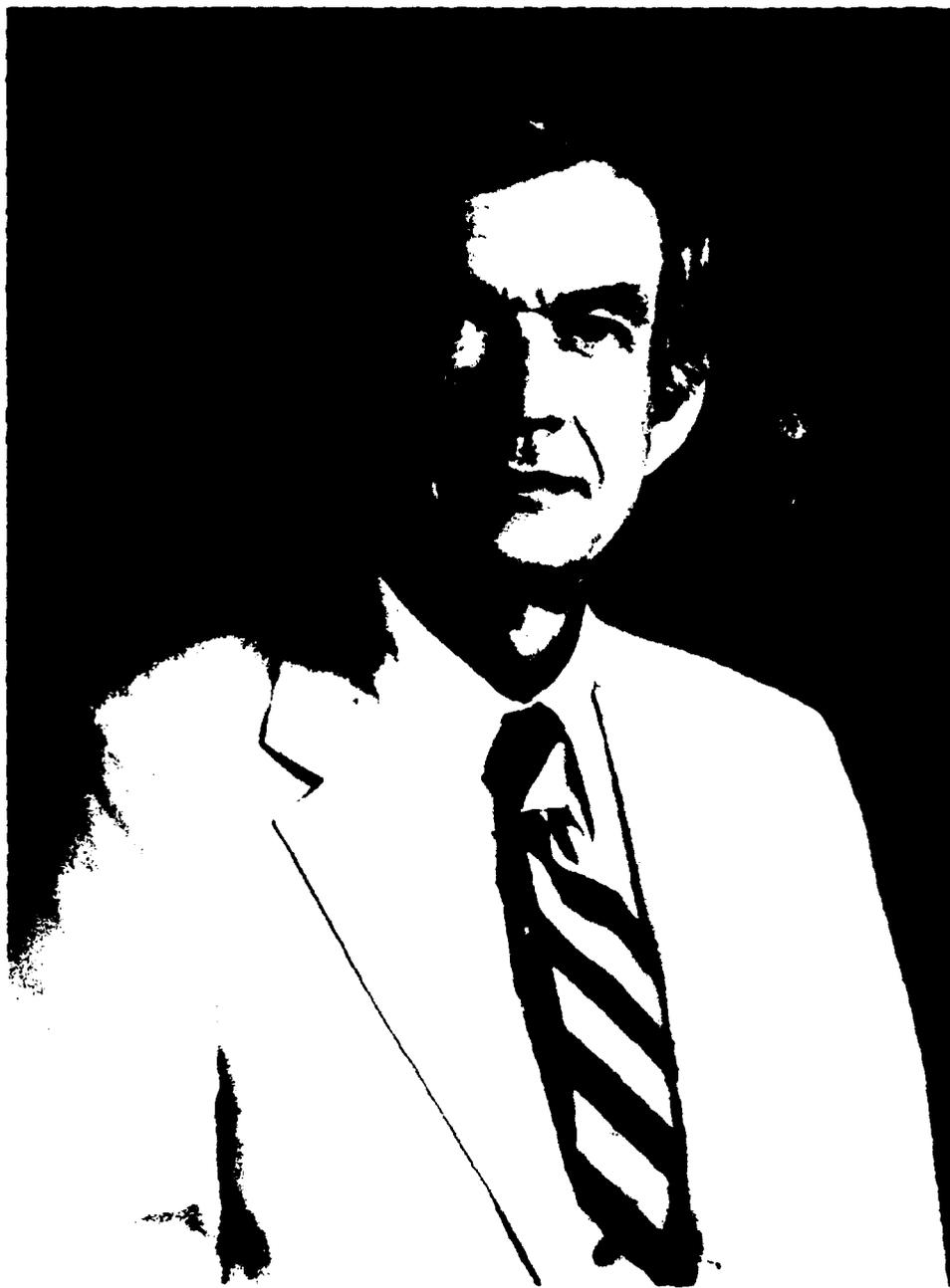
**Abstract:** Dr. Regan describes becoming NPRDC's first Technical Director, the special problems of the first year of operation, difficulties associated with full consolidation of the Navy's personnel R&D efforts and responsibility for coordinating all personnel research, the origin of the Center concept, NRAC's impact on Center development, the Sub-Panel on Personnel, and location of NRAC records, funding of NPRDC, his Center management philosophy, the appropriateness of a civilian Technical Director managing a military laboratory, becoming a NAVMAT laboratory, the differences in operational philosophy between NPRDC and the material laboratories, his concerns relative to changing modes in R&D funding, reports by the Inspector General and GAO, and an overview of the last ten years.

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Rigney, Dr. Joseph  
Kinnear, RADM George E. R.  
Bagley, VADM David H.  
Collins, Dr. John J.  
Probus, Dr. James H.  
Ramras, Eugene M.  
Bryan, Dr. Glenn L.  
Frosch, Dr. Robert A.  
Smith, Dr. Robert

**Institutions:** Naval Research Advisory Committee  
General Accounting Office  
Navy Personnel Research and Development Center

**Other added entries:** Technical Director  
Personnel Research



Dr. James J. Regan, Technical Director of the Navy Personnel  
Research and Development Center, 1974-1981.

Reich, VADM Eli T.

**Date of Interview:** 750210

**Documentation:** 1 Tape

**Interview number:** BA-23

**Repositories:** NHC, DTNSRDC

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Reich, VADM Eli T.

Interview of VADM Eli T. Reich, Volume I

**Date of Interview:** 780400

**Other date of interview:** 790100

**Documentation:** Index, Transcript 520 pp.

**Abstract:** VADM Reich discusses his submarine experience in World War II, command of the missile cruiser USS CANBERRA, and his role in the investigative study of the Tartar, Terrier and Talos missile programs.

**Repositories:** NHC, USNA, USNI, NWCN

**Subjects:** Surface to Air Missiles  
Antiaircraft Missiles  
Weapons Systems

**Other added entries:** Terrier Missile  
Tartar Missile  
Talos Missile  
Surface Missile Systems Project

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Reich, VADM Eli T.

Interview of VADM Eli T. Reich, Volume II

**Date of Interview:** 790200

**Other date of interview:** 800100

**Documentation:** Index, Appendices, Transcript 681 pp.

**Abstract:** Continues career in 1963, when VADM Reich was Director of the Surface Missile Systems Project. Prior to his retirement, he served as Deputy Assistant Secretary of

Defense (Production, Engineering, and Acquisition).

**Repositories:** NHC, USNA, USNI, NWCM

**Subjects:** Surface to Air Missiles  
Antiaircraft Missiles  
Weapons Systems

**Other added entries:** Terrier Missile  
Tartar Missile  
Talos Missile  
Surface Missile Systems Project

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Renard, RADM Jack C.

Interview of RADM Jack C. Renard, conducted by Albert B. Christman

**Date of Interview:** 690521

**Documentation:** Index, Transcript 52 pp.

**Interview number:** NOTS-75201-S64

**Abstract:** RADM Renard comments on his position as Magnetic Airborne Director at NOTS, test facilities at Goldstone Lake, and the search for a new rocket test site. He talks about acquiring land for a new test facility, the turn of events that led to it, and CalTech's participation in the war effort under Dr. Charles Lauritsen. Renard describes RADM Mitscher's influence, the first rocket tests, and the opening of NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
Fowler, Dr. William  
Hayward, ADM John T.  
King, FADM Ernest  
Lauritsen, Dr. Charles C.  
Mitscher, ADM Marc  
Pollock, CAPT Thomas  
Russell, ADM James S.

**Institutions:** Naval Ordnance Test Station  
California Institute of Technology  
Ryan Aircraft

**Subjects:** Naval Research  
Rocket Research

**Cities:** Goldstone Lake, CA.  
Inyokern, CA.

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Renne, Clarence J.

Interview of Clarence J. Renne, conducted by Michelle Kilikauskas and Susan Priest

**Date of Interview:** 801219

**Documentation:** Index, Transcript 30 pp.

**Interview number:** S-114

**Abstract:** Renne discusses his early career, relationships between blue and white collar employees at NOTS, and the employee services board there. He comments on the difficulty in firing poor employees, difficulty getting work done, and his management philosophy. Renne talks about who really got work done at NOTS/NWC, Dr. Haskell G. Wilson, and contracting work to outside companies. He also speaks on the importance of trusting government workers.

**Repositories:** NWC, NHC, DTNSRDC

**Individuals mentioned:** Hays, Burrell  
Printy, Rich  
Wilson, Dr. Haskell G.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

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Rexroth, John

Interview of Mr. John Rexroth, conducted by Dr. Vincent Ponko

**Date of Interview:** 801205

**Documentation:** 3 Tapes, Index, Transcript 46 pp.

**Interview number:** DNL-T33

**Abstract:** Mr. Rexroth discusses his work as a project officer in the Bureau of Ordnance, including fire control, liaison officer with contractors, target designation work, and the Research and Development Board. He talks about support for applied research, in particular, the work of Dr. Frank Tanczos, the adverse influence of Polaris and other

projects, and the establishment of ASN (R&D). Rexroth comments on the Bureau of Weapons, his tenure as TD there, his contact with the Applied Physics Labs, and relations with in-house labs. He also discusses the negative impact of releasing the labs from the Bureaus/SYSCOMs, the lack of benefit derived from CNM control of the labs, and project management in the Systems Commands. Rexroth states that labs should only handle technical management responsibility, private industry should remain part of the R&D picture, and evaluates Dr. Robert A. Frosch and Dr. William Raney as R&D leaders. He explains the impact SECDEF Robert S. McNamara had on R&D procedures, the role of the CNO in Naval R&D, and the problems the Navy faced in the mid-1970's.

**Repositories:** DTNSRDC

**Individuals mentioned:** Parham, CAPT John S.  
Tanczos, Dr. Frank I.  
Wilson, Dr. Haskell G.  
Raney, Dr. William  
Frosch, Dr. Robert A.  
McNamara, SECDEF Robert S.

**Institutions:** Bureau of Ordnance  
Bureau of Weapons  
Chief of Naval Material  
Chief of Naval Operations  
Director of Navy Laboratories  
Applied Physics Laboratory  
Systems Commands

**Other added entries:** Technical Director  
Polaris Program

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Rich, Harry L.

Interview of Harry L. Rich, conducted by Dr. David K. Allison

**Date of Interview:** 840514

**Documentation:** 3 Tapes, Index

**Abstract:** Mr. Rich reminisces about his thirty-three years at DTNSRDC, he mentions his initial interview with Dr. Lyman Hewins and CAPT Alvey Wright, and his job as scientific assistant at the Experimental Model Basin. Rich was more interested in Structures and was able to transfer to that Department in 1941. He discusses the development of strain gauges, different types of hull strength testing, his memories of Operation Crossroads and how DTMB simulated the

tests. He describes conditions at DTMB during World War II - the Marine guard force living in the Structural Mechanics Laboratory, and unusual tests with cadavers. He mentions the role of the Center in the full scale shock test of the THRESHER, involvement in testing the "3 T" missile systems, improvements in submarines and surface ships due to research in shock and vibration studies, his position as the Navy's Shock Coordinator, and his work as an NSAP advisor to the Korean Navy.

**Repositories:** DTNSRDC

**Individuals mentioned:** Johnson, Everatt Emmil  
Hewins, Dr. Lyman  
Hartmann, Dr. Gregory  
Keil, Dr. Alfred H.  
Kell, ADM Claude O.  
Saunders, CAPT Harold E.  
Windenburg, Dr. Dwight F.  
Crook, Mary Charlotte  
Heller, CDR S. K.  
Allen, Dr. Robert  
Lawson, Dr. Joel

**Institutions:** Navy Science Assistance Program  
David Taylor Naval Ship Research and Development Center  
Naval Ship Research and Development Center  
David Taylor Model Basin  
Structures Department  
Applied Mechanics Laboratory  
Bureau of Ordnance  
Bureau of Ships  
Structural Mechanics Department  
Shock and Vibration Centralization Activity

**Subjects:** Shock  
Vibration

**Other added entries:** Korean War  
Strain Gauges  
Shock Testing  
Shock Hardening  
Navy Industrial Fund  
Polaris  
USS TROUT  
Terrier Missile  
Operation Paperclip  
Talos Missile  
Tartar Missile  
USS THRESHER  
USS DRAGONET  
USS BOSTON  
USS OMAHA

**Manhattan Project  
Operation Crossroads**

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**Richmond, CDR John**

**Interview of CDR John Richmond, conducted by Albert B. Christman**

**Date of Interview: 670100**

**Documentation: Index, Transcript 125 pp.**

**Interview number: NOTS-75201-S33**

**Abstract:** CDR Richmond reminisces about the construction and expansion of NOTS during the two years he was in charge. He discusses the birth of the community at China Lake, CA. and the construction of permanent housing, schools, and recreational facilities. Richmond sketches the personalities of NOTS there during his time and describes the military function of the base.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Appleton, Robert  
Blandy, ADM George  
Byrnes, CAPT James  
Duncan, CAPT James  
Hayward, ADM John T.  
Hussey, VADM George F.  
Lauritsen, Dr. Charles C.  
Sage, Dr. Bruce  
Sandquist, CAPT Oscar  
Switzer, VADM W. G.  
Sykes, RADM James B.  
Thompson, Dr. Louis T. E.  
Zimmerman, LT

**Institutions:** Naval Ordnance Test Station

**Cities:** China Lake, CA.

**Other added entries:** Manhattan Project  
Commanding Officer

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Ricketts, COMO Myron V.

Interview of COMO Myron V. Ricketts, conducted by Dr.  
David K. Allison

**Date of Interview:** 820210

**Documentation:** 1 Tape, Transcript 22 pp.

**Abstract:** COMO Ricketts comments on the role of a military commanding officer in the Navy laboratories, his work at NRL, the establishment of the Fleet Support Office at DTNSRDC, NSAP, financial management at DTNSRDC, the relationship between the laboratories and Systems Commands, contacting out of commercial activities, and incentives to keep competent technical people in the laboratories.

**Repositories:** DTNSRDC

**Institutions:** Fleet Support Office  
Naval Research Laboratory  
David Taylor Naval Ship Research and Development Center  
Navy Science Assistance Program

**Other added entries:** Commercial Activities  
Navy Industrial Fund  
Contracting

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Roach, James

**Date of Interview:** 750203

**Documentation:** 1 Tape

**Interview number:** BA-27

**Repositories:** NHC, DTNSRDC

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Robinson, ADM Samuel M.

Interview of ADM Samuel M. Robinson

**Date of Interview:** 630000

**Documentation:** Transcript 56 pp.

**Abstract:** ADM Robinson recalls his career in Naval engineering, discussing electric ship propulsion, the development of the high speed diesel engine, his service at the Puget Sound Navy Yard, and as Chief of the Bureaus of Engineering and Ships.

**Repositories:** COL, NHC

**Institutions:** Bureau of Ships  
Bureau of Engineering

**Subjects:** Diesel Engines  
Electric Ship Propulsion  
Naval Engineering

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Roman, Nancy Grace

Interview of Nancy Grace Roman, conducted by Dr. Richard F. Hirsh

**Date of interview:** 7606300

**Documentation:** Tape, 1 hr.

**Repositories:** AIP

**Subjects:** Astronomy

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Roman, Nancy Grace

Interview of Nancy Grace Roman, conducted by Dr. David DeVorkin

**Date of interview:** 8008019

**Documentation:** Tapes, 4 hrs., Transcript 70 pp.

**Abstract:** Ms. Roman speaks mainly about her career with NASA and the astronomy and space astronomy programs there, she also discusses her early life, education, and positions at the Yerkes Observatory and the Naval Research Laboratory.

**Repositories:** AIP

**Institutions:** Naval Research Laboratory  
National Aeronautics and Space Administration  
Yerkes Observatory

**Subjects:** Astronomy  
Space Astronomy

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Rosen, Milton

Interview of Milton Rosen, conducted by Dr. David H. DeVorkin

**Date of Interview:** 830325

**Documentation:** Tapes, 3.5 hours, Transcript, 90 pp.

**Abstract:** This interview covers Mr. Rosen's education, employment at Westinghouse and the Federal Power Commission, and move to NRL in 1940. At NRL Rosen was involved in general atmospheric research, including the Rocket-Sonde Division, the V-2 rocket program, and his year at JPL. He describes the V-2 rocket and later programs, and discusses basic versus applied research at NRL.

**Repositories:** NASM

**Individuals mentioned:** Braun, Wernher von  
Tombaugh, Clyde  
McLaughlin, R. B.  
Krause, Dr. Ernst H.

**Institutions:** Naval Research Laboratory  
Jet Propulsion Laboratory  
University of Pennsylvania  
Westinghouse Corporation  
Federal Power Commission

**Subjects:** Radar  
Rocketry

**Cities:** White Sands, NM.

**Other added entries:** V-2 Rocket  
Viking Rocket  
Aerobee Rocket  
Rocket-Sonde  
Missile Research  
Redstone Rocket  
Convair Rocket

**Atmospheric Research**

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**Roy, Dr. Max**

Interview of Dr. Max Roy, conducted by Albert B. Christman

**Date of Interview:** 670100

**Documentation:** Index, Transcript 10 pp.

**Interview number:** NOTS-75201-S25

**Abstract:** Dr. Roy speaks about the establishment of the Salt Wells Pilot Plant and the types of bombs made there. He discusses the established of the atom bomb plant at Inyokern, CA., and the different components made at Inyokern and Albuquerque, NM. Roy also tells why SWPP was closed.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.

**Institutions:** Naval Ordnance Test Station  
Salt Wells Pilot Plant

**Cities:** Inyokern, CA.  
Albuquerque, NM.  
Los Alamos, NM.

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**Ruckner, RADM Edward A.**

Interview of RADM Edward A. Ruckner

**Date of Interview:** 731000

**Other interview date:** 750500

**Documentation:** Index, Transcript 571 pp.

**Abstract:** RADM Ruckner discusses his education at the Naval Postgraduate School and MIT, his work on radar with ADM Rivero, and his tenure as Deputy CNO for Development. He also describes his tours of duty on the Ships Characteristics Board, and as Ordnance Officer at the Naval Proving Ground.

**Repositories:** NHC, USNA, USNI, NWCM

**Individuals mentioned:** Rivero, ADM Horacio

**Institutions:** Massachusetts Institute of Technology  
Deputy Chief of Naval Operations (Development)  
Bureau of Ordnance  
Naval Proving Ground  
Ship Characteristics Board  
Naval Postgraduate School

**Subjects:** Ordnance  
Radar

**Cities:** Annapolis, MD.  
Dahlgren, VA.

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Ruckner, RADM Edward A.

Interview of RADM Edward A. Ruckner, conducted by Peter Bruton and an unknown interviewer

**Date of Interview:** 740900

**Documentation:** 3 Tapes, Index, Transcript 87 pp.

Interview number: BA-6

**Abstract:** RADM Ruckner discusses Bureau of Ordnance R&D objectives, differences between BUORD's operation and those of other bureaus, and technical direction in BUORD labs. He explains the BuOrd lab evaluation process, how contractors were selected, and how ordnance was inspected. Ruckner describes trends and issues in BUORD from 1940 to 1948 and his tenure as Asst. Chief for R&D-BUORD. He talks about how R&D money was obtained, BuOrd's relations with ONR, and the establishment of the ASN (R&D). Ruckner also mentions BUORD's relations with OPNAV, DCNO, and ASN (R&D) and relates how DCNO (Development) was created and what its functions are. Lastly, he also discusses major trends and issues in R&D from 1958 to 1973, including important program successes, expansion of the DDR&E staff, and the centralization of Navy labs into the Centers.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Bennett, RADM Rawson  
Foster, Dr. John S.  
Frosch, Dr. Robert A.  
McNamara, SECDEF Robert S.  
Wakelin, Dr. James H.

**Institutions:** Assistant Secretary of the Navy (R&D)

Chief of Naval Material  
Deputy Chief of Naval Operations (Development)  
Office of Naval Research  
Bureau of Ordnance  
Director of Defense Research and Engineering

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Russell, ADM James S.

Interview of ADM James S. Russell, conducted by Albert  
B. Christman

**Date of Interview:** 700500

**Documentation:** Index, Transcript 17 pp.

**Interview number:** NWC-75201-71

**Abstract:** ADM Russell first details his own background at CalTech and the Bureau of Aeronautics. He discusses Dr. Theodore von Karman and how - with the help of Andrew Haley - he began to manufacture things for the Army. Russell also comments on the relationship between BUAER and BUORD. That includes the influence of ADM McCain in Navy R&D and the battle over cognizance at NOTS/NWC.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
Haley, Andrew  
McCain, ADM John S.  
Karman, Dr. Theodore von

**Institutions:** California Institute of Technology  
Bureau of Aeronautics  
Bureau of Ordnance  
North Atlantic Treaty Organization

**Other added entries:** Rocket Engines

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Sagdahl, John

Interview of John Sagdahl, conducted by Nelson Wood

**Date of Interview:** 7705211

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Sagdahl speaks of his work as general foreman for the Mark 43 Torpedo.

**Repositories:** ARL

**Subjects:** Torpedos

**Other added entries:** Torpedo Mark 43  
Aircraft Launched Torpedos

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Sage, Dr. Bruce

Interview of Dr. Bruce Sage, conducted by Albert B. Christman

**Date of Interview:** 661100

**Documentation:** Index, Transcript 30 pp.

**Interview number:** NOTS-75201-S22

**Abstract:** Dr. Sage discusses the selection of NOTS sites for pilot plant operations, the construction of the Salt Wells and China Lake Pilot Plants. He talks about the Michelson Laboratory at China Lake, the land selection for the plants, and Dr. Charles C. Lauritsen's motivations.

**Repositories:** DTNSRDC, NWC, NHC

**Individuals mentioned:** Byrnes, CAPT James  
Lauritsen, Dr. Charles C.  
Parsons, RADM William S.  
Sabin, Palmer

**Institutions:** Salt Wells Pilot Plant  
China Lake Pilot Plant  
Michelson Laboratory

**Cities:** Inyokern, CA.  
Pasadena, CA.

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Sanderson, Dr. John A.

Interview of Dr. John A. Sanderson, conducted by Dr. David K. Allison

**Date of Interview:** 770831

**Documentation:** 3 Tapes (5 Sides), Index 4 pp.

**Abstract:** This interview is a supplement to the oral history interview with Dr. Edward O. Hulburt and talks about Hulbert's associates.

**Repositories:** NRL

**Individuals mentioned:** Hulburt, Dr. Edward O.

**Institutions:** Naval Research Laboratory

**Subjects:** Optics

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Sandquist, CAPT Oscar

Interview of CAPT Oscar Sandquist, conducted by Albert B. Christman

**Date of Interview:** 660706

**Documentation:** Index, Transcript 26 pp.

**Interview number:** NOTS-75201-S13

**Abstract:** CAPT Sandquist tells about the birth of NOTS in Inyokern, CA., the recruitment of labor, and contractors at NOTS. He describes the logistics of construction, and at the same time cooperating with the CalTech scientists on the missile ranges nearby. Next, he discusses the master plan of the site, water problems, labor problems, budgets, postwar plans and construction. Sandquist also reflects on the first weapons systems to come out of NOTS, including the Sidewinder missile.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
Michelson, Dr. Albert A.  
Byrnes, CAPT James

**Institutions:** Naval Ordnance Test Station  
California Institute of Technology

**Other added entries: Sidewinder Missile Project**

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Sawyer, Dr. Ralph A.

Interview of Dr. Ralph A. Sawyer, conducted by Albert B. Christman

**Date of Interview:** 670500

**Documentation:** Index, Transcript 55 pp.

**Interview number:** NOTS-75201-S46

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons and also partly to record the history of NOTS at Inyokern, CA. Dr. Sawyer discusses his work at the Armor and Projectile Laboratory at the Naval Proving Ground at Dahlgren, VA., his relations with CAPT Hedrick, the CO there, and his impressions of Parsons. He describes subsequent promotion to Head of Research at NOTS, his work on Crossroads, and other research at NOTS. He evaluates Parsons as a man and as an officer and comments on Dr. Louis T. E. Thompson.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Blandy, ADM George  
Bradbury, Dr. Norris E.  
Hedrick, CAPT David  
Loeb, Dr. Leonard  
Parsons, RADM William S.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Armor and Projectile Laboratory  
Naval Proving Ground

**Cities:** Inyokern, CA.  
Dahlgren, VA.

**Other added entries:** Operation Crossroads

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Sawyer, Dr. Ralph A.

"Development of the Armor and Projectile Laboratory:  
Dr. Ralph A. Sawyer", conducted by Jack Brooks, Jr.

**Date of Interview:** 740522

**Documentation:** Transcript 7 pp.

**Note:** This interview is the Chapter V of Dahlgren, edited by  
Kenneth G. McCollum

**Abstract:** Dr. Sawyer tells how he came to Dahlgren as a  
Naval Officer to do spectrographic analysis at the newly  
constructed Armor and Projectile Laboratory, mentions his  
co-workers, Dr. L. T. E. Thompson and CAPT Leonard Loeb, the  
size of his staff, the most significant achievements of the  
A&P Laboratory, his latter work on the Manhattan Project.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Thompson, Dr. Louis T. E.  
Loeb, Dr. Leonard

**Institutions:** Naval Proving Ground  
Armor and Projectile Laboratory

**Subjects:** Ordnance

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Schneider, RADM R. J.

Interview of RADM R. J. Schneider

**Date of Interview:** 750107

**Documentation:** 2 Tapes

**Interview number:** BA-18

**Repositories:** DTNSRDC

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Schoeffel, RADM Malcom F.

Interview of RADM Malcom Schoeffel, conducted by Albert B. Christman

**Date of Interview:** 660421

**Documentation:** Index, Transcript 11 pp.

**Interview number:** NOTS-75201-S8

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM Schoeffel reflects on NOTS and the Michelson laboratory. He comments on RADM Parsons as Deputy Chief of Bureau of Ordnance.

**Repositories:** MWC, DTNSRDC, NHC

**Individuals mentioned:** Hussey, VADM George F. Parsons, RADM William S. Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Michelson Laboratory

**Cities:** Inyokern, CA.

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Schoenherr, Dr. Karl E.

Interview of Dr. Karl E. Schoenherr, conducted by Dr. David K. Allison

**Date of Interview:** 820415

**Documentation:** 8 Tapes, 5 Diskettes, Transcript 153 pp.

**Abstract:** Dr. Schoenherr talks about his background and education, serving as an apprentice seaman, entering MIT to study naval architecture, and his first experience with the Experimental Model Basin - testing yacht models for a school project. He discusses the EMB in 1922, his coworkers, the carriage, the size and type of staff, RADM David Taylor, the relationship between EMB and the Bureau of Construction and Repair, testing procedures, and the inadequacy of the EMB. He mentions the importance of the development of the bulbous bow and Taylor's Standard Series, cavitation studies in the 1930s, the search for a new basin site, acoustic decoys for World War II German torpedos, torpedo and submarine research and development during World War II, the wind tunnel, and the influence of airship design on torpedos. He gives his



Dr. Karl E. Schoenherr (left) and Mr. Krebs at the controls of the model towing carriage of the Experimental Model Basin, late 1920s.

impressions of CAPT Saunders and CDR Wright, NSRDCs relations with BUSHIPS, post-war changes in organization, speaks of leaving the Center to become Dean of Engineering at Notre Dame, returning to the Model Basin in 1958, work on underwater acoustics, and the balance between testing and research.

**Repositories:** DTNSRDC

**Individuals mentioned:** Hewins, Dr. Lyman  
Rickover, ADM Hyman  
Keil, Dr. Alfred H.  
St. Denis, Manley  
Karman, Dr. Theodore von  
Gertler, Morton  
Wright, RADM Edward Alvey  
Landweber, Dr. Louis  
Saunders, CAPT Harold E.  
Eggert, CAPT Ernest F.  
McEntee, CAPT William  
Taylor, RADM David W.  
Sam, Dr. Albert

**Institutions:** Massachusetts Institute of Technology  
Notre Dame  
Bureau of Construction and Repair  
Bureau of Ships  
Johns Hopkins University  
Experimental Model Basin

**Subjects:** Airships  
Propellers  
Torpedos

**Other added entries:** Naval Architecture  
Mine Mark 24  
Bulbous Bow  
Model Testing

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Schoman, Dr. Charles M.

Interview of Dr. Charles M. Schoman, conducted by Dr. David K. Allison

**Date of Interview:** 820726

**Documentation:** 1 Tape, Index

**Abstract:** Dr. Schoman describes the organizational structure of DTNSRDC, his position as Director of Plans & Programs, the Five Year Planning process, and the work of Center

committees.

**Repositories:** DTNSRDC

**Individuals mentioned:** Powell, Dr. Alan  
Allen, Dr. Robert C.

**Institutions:** David Taylor Naval Ship Research and Development Center  
Director, Plans & Programs  
Director of Technology  
Technical Director

**Other added entries:** Five Year Plan  
Laboratory Management

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Sette, Dr. William J.

Interview of Dr. William J. Sette, conducted by Dr.  
David K. Allison

**Date of Interview:** 821015

**Documentation:** 1 Tape, Index

**Abstract:** Dr. Sette talks about his background, initial impression of the Experimental Model Basin, early work on shock testing and propeller cavitation, involvement of the Basin in World War II operations, airblast and gunblast effects, Operation Crossroads, and his view of the Carderock - Annapolis Laboratory merger.

**Repositories:** DTNSRDC

**Individuals mentioned:** Mumma, RADM Albert G.  
Windenburg, Dr. Dwight F.  
Strasberg, Dr. Murray  
Keil, Dr. Alfred H.

**Institutions:** Experimental Model Basin  
David Taylor Model Basin  
Marine Engineering Laboratory  
David Taylor Naval Ship Research and Development Center  
Underwater Explosives Research Division  
Applied Mechanics Laboratory  
Hydrodynamics Division

**Subjects:** Shock  
Cavitation

**Cities:** Los Alamos, NM.  
Woods Hole, MA.

**Other added entries:** Operation Crossroads  
Airblast  
Independent Research/Independent Exploratory Development  
Gunblast

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Sewell, Robert G. S.

Interview of Robert G. S. Sewell, conducted by Mickey Strang

**Date of Interview:** 751200

**Documentation:** Index, Transcript 27 pp.

**Interview number:** S-105

**Abstract:** Mr. Sewell comments on the Vietnam Laboratory Assistance Program - how men were selected to go, how they travelled to Vietnam with lab equipment, and technical support from NOTS. He discusses being a civilian in uniform, life in the Navy at sea and in Saigon, and cutting military red tape. Sewell also talks about the Sidewinder and Walleye Missile Projects.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Gould, Al  
Johnson, Dr. Gerald

**Institutions:** Naval Ordnance Test Station

**Other added entries:** Vietnam Laboratory Assistance Program  
Sidewinder Missile Project  
Walleye Missile Project  
Vietnam War

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Sewell, Robert G. S.

Interview of Robert G. S. Sewell, conducted by Mickey Strang

**Date of Interview:** 750826

**Documentation:** Index, Not Transcribed, but in note form.

**Interview number:** S-106

**Abstract:** Mr. Sewell explains why he came to NOTS-China Lake, why testing there is more expensive than other labs.

He comments on the role of William B. McLean at NOTS and an engineer's pursuit of excellence - he cannot stand to be wrong. Sewell talks about changes in NOTS organization and Junior Professional Training, as well as the initial team recruited for NOTS. He noted that by 1950, NOTS original projects had been completed and the lab had to find new things to do.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B. Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Cities:** China Lake, CA.

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Seymour, VADM Ernest R.

Interview of VADM Ernest R. Seymour, conducted by Leroy L. Doig III and Dr. David K. Allison

**Date of Interview:** 830612

**Documentation:** Tapes, Transcript, 36 pp.

**Interview number:** S-149

**Abstract:** VADM Seymour was COMNAVAIR from 1980-1983. Discussion includes concept and place of the laboratories, contractors versus laboratories, organization, NAVMAT versus NAVAIR activities, military-civilian relationships, projects - including Maverick and Skipper; uses NWC as example of good and bad in laboratories.

**Repositories:** NWC

**Institutions:** Naval Weapons Center  
Naval Material Command  
Naval Air Systems Command

**Other added entries:** Laboratory Management  
Maverick Missile

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Seymour, VADM Ernest R.

Interview of VADM Ernest R. Seymour, conducted by Dr. William J. Armstrong

**Date of Interview:** 830713

**Documentation:** 1 Tape

**Note:** VADM Seymour was COMNAVAIR from 1980-1983.

**Repositories:** NAVAIR

**Institutions:** Naval Air Systems Command

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Seymour, Dr. Harry R.

Interview of Dr. Harry R. Seymour, conducted by Roger Kempler

**Date of Interview:** 820629

**Other interview date:** 820818

**Documentation:** Transcript, 27 pp

**Abstract:** Dr. Seymour describes his perception of NRAC, the establishment of NPRDC, the relative merits of BUPERS and NAVMAT sponsorship, the changing role of NPRDC's Washington representative, its major accomplishments, the influence of his military service on his decision to enter personnel research, the Special Projects Units, personnel research programs of the 1950s, the general attitude of the Navy toward personnel research, major figures in research during the post-war era, and his thoughts on improving management of Naval R&D. He talks of his major goals as NPRDC's Washington liaison officer, basic versus applied research, problems associated with justifying personnel R&D in relation to hardware R&D, the relative impact of personnel R&D in the fleet today, the NRAC sub-panel's concern over the amount of applied research performed by NPRDC, his views on the GAO review, and NPRDC's size as a key to its effectiveness

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Price, D. George  
Watkins, ADM James  
Clarkin, CAPT James J.  
Wiskoff, Dr. Martin  
Carstater, Dr. Eugene D.

Sjoholm, Dr. Allan A.  
Regan, Dr. James J.  
Parker, CAPT Donald F.  
Collins, Dr. John J.  
Marcy, ASN (R&D) H. Tyler  
Rostker, Dr. Bernard  
Elster, Dr. Richard  
Bryan, Dr. Glenn L.

**Institutions:** Naval Research Advisory Committee  
Navy Personnel Research and Development Center

**Subjects:** Personnel Research

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Sheehy, Myles

Interview of Myles Sheehy, conducted by Albert B. Christman

**Date of Interview:** 780300

**Documentation:** 1 Tape, Transcript 12 pp.

**Interview number:** DNL-T7-78

**Abstract:** Mr. Sheehy describes his years at NEL in San Diego, in particular, his role during World War II. Note: The transcription of this interview is poor. Key terms are repeatedly omitted either purposefully or because of poor tape quality. There is no page 11.

**Repositories:** DTNSRDC

**Institutions:** Naval Electronics Laboratory

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Sherwin, Dr. Chalmers

Interview of Dr. Chalmers Sherwin, conducted by Dr. Samuel Rothman

**Date of Interview:** 740000

**Documentation:** Index, Transcript 30 pp.

**Interview number:** BA-3-74

**Abstract:** Dr. Sherwin talks about the original purpose of DDR&E, funding for labs, and the dissatisfaction that led to lab re-organization. He comments on the image on Navy labs.

the reason for the McNamara memo concerning lab re-organization, and and new innovations in technology. He also discusses the management of the labs, basic research done by labs, DDR&E, and centralization in DoD. Sherwin sees the need for a Historical Evaluation Group to continually evaluate technical and management decisions.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Glass, Dr. Edward  
McLean, Dr. William B.  
McNamara, SECDEF Robert S.

**Institutions:** Director of Defense Research and Engineering

**Other added entries:** Laboratory Consolidations  
Laboratory Management

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Shugg, Carleton

Interview of Carleton Shugg

**Date of interview:** 731100

**Documentation:** Transcript 25 pp.

**Abstract:** Mr. Shugg was President of Electric Boat Company, a sub-systems contractor and builder of FBM submarines for Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

**Repositories:** NHC, NWC, USNA, USNI

**Subjects:** Submarine Launched Ballistic Missiles  
Fleet Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program

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**Smith, Bernard**

Interview of Barney Smith, conducted by Mrs. Susan Frutkin and Dr. Peter Bruton

**Date of Interview:** 740000

**Documentation:** 4 Tapes, Index, Transcript 120 pp.

**Interview number:** BA-7-74

**Abstract:** Mr. Smith explains how management of R&D facilities in DoD worked: The Pentagon formulated programs, the TD at a laboratory went to a desk man at a Bureau for money, and the desk man allocated it according to a set budget. He discusses the establishment of the ASN (R&D), quotes Sidewinder as an example of a program not managed well, and describes how foundational research money was misused. Smith comments on bureau-lab dialogues and how an individual can make a big difference in laboratory management. He explains the Bureau's feelings at the labs being placed under the CNM, the role of the DNL, and the SYSCOMs' dialogues with industry. He notes that the DNL was not an innovative force and was a poor contact between the labs and their customers. Smith states that RDT&E appropriations were not a serious problem, evaluates the success of Project 97, and says that the CNO is not competent enough to set exploratory development goals. He finds that block funding was an improvement over specific grants to the labs, Sidewinder was a success that broke all the rules, and Navy labs can afford mistakes more than private industry. Smith believes that rotation of personnel improves R&D management, that labs should be on the same level as the SYSCOMs, and that education of lab personnel should be continuous.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Davies, RADM Thomas Kidd, ADM Issac C., Jr.

**Institutions:** Bureau of Ordnance  
Assistant Secretary of the Navy (R&D)  
Chief of Naval Material  
Chief of Naval Development  
Naval Weapons Laboratory  
Systems Commands

**Other added entries:** Sidewinder Missile Project  
Technical Development Plan  
Navy Industrial Fund

Smith, Bernard

"Rapid Development: Bernard Smith", conducted by  
Cynthia Rouse

**Date of Interview:** 760608

**Documentation:** Transcript 17 pp.

**Note:** This interview is Chapter XII of Dahlgren, edited by  
Kenneth G. McCollum

**Abstract:** Mr. Smith discusses his early interest in rockets, his appointment as Technical Director of the Naval Weapons Laboratory in 1964, his opinion of work at Dahlgren in the 1950s, reorganizations and mission changes, dealings with the Systems Commands, military-civilian relationships, the effect of civil rights legislation at Dahlgren, professional development, management training, the significance of the merger with NOL, White Oak, other proposed mergers, co-workers.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Colvard, Dr. James E.  
Lydanne, Dr. Russell H.  
Chase, ADM John Dawson  
Bernard, Charles W.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Laboratory  
Naval Surface Weapons Center  
Naval Weapons Laboratory  
Systems Commands

**Cities:** White Oak, MD.  
Dahlgren, VA.

**Other added entries:** Technical Director

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Smith, Howard

Interview of Howard Smith, conducted by Dr. Vincent Ponko

**Date of Interview:** 800916

**Documentation:** Index, Transcript 34 pp.

**Interview number:** DNL-T26

**Abstract:** Mr. Smith talks about military civilian relationships, the formation of the DNL/DLP, and the work of the first two DNL/DLP's. He comments on financial controls of in-house laboratories, labs under the DNL and the bureaus, and key people in Navy R&D, including Dr. Chalmers Sherwin, Dr. Robert A. Frosch, and SECDEF Robert S. McNamara. Smith discusses organizational changes in Navy R&D; in particular, the politicizing of R&D under President Kennedy, and the role of the DNL/DLP. He describes the technical ability of Navy R&D headquarters personnel, decentralization of DOD under SECDEF Laird, and lack of incentive for technical people in the labs.

**Repositories:** DTNSRDC

**Individuals mentioned:** Johnson, Dr. Gerald  
Lawson, Dr. Joel  
Laird, SECDEF Melvin  
Kennedy, PRES John F.  
Sherwin, Dr. Chalmers  
Frosch, Dr. Robert A.  
Towle, CAPT Bernard

**Institutions:** Director of Navy Laboratories  
Director of Laboratory Programs

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Smith, VADM Levering

Interview of VADM Levering Smith, conducted by Albert B. Christman

**Date of Interview:** 670500

**Documentation:** Index, Transcript 18 pp.

**Interview number:** NOTS-75201-S48

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Smith discusses Parsons as an officer on the USS TEXAS and as a

proponent of the Proximity Fuze. He talks about Parsons' knack for spotting people's talents and his tenure as Deputy Chief of the Bureau of Ordnance. Smith also compares Parsons to Engineering Duty officers and notes Parsons' role in Navy nuclear research.

**Repositorie:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Parsons, RADM William S.  
Sides, ADM  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Bureau of Ordnance

**Other added entries:** Proximity Fuze  
Engineering Duty Officers

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Smitley, Charles Raymond

Interview of Charles Raymond Smitley, conducted by  
Nelson Wood

**Date of Interview:** 790126

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Smitley describes his background and education, and his work with the Harvard Underwater Sound Laboratory.

**Repositories:** ARL

**Institutions:** U. S. Army Signal Corps  
Harvard University  
Underwater Sound Laboratory

**Other added entries:** Acoustics Research  
Electronics Research  
Ordnance Research

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Snyder, RADM J. Edward

Interview of RADM J. Edward Snyder

**Date of Interview:** 741223

**Documentation:** 1 Tape

**Interview number:** BA-19

**Repositories:** DTNSRDC

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Spangenburg, George

Interview of George Spangenburg

**Date of Interview:** 751210

**Documentation:** 1 Tape

**Interview number:** BA-25

**Repositories:** NHC, DTNSRDC

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Stone, Dr. Harris B.

Interview of Dr. Harris B. Stone, conducted by Booz-Allen & Hamilton

**Date of Interview:** 741128

**Documentation:** 1 Tape (1 Side), Index

**Interview number:** BA-15

**Abstract:** This interview is part of Booz-Allen & Hamilton's review of Navy R&D Management 1943-1973. Dr. Stone discusses leaving the Army laboratory system to work for the Navy, feeling that the Navy had better military/civilian relations and more opportunities in in-house research. He describes his work coordinating electronics warfare and intelligence research in ONR, and the reorganization that placed his group under the CNO. He emphasizes the need to analyze Navy R&D programs in totality.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Zumwalt, ADM Elmo  
Burns, Dr. Robert O.

**Institutions:** Office of Naval Research  
U. S. Army  
Ft. Monmouth  
Ft. Huachuca  
Chief of Naval Operations  
Director of Research, Development, Test & Evaluation

**Other added entries:** Long Range Planning  
Naval Research

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Stoner, Donald W.

"Range Operations: Donald W. Stoner", conducted by  
Cynthia Rouse

**Date of Interview:** 760914

**Documentation:** Transcript 19 pp.

Note: This interview is the Chapter IV of Dahlgren, edited  
by Kenneth G. McCollum

**Abstract:** Mr. Stoner describes the work he did on  
bombsights and fuzes at Dahlgren between 1935 and 1941,  
experiments with armor-piercing bombs, general ordnance work  
during World War II, funding problems, change in emphasis to  
guided missiles, re-working World War II ammunition during  
the Vietnam War, problems with the local community,  
accidental deaths during ordnance tests, and co-workers.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Dement, Roger  
Kemper, Dr. William  
Tubman, Benjamin  
Reynolds, Dr. Melvin F.

**Institutions:** Naval Proving Ground  
Bureau of Ordnance  
Naval Weapons Laboratory

**Subjects:** Ordnance  
Ballistics  
Armor  
Fuzes  
Bombs  
Bombsights  
Projectiles

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Strand, Dr. Kai Aa.

Interview of Dr. Kai Aa. Strand, conducted by Dr. David H. DeVorkin

**Date of Interview:** 821208

**Documentation:** Tapes, 7.5 hours, Transcript, 140 pp.

**Other interview date:** 830103

**Abstract:** Mr. Strand's early life and training in Copenhagen are discussed, his work for the U. S. Army during World War II, and his time at the Sproul, Yerkes, and U. S. Naval Observatories.

**Repositories:** NASM

**Institutions:** Naval Observatory  
Yerkes Observatory  
Northwestern University  
Sproul Observatory  
U. S. Army

**Subjects:** Astronomy

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Strauss, RADM Louis L.

Interview of RADM Louis L. Strauss, conducted by Albert B. Christman

**Date of Interview:** 670500

**Documentation:** Index, Transcript 13 pp.

**Interview number:** NOTS-75201-S47

**Abstract:** This interview was originally conducted as background for a biography RADM William S. Parsons. RADM Strauss recalls his first acquaintance with Parsons, in the Manhattan Project, and Parsons' feelings on the United States' atomic strategy. He details Parsons' relationship with SECNAV James Forrestal, his and Parsons' roles on the Atomic Energy Commission, and Dr. Robert Oppenheimer's loss of clearance.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Oppenheimer, Dr. Robert  
Forrestal, SECNAV James  
Parsons, RADM William S.

**Institutions:** Atomic Energy Commission  
Naval Proving Ground

**Cities:** Dahlgren, VA.

**Other added entries:** Manhattan Project

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Stump, ADM Felix Budwell

Interview of ADM Felix Budwell Stump

**Date of Interview:** 650000

**Documentation:** Transcript 364 pp.

**Abstract:** This interview concerns the Naval Academy, naval aviation training at Pensacola in 1919, aeronautical engineering 1922-1924, and the Naval Air Maintenance Procurement Division, Bureau of Aeronautics.

**Repositories:** COL, NHC

**Institutions:** Bureau of Aeronautics

**Subjects:** Naval Aviation

**Cities:** Pensacola, FL.

**Other added entries:** Aeronautical Engineering

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Sullivan, ADM William

Interview of ADM William Sullivan

**Date of Interview:** 650000

**Documentation:** Transcript 1,784 pp.

**Abstract:** ADM Sullivan recalls his career in the Navy, with special mention of Naval construction, Navy yards in United States, the Trans-Siberian Railroad, his work at the Model Basin and Washington Naval Gun Factory, diving technology and mine-sweeping.

**Repositories:** COL, NHC

**Institutions:** Experimental Model Basin  
Naval Gun Factory

**Cities:** Washington, DC.

**Subjects:** Naval Construction

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**Sykes, RADM James B.**

Interview of RADM James Sykes, conducted by Albert B. Christman

**Date of Interview:** 670427

**Documentation:** Index, not taped 23 pp.

**Interview number:** NOTS-75201-S41

**Abstract:** RADM Sykes discusses his tenure as Commanding Officer at NOTS - his operating philosophy for the station, his relationship with scientists there, and the building of a neighborhood community. He recalls how he got his appointment to the Naval Academy and compares his other tours of duty with his time at NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E. Sykes, Mrs. James

**Institutions:** Naval Ordnance Test Station  
Salt Wells Pilot Plant

**Cities:** Inyokern, CA.

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**Thompson, Arthur**

Interview of Arthur Thompson, conducted by Richard D. Glasow

**Date of Interview:** 800822

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Thompson speaks of his his work with the Ordnance Research Laboratory.

**Repositories:** ARL

**Institutions:** Ordnance Research Laboratory  
Pennsylvania State University

**Other added entries:** Acoustics Research

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Thompson, Dr. Louis T. E.

Interview of Dr. L. T. E. Thompson, conducted by Albert B. Christman

**Date of Interview:** 651107

**Documentation:** Index, Transcript 54 pp.

**Interview number:** NOTS-75201-S1

**Other interview date:** 651106

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Thompson discusses Parsons' background, his early days at the Naval Proving Ground at Dahlgren, VA., and Parsons at NRL and NOTS. Thompson also includes an account of Parsons' work on the Manhattan Project, his thoughts on in-house labs, and his role in the Naval hierarchy.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Burroughs, ADM Sherman E.  
Duncan, CAPT James  
Hussey, VADM George F.  
Lauritsen, Dr. Charles C.  
Moulton, Prof. Forest Ray  
Parsons, RADM William S.

**Institutions:** Naval Surface Weapons Center  
Naval Proving Ground  
Naval Research Laboratory  
Naval Ordnance Test Station  
Bureau of Ordnance

**Cities:** Dahlgren, VA.

**Other added entries:** Manhattan Project

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Thompson, Dr. Louis T. E.

Interview of Dr. L. T. E. Thompson., conducted by  
Albert B. Christman

**Date of Interview:** 681110

**Documentation:** Transcript 40 pp.

Interview number: NWC-75201-S55

**Abstract:** Dr. Thompson comments informally on pre-World War II research at the Naval Proving Ground, weapons design, and the Naval bureaucracy.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Goddard, Dr. Robert  
Hedrick, CAPT David  
Schuyler, CAPT Michael

**Institutions:** Naval Proving Ground

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Thompson, Dr. Louis T. E.

"Dahlgren's First Leading Scientist: Dr. L. T. E.  
Thompson", conducted by Cynthia Rouse

**Date of Interview:** 761208

**Documentation:** Transcript 8 pp.

Note: This interview is Chapter II of Dahlgren, edited by  
Kenneth McCollum

**Abstract:** Dr. Thompson explains his decision to come to Dahlgren in 1923, comments on his personal goals, the environment at the Proving Ground, support from BUORD, his friendship with RADM Parsons, his theories on the value of experimental and developmental work.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Parsons, RADM William S.  
Stark, ADM Harold R.

**Institutions:** Bureau of Ordnance  
Naval Proving Ground

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Tibbitts, CAPT Barrick F.

Interview of CAPT Barrick F. Tibbitts, conducted by Dr. David K. Allison

**Date of Interview:** 800716

**Documentation:** Three Tapes (5 Sides), Index

**Abstract:** At the end of his tour at DTNSRDC, CAPT Tibbitts reviews his three years at the Center and his major accomplishments. He describes the Center's role in relation to other NAVMAT laboratories and its customers, the Systems Commands.

**Repositories:** DTNSRDC

**Individuals mentioned:** Powell, Dr. Alan  
Ricketts, COMO Myron V.

**Institutions:** David Taylor Naval Ship Research and Development Center  
Naval Sea Systems Command

**Other added entries:** Navy Industrial Fund  
Ship Design  
Engineering Duty Officers  
Long Range Planning  
Laboratory Management  
Military Construction

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Tousey, Dr. Richard

Interview of Dr. Richard Tousey, conducted by Dr. David H. DeVorkin

**Date of Interview:** 811100

**Other interview dates:** 820108 and 820406

**Documentation:** Tapes, 9.5 hours, Transcript, 160 pp.

**Abstract:** Dr. Tousey talks about his education, interest in the UV solar spectrum, contact with E. O. Hulburt, and research in optics at the Naval Research Laboratory during World War II. After the war, Hulburt brought Tousey into the V-2 rocket program, and he designed a new UV spectrograph. He describes his involvement with and objectives of the V-2 program, and designs of Aerobee and Viking spectroscopic equipment.

**Repositories:** NASM

**Individuals mentioned:** Friedman, Dr. Herbert  
Van Allen, Dr. James  
Menzel, Dr. Donald  
Roberts, Dr. Walter Orr  
Krause, Dr. Ernst H.  
Hulburt, Dr. Edward O.  
Goldberg, Dr. Leo

**Institutions:** Naval Research Laboratory  
Harvard University  
Bureau of Aeronautics  
Applied Physics Laboratory  
Upper Air Rocket Research Panel

**Subjects:** Satellites  
X-Ray Astronomy  
Experimental Physics  
Solar Physics  
Optics  
Solar X-Ray Radiation

**Other added entries:** Coronagraphic Studies  
Aerobee Rocket  
Photographic Emulsions  
Lyman-Alpha  
V-2 Rocket  
Nike Missile  
Ultra Violet Solar Spectroscopy  
Photoelectric Sensors  
Infrared Sensors

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Towle, CAPT Bernard

Interview of CAPT Bernard Towle, conducted by Dr. Samuel Rothman, Dr. Peter Bruton, and Mrs. Susan Frutkin

**Date of Interview:** 741217

**Documentation:** 3 Tapes, Index, Transcript 54 pp.

**Interview number:** BA-14

**Abstract:** CAPT Towle discusses lab management under SECDEF Robert S. McNamara, the philosophies of different Navy bureaus, and the combination of the Bureau of Ordnance and Bureau of Aeronautics. He talks about the establishment of the DNL, particularly why the labs should report to CNM. Towle explains the influence of outside sources on R&D, including the Sherwin Plan, the Mansfield Amendment, the National Science Foundation, and congressional input. He also comments on problems in the use of labs, in decision

making, and trends in top-level laboratory management.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Johnson, Dr. Gerald  
Sherwin, Dr. Chalmers  
McNamara, SECDEF Robert S.

**Institutions:** Bureau of Aeronautics  
Bureau of Ordnance  
Chief of Naval Material  
Director of Navy Laboratories  
National Science Foundation

**Other added entries:** Mansfield Amendment  
Sherwin Plan

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Towle, CAPT Bernard

Interview of CAPT Bernard Towle, conducted by Albert B. Christman

**Date of Interview:** 780314

**Documentation:** 1 Tape, Transcript 32 pp.

**Interview number:** DNL-T1-78

**Abstract:** CAPT Towle comments on his positions in the Navy in the 1960's, the pre-DNL lab management, and the introduction of the Sherwin Plan. He explains the Navy's compromise plan for re-organization of the labs - changes dictated by technology, SYSCOM resistance, and ADM Rivero's decision that military command of the labs is not essential. Towle talks about the DNL charter, concepts of the DNL position, and the first DNL. He describes the problems in selecting lab managers, SECDEF McNamara and the DNL, and DDR&E's influence. Towle discusses the Navy's loss of flexibility in controlling money and effect of SYSCOM opposition to the establishment of the DNL. He comments on the second DNL, ADM Kidd's view of the labs, and the future of the lab system.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Rivero, ADM Horacio  
Rothman, Dr. Samuel  
McNamara, SECDEF Robert S.  
Kidd, ADM Issac C., Jr.  
Andrews, CAPT Albert  
Smith, Howard

**Institutions:** Assistant Secretary of the Navy (R&D)  
Chief of Naval Material  
Director of Navy Laboratories  
Director of Defense Research and Engineering  
Systems Commands

**Other added entries:** Sherwin Plan

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Tremblay, Harold

Interview of Mr. Harold Tremblay, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820706

**Documentation:** 1 Tape, Index 2 pp.

**Interview number:** NADC-7

**Abstract:** Mr. Tremblay describes his personal background and his early NAMU work, including the V-2 Missile Studies, glider research, and early television projects, leading to airborne video cameras. He discusses Project Typhoon, his relations with RCA, and BUAER's role at NADC. Tremblay talks about Typhoon's construction as a vacuum tube computer, its applications, and its size.

**Repositories:** NADC, DTNSRDC

**Institutions:** Naval Air Development Center  
Radio Corporation of America  
Princeton University  
Bureau of Aeronautics  
Naval Air Modification Unit

**Subjects:** Computer Simulation  
Guided Missile Computers  
Missile Systems

**Other added entries:** Typhoon Project  
Whirlwind Project  
Hurricane Project  
Computer Research  
REAC Computers  
V-2 Rocket

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Tremblay, Harold

Interview of Harold Tremblay, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820720

**Documentation:** 1 Tape, Index 2 pp.

**Interview number:** NADC-14

**Abstract:** Mr. Tremblay discusses the relationship between NADC and the University of Pennsylvania, the creation of the Numerical Analysis Branch at NADC in 1953, and the re-organization of computer work there in 1955 and 1956. He talks about the ambiguity in the term "systems concept", establishment of the Aeronautical Computer Lab at NADC, and connections between computers and centrifuges. Tremblay describes computer work in the 1960's and the development of advanced software in the 1970's.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Hardy, Dr. James D.

**Institutions:** Naval Air Development Center  
University of Pennsylvania  
Naval Proving Ground  
Aeronautical Computer Laboratory  
U. S. Army

**Subjects:** Computer Softwear  
Space Simulation  
Aerospace Medicine  
Computer Simulation  
Fire Control Computers  
Ballistic Trajectories

**Cities:** Dahlgren, VA.

**Other added entries:** ENIAC Computer  
X-15 Project  
Mercury Project  
Gemini Project  
Human Centrifuge



Harold Tremblay of the Naval Air Development Center.

Trexler, James Hugh

Interview of James Hugh Trexler, conducted by Dr. David K. Allison

**Date of Interview:** 801020

**Documentation:** 5 Tapes (10 Sides), Background and list of questions asked

**Abstract:** Mr. Trexler talks about radio telescope projects done at Stump Neck, MD, and Sugar Grove, WV, and research in electronic counter-measures at NRL. The interview is supplemented by a collection of papers on research management.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Cities:** Stump Neck, MD.  
Sugar Grove, WV.

**Other added entries:** Radio Telescope Research  
Electronic Counter-measures

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Truax, CAPT Robert

Interview of CAPT Robert Truax, conducted by Albert B. Christman

**Date of Interview:** 720316

**Documentation:** Index, Transcript 27 pp.

**Interview number:** NWC-751-S82

**Abstract:** CAPT Truax talks about his own research at the Naval Academy and his early contacts in Maryland. He describes his work in California during World War II, the competition between himself and Dr. Robert Goddard, and the similarities and differences in their work. Truax comments on Goddard's general disposition, his penchant for secrecy, his poor health, and his research methods.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Cox, ADM  
Fischer, LTC Frank  
Goddard, Dr. Robert

**Institutions:** U. S. Naval Academy

**Other added entries:** Rocket Research

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Uppgren, A.

Interview of A. Uppgren, conducted by David H. DeVorkin

**Date of Interview:** 770000

**Documentation:** Tapes

**Repository:** AIP

**Subjects:** Astronomy

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Van Allen, Dr. James

Interview of Dr. James Van Allen, conducted by Dr. David H. DeVorkin and Allan Needell

**Date of Interview:** 810218

**Documentation:** Tapes, 18.5 hours, Transcript, 362 pp.

**Other interview dates:** 810712, 810618, 810622, 810715, 810116, 810728, 810806

**Abstract:** Dr. Van Allen talks about his family and life during World War I in Iowa, his educational background, thesis subjects, and post-graduation job at the Department of Terrestrial Magnetism in Washington and interest in cosmic ray studies. He describes his work in World War II in the Pacific, Merle Tuve and the development of the Proximity Fuze, post-war years at the APL, work with NRL on the V-2 rockets, and achievements of the V-2 experiments, the development of the Rockoon, the Rocket Panels' involvement during the International Geophysical Year, the effect of Sputnik and the rush to launch Vanguard, the establishment of NASA, satellites, the "Van Allen" radiation belts, and the outlook for space science.

**Repositories:** NASM

Tousey, Dr. Richard  
Tuve, Dr. Merle  
Krause, Dr. Ernst H.  
Toftoy, BG Holger N.  
Zwicky, Prof. Fritz

Braun, Wernher von  
Johnson, PRES Lyndon B.  
Millikan, Dr. Robert A.

**Institutions:** Naval Research Laboratory  
Bureau of Ordnance  
Applied Physics Laboratory  
International Geophysical Year

**Subjects:** Satellites  
Cosmic Rays  
Physics  
Magnetospherics

**Other added entries:** Proximity Fuze  
Van Allen Radiation Belt  
USS NORTON SOUND  
V-2 Rocket  
Sputnik  
Aerobee Rocket  
Vanguard Program  
Explorer Program  
Project Sherwood  
Rockoon

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Vossler, RADM Curtis F.

Interview of RADM Curtis F. Vossler, conducted by J. D.  
Gerrard-Gough

**Date of Interview:** 730400

**Documentation:** Index, Transcript 34 pp.

**Interview number:** NOTS-75201-S85

**Abstract:** RADM Vossler explains how he came to be in the Navy and talks about his early career. He describes testing rockets and new planes at NOTS and comments on the command structure at NOTS-in particular, the tenures of CAPTs John T. Hayward and James Sykes as Commanding Officer.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Armitage, LT John M.  
Burroughs, ADM Sherman E.  
Hayward, ADM John T.  
Pollock, CAPT Thomas  
Sykes, RADM James B.

**Institutions:** Naval Ordnance Test Station

**Other added entries:** Rocket Testing  
Aircraft Testing  
Commanding Officer

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Wakelin, Dr. James H.

Interview of Dr. James H. Wakelin, conducted by Dr. Peter Bruton, Mrs. Susan Frutkin, and CAPT Robert L. Hansen

**Date of Interview:** 740900

**Documentation:** 2 Tapes, Index, Transcript 110 pp.

**Interview number:** BA-9

**Abstract:** Dr. Wakelin discusses R&D programs in the 1950's, establishment of the ASN (R&D), the Polaris Program, and DDR&E as a pressure mechanism for ASN (R&D). He discusses the ONR-Blue Suit Navy relationship, management responsibilities for DDR&E appropriations, and the need for a coherent R&D program. Wakelin describes the Navy R&D planning system and program structure. He also mentions ideas for improving lab operations, the creation of the DNL, and the ASN (R&D) as a liaison between the Navy and DoD, and the difficulty of attracting qualified technical people.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** Franke, William B.  
Hayward, ADM John T.  
McNamara, SECDEF Robert S.

**Institutions:** Director of Defense Research and Engineering  
Assistant Secretary of the Navy (R&D)  
Bureau of Ordnance  
Department of Defense

**Other added entries:** Polaris Missile  
Tentative Specific Organizational Requirement

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Ward, Dr. Newton E.

Interview of Dr. Newton E. Ward, conducted by J. D. Gerrard-Gough and Max R. Smith

**Date of Interview:** 740524

**Documentation:** Index, Transcript 36 pp.

**Interview number:** S-91

**Abstract:** Dr. Ward describes the early NOTS organizational structure and talks about problems with air-to-ground missiles like Sidewinder and Dove. He comments on the first proposals for Walleye, its funding, and its building problems. Ward recalls its early launchings and production problems and conflicts with Martin Company.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Crawford, Jack A.  
McLean, Dr. William B.

**Institutions:** Naval Ordnance Test Station  
Martin Company

**Subjects:** Missiles

**Other added entries:** Sidewinder Missile Project  
Walleye Missile Project  
Dove Missile Project

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Walker, Eric A.

Interview of Eric A. Walker

**Date of Interview:** 791128

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Walker describes his background and education, and his work at the Harvard Underwater Sound Laboratory.

**Repositories:** ARL

**Institutions:** Harvard University  
Underwater Sound Laboratory

**Other added entries:** Acoustics Research

Ward, Dr. Newton E.

Interview of Dr. Newton E. Ward, conducted by Albert B. Christman

**Date of Interview:** 741023

**Documentation:** Index, Transcript 46 pp.

**Interview number:** S-94

**Abstract:** Dr. Ward discusses the management of NOTS when he first arrived, and Dr. Louis T. E. Thompson as NOTS' first technical director. He comments on the leadership abilities and roles of other technical directors, including Dr. Brown, Dr. William B. McLean, and Dr. Thomas Amlie, and Dr. Haskell G. Wilson. Ward reflects on the commanding officers who have been at NOTS, military-civilian relationships there, and the trend towards more bureaucracy in R&D.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Amlie, Dr. Thomas S.  
Brown, Dr. Frederick W.  
Frosch, Dr. Robert A.  
LaBerge, Dr. Walter  
McLean, Dr. William B.  
Thompson, Dr. Louis T. E.  
Wilson, Dr. Haskell G.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

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Warner, Dr. Arthur H.

Interview of Dr. Arthur H. Warner, conducted by J. D. Gerrard-Gough

**Date of Interview:** 751211

**Documentation:** Index, Transcript 10 pp.

**Interview number:** 5313 S-102

**Abstract:** Dr. Warner discusses NOTS history, including a housing shortage problem, SECNAV Forrestal's visit to NOTS in 1947, and the role of ADMS Switzer and Vieweg in shaping NOTS. He comments on Dr. Bruce Sage, Dr. Wallace C. Brode, the need for a better computing center at NOTS, and Dr. Willaim McLean's work on the Sidewinder Missile.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Brode, Dr. Wallace C.  
Hayward ADM John T.  
McLean, Dr. William B.  
Switzer, VADM W. G.  
Sykes, RADM James B.  
Forrestal, SECNAV James  
Vieweg, RADM Walter V. R.

**Institutions:** Naval Ordnance Test Station

**Other added entries:** Sidewinder Missile Project

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Waterman, Dr. Peter

Interview of Dr. Peter Waterman

**Date of Interview:** 740000

**Documentation:** 1 Tape, Transcript 32 pp.

**Interview number:** BA-12

**Abstract:** Dr. Waterman speaks about the maintenance of Navy R&D facilities and programs, cost effectiveness of programs, and Navy R&D, in general, from World War II to the present.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Clements, William

**Other added entries:** Laboratory Management

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Watson, Dr. Earnest C.

Interview of Dr. Earnest C. Watson, conducted by Albert B. Christman

**Date of Interview:** 700220

**Documentation:** Index, Transcript 68 pp.

**Interview number:** NWC-75201-S69

**Note: Other date:** 700219

**Abstract:** Dr. Watson talks about scientists in World War I, Dr. Robert Millikan, and Dr. Richard C. Tolman. He describes

CalTech's role in research during World War II, Dr. Charles C. Lauritsen, and Dr. Vannevar Bush. Watson comments on the development of rocket propellents and the proximity fuze and Dr. Max G. Mason. He details the development of NOTS and CalTech's role there after World War II.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Bush, Dr. Vannevar  
Fowler, Dr. William  
Hale, George Ellery  
Lauritsen, Dr. Charles C.  
Mason, Dr. Max G.  
Michelson, Dr. Albert A.  
Millikan, Dr. Robert A.  
Noyer, Arthur  
Sage, Dr. Bruce  
Tolman, Dr. Richard C.

**Institutions:** Naval Ordnance Test Station  
California Institute of Technology

**Cities:** Inyokern, CA.

**Other added entries:** Proximity Fuze  
Rocket Propellents

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Watson, Clement

Interview of Clement Watson

**Date of Interview:** 721100

**Documentation:** Transcript 65 pp.

**Abstract:** Mr. Watson was Presentation/Public relations contractor for Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

**Repositories:** NHC, NWCM, USNA, USNI

**Subjects:** Submarine Launched Ballistic Missiles  
Fleet Ballistic Missiles  
Ballistic Missile Submarines  
Nuclear Powered Fleet Ballistic Missile Submarines  
Nuclear Missiles  
Weapons Systems

**Other added entries:** Polaris Program

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Watson-Watt, Sir Robert Alexander

Interview of Sir Robert Alexander Watson-Watt

**Date of Interview:** 610000

**Documentation:** Transcript 568 pp.

**Abstract:** Watson-Watt reminisces about his involvement in meteorological work, World War I, radio and static studies, director finders, the Department of Scientific and Industrial Research, airborne radar, planned position indicators, secondary radar devices, interallied intelligence missions, and V-1 and V-2 raids.

**Repositories:** COL

**Individuals mentioned:** Tizard, Henry

**Subjects:** Radar  
Airborne Radar

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Waynick, Arthur H.

Interview of Arthur H. Waynick, conducted by Richard D. Glasow

**Date of Interview:** 800321

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Waynick describes his background and education, his work at the Harvard Underwater Sound Laboratory and the Applied Research Laboratory.

**Repositories:** ARL

**Institutions:** Pennsylvania State University  
Harvard University  
Underwater Sound Laboratory  
Applied Research Laboratory

**Other added entries:** Acoustics Research

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Weaver, Dr. Warren

Interview of Dr. Warren Weaver

**Date of Interview:** 610000

**Documentation:** Transcript 783 pp.

**Abstract:** Mr. Weaver discusses World War II, the NDRC, range finders, fuzes, bomb sights, gun directors, electrical predictors, computers, and the Applied Mathematics Panel.

**Repositories:** COL

**Institutions:** Applied Mathematics Panel  
National Defense Research Committee

**Individuals mentioned:** Tizard, Henry  
Millikan, Dr. Robert A.

**Subjects:** Range Finders  
Fuzes  
Bomb Sights  
Ordnance

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Welford, Randolph

Interview of Randolph Welford, conducted by Albert B. Christman and Dr. Marjorie Ciarlante

**Date of Interview:** 820700

**Documentation:** 1 Tape (15 Minutes Total)

**Interview number:** ABC-1

**Note:** Mr. Welford is the nephew of Dr. Louis T. E. Thompson

**Repositories:** DTNSRDC

**Individuals mentioned:** Thompson, Dr. Louis T. E.

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White, Dr. Howard J., Jr.

Interview of Dr. Howard A. J. White, Jr., conducted by  
Dr. Vincent Ponko

**Date of Interview:** 801200

**Documentation:** 4 Tapes, Index, Transcript 27 pp.

**Interview number:** DNL-T32

**Abstract:** Dr. White discusses the background to his appointment as Special Assistant for Research to the ASN (R&D). He describes his duties, including budgeting 6.1 and 6.2 funds, working as a liaison between the labs and ASN (R&D), and studying the problem of laboratory management in a military-civilian matrix. White comments on the impact of the Task Force 97 Project Report, the Dillon Review of 1962, and the Furnes and Austin Reports. He talks about the Sherwin Plan and the Navy R&D community's reaction to it, and key R&D people like Dr. William B. McLean, Dr. Haskell G. Wilson, and SECNAV Paul Nitze. White discusses the needs the Navy's in-house labs must meet, the justification for in-house labs, and Navy labs in the early 1960's. He also comments on SECDEF McNamara.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.  
Wilson, Dr. Haskell G.  
Nitze, SECNAV Paul  
McNamara, SECDEF Robert S.  
Sherwin, Dr. Chalmers  
Wakelin, Dr. James H.

**Institutions:** Secretary of Defense  
Secretary of the Navy

**Other added entries:** Sherwin Plan  
Task Force 97  
Dillon Report  
Furnes Report  
Austin Report

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Whitmarsh, David

Interview of David Whitmarsh, conducted by Nelson Wood

**Date of Interview:** 790126

**Documentation:** Tapes, Transcript

**Abstract:** Mr. Whitmarsh talks about his work at the Ordnance Research Laboratory.

**Repositories:** ARL

**Institutions:** Naval Torpedo Station  
Ordnance Research Laboratory  
Pennsylvania State University  
Bureau of Ordnance

**Cities:** Newport, RI.

**Subjects:** Torpedos

**Other added entries:** Acoustics Research  
Ordnance Research

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Wiegand, Dr. James

Interview of Dr. James Wiegand, conducted by Michelle Ballenger

**Date of Interview:** 720800

**Documentation:** Index, Transcript 28 pp.

**Interview number:** S-111

**Abstract:** Dr. Wiegand talks about his association with the Solid Propellant Branch at NOTS. He describes the China Lake Pilot Plant, social interaction between military and civilian personnel, and Dr. Louis T. E. Thompson. Wiegand comments on program direction from Washington, relations with Aerojet and major problems encountered by the rocket department. He also explains his reasons for leaving NOTS.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Ellis, Dr. Emory L.  
Gould, Al  
McLean, Dr. William B.  
Patton, Harold

Sage, Dr. Bruce  
Smith, VADM Levering  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center  
China Lake Pilot Plant  
Aerojet General Corporation

**Cities:** China Lake, CA.

**Other added entries:** Rocket Research

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Wilcox, Douglas

Interview of Douglas Wilcox, conducted by J. D.  
Gerrard-Gough

**Date of Interview:** 751223

**Documentation:** Index, Transcript 11 pp.

**Interview number:** 5313 S-103

**Abstract:** Mr. Wilcox recalls his entry at NOTS-Pasadena as an "NP" (New Professional) and his later appointment as Head of the Underwater Ordnance Department. He describes the communication problems between China Lake and Pasadena and how they were solved. Wilcox comments on problems in the military-civilian relationships at NOTS, the emphasis there on the Junior Professional Program, and his switch to the Naval Undersea Center at San Diego, CA. He also states that he did not favor the break-up of the China Lake-Pasadena arrangement.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.  
Wilson, Dr. Haskell G.

**Institutions:** Naval Ordnance Test Station  
Naval Undersea Center

**Cities:** China Lake, CA.  
Pasadena, CA.  
San Diego, CA.

Wilcox, Douglas

Interview of Douglas Wilcox, conducted by Albert B. Christman

**Date of Interview:** 780313

**Documentation:** 1 tape, Transcript 22 pp.

**Interview number:** DNL-T5-78

**Abstract:** Wilson comments on his early work at NOTS, his move from NOTS to NUC, and his stint as Technical Director there. He talks about the influence of Dr. William B. McLean; in particular, his ability at NOTS/NWC to cut through red tape and achieve real progress in weapons systems. Wilson also describes the problem of layering in the federal bureaucracy, the need for greater trust and flexibility in the laboratory system, and for a better recorded history of what happened at Navy laboratories.

**Repositories:** NHC, DTNSRDC

**Individuals mentioned:** McLean, Dr. William B.  
Wilson, Dr. Haskell G.

**Institutions:** Naval Ordnance Test Station  
Naval Ocean Systems Center

**Other added entries:** Technical Director

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Wilcox, Dr. Howard A.

Interview of Dr. Howard A. Wilcox, conducted by Mickey Strang

**Date of Interview:** 760525

**Documentation:** Index, Transcript 13 pp.

**Interview number:** S-107

**Abstract:** Dr. Wilcox comments on the projects he was involved in NOTS, including NOTSNIK, a response to Sputnik, and ASROC. He also talks about satellites as collectors of solar energy and their extremely high cost.

**Repositories:** NWC, DTNSRDC, NHC

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Subjects:** Satellites

**Other added entries:** Sputnik  
NOTSNIK  
Antisubmarine Rocket

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Wilcox, Dr. Howard A.

Interview of Dr. Howard A. Wilcox, conducted by Albert B. Christman with Bert Larson

**Date of Interview:** 780315

**Documentation:** 1 Tape, Transcript 23 pp.

**Interview number:** DNL-T9-78

**Abstract:** Dr. Wilcox describes various problems with Navy labs before World War II, including increasing bureaucracy, the insertion of new managers without wartime lab experience, and budget constraints. He comments on lack of innovative weapons ideas and narrowly defined lab missions. He discusses Dr. William B. McLean's leadership qualities, his ability to cut red tape, and his technical and administrative skills. Wilcox comments on Dr. Walter LaBerge as an R&D leader, good aspects of the Navy lab system, and the roles of headquarters, labs, and industry in Navy R&D. He states that there is a need for more vigorous prosecution of Navy R&D, talks about the effect of Sputnik and the Navy's role in Vietnam.

**Repositories:** DTNSRDC

**Individuals mentioned:** McLean, Dr. William B.  
LaBerge, Dr. Walter  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center

**Other added entries:** Sputnik  
Vietnam War

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Wilcox, Dr. Howard A.

Interview of Dr. Howard A. Wilcox, conducted by Starla Hall

**Date of Interview:** 800900

**Documentation:** Transcript 36 pp.

**Interview number:** DNL-T25

**Abstract:** Dr. Wilcox gives his impressions of his longtime colleague Dr. William B. McLean. He talks about McLean's involvement on the Sidewinder Missile Project; in particular, his leadership style, technical problems involved, and problems of Air Force acceptance of the missile. Wilcox comments on McLean as NOTS Technical Director and as a lobbyist in Washington. He discusses McLean's frustration with increasing government bureaucracy, his move to NUC as TD, and problems in combining NOTS and NEL functions at NUC. He comments on officers' attitudes toward McLean, McLean's retirement, and the role of Edith LaVerne McLean.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** McLean, Dr. William B.  
McLean, Edith LaVerne (Mrs. William B.)

**Institutions:** Naval Ordnance Test Station  
Naval Undersea Center  
Naval Electronics Laboratory  
Naval Weapons Center  
U. S. Air Force

**Other added entries:** Sidewinder Missile Project

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Willey, Thomas

Interview of Tom Willey, conducted by Tom Misa and Ed Todd

**Date of Interview:** 820715

**Documentation:** 2 Tapes, Index 3 pp.

**Interview number:** NADC-10,11

**Abstract:** Mr. Willey discusses his personal background and his work in Systems Engineering at NADC, including the A-NEW Program, Airborne Computer Development Systems in the



Thomas Willey of the Naval Air Development Center.

1960's, and the Proteus System of Signal Processing. He talks about the impact of Systems Engineering, the Polaris Submarine and its effect on ASW, and re-organization of NADC in the early 1970's. Willey comments on audits of programs over 6-12 year periods.

**Repositories:** NADC, DTNSRDC

**Individuals mentioned:** Aslo, Izzy  
Cody, Harold

**Institutions:** Naval Air Development Center  
Naval Air Systems Command  
Anti-Submarine Warfare Laboratory

**Subjects:** Systems Engineering  
Antisubmarine Warfare  
Antisubmarine Aircraft

**Other added entries:** Polaris Submarines  
Proteus System  
A-NEW Program

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Williams, ADM Henry

Interview of ADM Henry Williams

**Date of Interview:** 630000

**Documentation:** Transcript 251 pp.

**Abstract:** ADM Williams recalls his career in the Navy, remembering the Spanish-American War, taking a graduate course in naval architecture in Paris, 1899-1901, his work as a naval construction specialist dealing with launching problems, the developments of plastic ship bottom paint, and submarine rescue chambers.

**Repositories:** COL, NHC

**Individuals mentioned:** Sims, ADM William  
Taylor, ADM Henry  
Robinson, ADM Samuel M.  
Land, ADM Emory S.

**Institutions:** Bureau of Ships

**Subjects:** Naval Construction  
Naval Architecture  
Polymers

**Other added entries:** Submarine Rescue Chambers

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Williams, ADM John G. Jr.

Interview of ADM John G. Williams Jr., conducted by Leroy L. Doig III, and Dr. David K. Allison

**Date of Interview:** 830712

**Documentation:** Diskette, Transcript 9 pp.

**Interview number:** DNL-T38

**Abstract:** ADM Williams discusses the purpose of R&D Centers, and changes that occurred during his tenure as CNM, the Corporate Plan for NAVMAT, selection of Technical Directors, selection of good personnel, the laboratories' role as "smart buyers" for the Navy, and the laboratories as part of NAVMAT.

**Repositories:** NWC, DTNSRDC

**Individuals mentioned:** Colvard, Dr. James E.  
Hillyer, Robert  
Paisley, Dr. Melvyn R.  
Whittle, ADM Alfred J., Jr.

**Institutions:** Director of Navy Laboratories  
Deputy Chief of Naval Material  
Chief of Naval Material  
Chief of Naval Operations  
Naval Material Command

**Other added entries:** Navy Industrial Fund  
Corporate Plan

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Wills, James R.

Interview of James R. Wills, conducted by Leroy L. Doig III

**Date of Interview:** 810107

**Documentation:** Index, Transcript 29 pp.

**Interview number:** S-116

**Abstract:** Mr. Wills comments on the closure of the NOTS branch at Corona and its move to China Lake in 1970. He

talks about fuzing projects, in general, and the Air Force, Navy, and NWC's contact with NATO. Wills extols NWC's safety record and reflects on the work of Mr. Robert Hillyer, the lack of continuity at the Technical Director level at NWC, and NWC as a national asset.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Hillyer, Robert  
Nastromeno, John

**Institutions:** Naval Ordnance Test Station  
Naval Weapons Center  
North Atlantic Treaty Organization  
U. S. Air Force

**Cities:** China Lake, CA.  
Corona, CA.

**Other added entries:** Fuze Research

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Wilson, Dr. Haskell G.

Interview of Dr. Haskell G. Wilson, conducted by Albert B. Christman

**Date of Interview:** 700911

**Documentation:** Transcript 13 pp.

**Interview number:** S-93

**Abstract:** Dr. Wilson discusses in a general way public attitudes towards the Navy and the armed services as a whole. He comments on the future of R&D installations and the changing military role of the Navy and the Marines.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Zumwalt, ADM Elmo

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Wilson, CAPT Eugene Edward

Interview of CAPT Eugene Edward Wilson

**Date of Interview:** 620000

**Documentation:** Transcript 974 pp.

**Abstract:** Naval Academy; Engineering School, Columbia; Aviation Mechanics School, Great Lakes; Bureau of Aeronautics; private industry.

**Repositories:** COL, NHC

**Individuals mentioned:** Sikorsky, Igor  
Boeing, William  
Moffett, ADM William A.  
King, FADM Ernest  
Forrestal, SECNAV James

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Wingo, Carl H., Jr.

"Naval Guns: Carl H. Wingo, Jr.", conducted by Cynthia Rouse

**Date of Interview:** 760930

**Documentation:** Transcript 13 pp.

**Note:** This interview is Chapter XI of Dahlgren, edited by Kenneth G. McCollum

**Abstract:** Mr. Wingo describes the changes in ammunition testing since he came to Dahlgren in 1951, the effect of the Korean War, refitting the guns of the NEW JERSEY, the development of shipboard missiles and guided projectiles, lightweight guns, the Naval Gunnery Improvement Program, HIFRAG rounds, and EOSS.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Kitterman, Warren  
Kirschke, Jim

**Institutions:** Naval Ordnance Laboratory

**Subjects:** Ordnance  
Projectiles  
Guided Projectiles

**Other added entries:** Naval Gunnery

Electro-Optical Sensor System  
USS NEW JERSEY

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Winnick, Robert L.

Interview of Robert L. Winnick, conducted by Albert B. Christman

**Date of Interview:** 780000

**Documentation:** 1 Tape, Transcript 26 pp.

**Interview number:** DNL-T17-78

**Abstract:** Mr. Winnick discusses sonar and torpedo R&D work conducted at NUSC, including torpedo research during World War II. He talks about the effect of the Bureaus and Systems Commands on torpedo development and his position as Director of Fleet Readiness. Winnick also comments on Naval re-organization in the late 1960's and 1970's.

**Repositories:** DTNSRDC

**Institutions:** Naval Underwater Systems Center  
Naval Sea Systems Command  
Systems Commands

**Other added entries:** Torpedos  
Sonar

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Wislicenus, Dr. George F.

Interview of Dr. George F. Wislicenus, conducted by Nelson Wood

**Date of Interview:**-800821

**Documentation:** Tapes, Transcript

**Abstract:** Dr. Wislicenus speaks of his background and education, his work with the OSRD and his research in acoustics.

**Repositories:** ARL

**Institutions:** Office of Scientific Research and Development  
National Defense Research Committee  
California Institute of Technology

**Other added entries:** Acoustics Research

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Withington, RADM Frederick S.

"Dahlgren in Perspective: RADM Frederick S. Withington", conducted by Cynthia Rouse

**Date of Interview:** 761103

**Documentation:** 12 pp.

Note: This interview is Chapter XIII of Dahlgren, edited by Kenneth G. McCollum

**Abstract:** RADM Withington describes his education, tours of different ordnance facilities in the 1920s, the primitive facilities at Dahlgren when he began work there, his work at the Naval Gun Factory on torpedo directors and gunfire control directors from 1934-1936, his work with the Bureau of Ordnance, his position as OIC at the Naval Ordnance Laboratory, White Oak MD, and later positions with AEC and Chief of BUORD, and individuals who had particular influence on Naval R&D.

**Repositories:** NSWC, DTNSRDC

**Individuals mentioned:** Johnson, Dr. Ellis  
Lauritsen, Dr. Charles C.  
Bradbury, Dr. Norris E.  
Tuve, Dr. Merle  
Leary, VADM Herbert F.

**Institutions:** Naval Proving Ground  
Naval Gun Factory  
Bureau of Ordnance  
Naval Weapons Laboratory  
Atomic Energy Commission

**Subjects:** Ordnance  
Torpedo Directors  
Gun Directors

**Cities:** White Oak, MD.  
Washington, DC.  
Dahlgren, VA.

**Other added entries:** Laboratory Consolidations  
Defense Spending  
Funding

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Wolff, Dr. Irving

Interview of Dr. Irving Wolff, conducted by Dr. David K. Allison

**Date of Interview:** 7910406

**Documentation:** 1 Tape, Index 3 pp.

**Abstract:** An RCA physicist involved in radar research in the 1930s and 1940s interviewed in 1976 as part of an RCA history project, copies of the 2 tapes produced and an index prepared by Dr. Allison are also contained in the NRL oral history collection. Wolff discusses his background, education, contacts with the Army and NRL, personnel at NRL, the establishment of the Radiation Laboratory, contact with German engineers in the 1930s which suggested that both sides knew that the other was working on radar detection, and his connection with Isidor Rabi.

**Repositories:** NRL

**Individuals mentioned:** Rabi, Isidor I.  
Zahl, Dr. Harold A.  
Taylor, Dr. A. Hoyt  
Ruble, ADM W. J.

**Institutions:** Radiation Laboratory  
Victor Talking Machine Company  
Bell Laboratories  
Radio Corporation of America  
U. S. Army Signal Corps

**Subjects:** Radar  
Microwave Radar

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Worchesek, CAPT Robert R.

Interview of CAPT Robert R. Worchesek, conducted by Roger Kempler

**Date of Interview:** 8208316

**Documentation:** Transcript, 26 pp

**Abstract:** CAPT Worchesek discussed the circumstances of his involvement with Naval personnel research, the people involved in the reorganization of the Navy's personnel R&D program, the CO/TD dual executive structure of the Navy Laboratories, the problems of justifying personnel R&D relative to hardware R&D, problems of rehabilitation of NOSC

barracks spaces, the Research Liaison Office, close managerial control of NPRDC, prime movers in NPRDC development, its role as coordinator for Human Resources R&D, his major contributions during transition to a single center, his view on CNM management control, and a post-retirement view of the Center.

**Repositories:** NPRDC, DTNSRDC

**Individuals mentioned:** Kinnear, RADM George E. R.  
Collins, Dr. John J.  
Sjoholm, Dr. Allan A.  
Bagley, VADM David H.  
Ramras, Eugene M.

**Institutions:** Navy Personnel Research and Development Center

**Subjects:** Personnel Research

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Word, Thomas J.

Interview of Thomas J. Word, conducted by Leroy L. Doig  
III

**Date of Interview:** 821128

**Other interview date:** 821129

**Documentation:** 4 Tapes

**Interview number:** S-143

**Abstract:** Interview primarily concerned with NWC management, organization, and people, focusing on problems.

**Repositories:** NWC

**Institutions:** Naval Weapons Center

**Cities:** China Lake, CA.

**Other added entries:** Laboratory Management

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York, Dr. Herbert

Interview of Dr. Herbert York, conducted by Albert B. Christman

**Date of Interview:** 800924

**Documentation:** 1 Tape, Transcript 40 pp.

Interview number: DNL-T24-80

**Abstract:** Dr. York discusses the effect of Sputnik on Navy R&D, his position as Chief Scientist of ARPA, and his selection to be the first DDR&E. He talks about the reasons for DDR&E, its relationship with the services, and the uniformed Navy's success in keeping R&D projects under control. York describes DDR&D's contacts with high level government officials, major trends and problems he encountered as DDR&E, and his management style. He comments on SECDEF McNamara's effect on centralization of the armed forces, DDR&D and the general growth of bureaucracy, and why he left DDR&E. York also details the effect of increased R&D on the escalation of the arms race and trends in technology.

**Repositories:** DTNSRDC

**Individuals mentioned:** Eisenhower, PRES Dwight D. McNamara, SECDEF Robert S.

**Institutions:** Director of Defense Research and Engineering  
Secretary of the Navy  
Assistant Secretary of the Navy (R&D)  
Advanced Research Projects Agency

**Other added entries:** Sputnik

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Young, Dr. Leo C.

Interview of Dr. Leo C. Young, conducted by Stanford C. Hooper

**Date of Interview:** nd

Interview Number: 150-151

**Abstract:** This interview is from the Stanford C. Hooper papers in the Library of Congress Manuscript Division, it is a duplication of tapes 150 and 151 of Hooper's series of tapes on the "History of Radio-Radar-Sonar." Young reminisces about the discovery and early development of radar at the Naval Research Laboratory, and a bit about his

background.

**Repositories:** NRL, LC

**Individuals mentioned:** Hooper, RADM Stanford C.

**Institutions:** Naval Research Laboratory

**Subjects:** Radar  
Radio Detection

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Youngblood, Curtis

Interview of Curtis Youngblood, conducted by Albert B. Christman

**Date of Interview:** 670500

**Documentation:** Index, Transcript

**Interview number:** NOTS-75201-S51

**Abstract:** This interview was originally conducted as background for a biography of RADM William S. Parsons. Mr. Youngblood reminisces about his personal relationship with RADM Parsons at the Naval Proving Ground and during Operation Crossroads. He also talks about the chain of command at NPG; in particular, CAPT Hennick and Parsons' relationships with CAPT Hedrick, ADM Blandy, Dr. Louis T. E. Thompson, and Dr. Ralph Sawyer.

**Repositories:** NWC, DTNSRDC, NHC

**Individuals mentioned:** Blandy, ADM George  
Bradbury, Dr. Norris E.  
Hedrick, CAPT David  
Parsons, RADM William S.  
Sawyer, Dr. Ralph A.  
Thompson, Dr. Louis T. E.

**Institutions:** Naval Proving Ground  
Systems Commands

**Cities:** Dahlgren, VA.

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Zisman, Dr. William A.

Interview of Dr. William A. Zisman, conducted by Steven Markel

**Date of Interview:** 800724

**Documentation:** Six Tapes (11 Sides)

**Other interview dates:** 800715, 800716

**Abstract:** Dr. Zisman discusses the American scientific community in the 1930's, problems of placement for Jewish scientists, and chemical research from 1937 to 1978. Included are two interviews with associates. Zisman came to NRL in 1933 and made major contributions to the development of synthetic lubricants, including pioneering research leading to the development of Teflon, and establishment of surface chemistry as a critical field of naval research.

**Repositories:** NRL

**Institutions:** Naval Research Laboratory

**Subjects:** Synthetic Lubricants

**Other added entries:** Chemical Research  
Teflon  
Surface Chemistry

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## CONTACT POINTS AT ORAL HISTORY REPOSITORIES

AIP:  
American Institute of Physics  
335 East 45th Street  
New York, New York 10017  
(212) 661-9404

ARL:  
Applied Research Laboratory  
Pennsylvania State University  
P. O. Box 30  
State College, Pennsylvania 16801  
(814) 865-6621  
Mr. Charles G. Murphy

COL:  
Oral History Research Office  
Box 20  
Butler Library  
Columbia University  
New York, New York 10027  
(212) 280-2273  
Ms. Jeri Nunn

DTNSRDC:  
Navy Laboratories Archives  
Code 504  
David Taylor Naval Ship Research and Development Center  
Bethesda, Maryland 20084  
(202) 227-1407  
AUTOVON 287-1407  
Dr. David K. Allison  
Ms. C. Elizabeth Nowicke

LC:  
Manuscript Collection  
Library of Congress  
Washington, D.C. 20540  
(202) 287-5387

NADC:  
Public Affairs Office, Code 701  
Naval Air Development Center  
Warminster, Pennsylvania 18974  
(215) 441-3067  
AUTOVON 441-3067

NASM:  
Records Management Division  
National Air and Space Museum  
Smithsonian Institution  
Washington, D. C. 20560  
(202) 357-13133

NAVAIR:  
Code 953  
Naval Air Systems Command  
Washington, D.C. 20360  
(202) 692-7834  
AUTOVON 222-7834  
Dr. William J. Armstrong

NHC:  
Naval Historical Center  
Operational Archives Branch  
Building 57, Washington Navy Yard  
Washington, D.C. 20374  
(202) 433-3170  
AUTOVON 288-3224 (3172)  
Dr. Dean Allard  
Ms. Martha L. Crawley

NPRDC:  
Code 303  
Naval Personnel Research and Development Center  
San Diego, California 92152  
(619) 225-7450  
AUTOVON 933-7424  
Mr. Robert F. Turney

NRL:  
Historian, Code 2604  
Naval Research Laboratory  
Washington, D.C. 20375  
(202) 767-3419  
AUTOVON 297-3419  
Dr. John A. S. Pitts

NSWC:  
Public Affairs Office, Code X02  
Naval Surface Weapons Center  
Dahlgren, Virginia 22448  
(703) 663-8154  
AUTOVON 249-8154

NWC:  
Code 3411  
Naval Weapons Center  
China Lake, California  
(619) 939-2027  
AUTOVON 437-2027  
Mr. Leroy L. Doig III

NWCM:  
Curator, Naval Historical Collection  
U.S. Naval War College  
Newport, Rhode Island 02840  
(401) 841-2435  
AUTOVON 948-2435  
Dr. Evelyn Cherpak

MIT:  
The Libraries  
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Cambridge, Massachusetts 02139  
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Special Collections  
Nimitz Library  
U.S. Naval Academy  
Annapolis, Maryland 21402  
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AUTOVON 281-2220  
Ms. Alice Creighton  
Ms. Pamela Sherbert

USNI:  
U.S. Naval Institute  
Preble Hall  
Annapolis, Maryland 21402  
(301) 268-6110  
Ms. Susan Sweeney  
Ms. Tomi Johnson

## ACRONYMS AND ABBREVIATIONS

ACNO	Assistant Chief of Naval Operations
ADM	Admiral
AEC	Atomic Energy Commission
AEEL	Aeronautical Electronics and Engineering Laboratory
AEW	Airborne Early Warning
AFB	Air Force Base
AIP	American Institute of Physics
AMAL	American Medical Acceleration Laboratory
APL	Applied Physics Laboratory (Johns Hopkins)
ARPA	Advanced Research Projects Agency
ASN	Assistant Secretary of the Navy
ASN(R&D)	Assistant Secretary of the Navy (Research and Development)
ASN(RES)	Assistant Secretary of the Navy (Research Systems & Engineering)
ASP	All Altitude Spin Projectile
ASROC	Antisubmarine Rocket
ASW	Antisubmarine Warfare
ATOWG	Advanced Technical Objectives Working Group
BUAER	Bureau of Aeronautics
BUBUDGET	Bureau of the Budget
BUMED	Bureau of Medicine and Surgery
BUPERS	Bureau of Naval Personnel
BUSHIPS	Bureau of Ships
BUWEPS	Bureau of Naval Weapons
CAPT	Captain
CDR, CMDR	Commander
CLPP	China Lake Pilot Plant
CHNAVMAT	Chief of Naval Material
CNM	Chief of Naval Material
CNO	Chief of Naval Operations
CO	Commanding Officer
COBOL	Common Business Oriented Language
COL	Colonel
COMMO	Commodore
COMNAVAIR	Commander, Naval Air Systems Command
DARPA	Defense Advanced Research Projects Agency
DCNM	Deputy Chief of Naval Material
DCNM(D)	Deputy Chief of Naval Material (Development)
DCNM(L)	Deputy Chief of Naval Material (Laboratories)
DCNO	Deputy Chief of Naval Operations
DDRAT	Director Defense Research and Technology
DDRE	Director of Defense Research and Engineering
DIFAR	Directional Finding and Ranging
DLP	Director of Laboratory Programs
DNA	Defense Nuclear Agency
DNL	Director of Navy Laboratories
DNSARC	Department of the Navy Systems Acquisition Review Council

DOD	Department of Defense
DON	Department of the Navy
DRDT&E	Director, Research, Development, Test and Evaluation
DSARC	Defense Systems Review Council
DTMB	David Taylor Model Basin
DTNSRDC	David W. Taylor Naval Ship Research and Development Center
DUSRAT	Deputy Under Secretary for Research and Technology
EES	U. S. Navy Engineering Experiment Station
EMB	Experimental Model Basin
ENIAC	Electronic Numerical Integrator and Computer
EOSS	Electro-Optical Sensor System
FAA	Federal Aviation Administration
FADM	Fleet Admiral
FBM	Fleet Ballistic Missile
FCRC	Federal Contract Research Center
FOSS	Fiber-Optic Sensor System
FY	Fiscal Year
GAO	General Accounting Office
GEN	General
GUPPY	Greater Underwater Propulsive Power
HIFRAG	High Fragmentation
HQ	Headquarters
IBM	International Business Machines
IG	Inspector General
IGY	International Geophysical Year
JASON	a task force active in the 1970s
JPL	Jet Propulsion Laboratory
LAHV	Light Airborne ASW Vehicle
LAB	Laboratory Advisory Board
LAMPS	Light Airborne Multi-Purpose System
LC	Library of Congress
LOFAR	Low Frequency Analyzing and Recording
LORAN	Long Range Navigation
LST	Tank Landing Ship
LTC	Lieutenant Colonel
LTGEN	Lieutenant General
LUS	Laboratory Utilization Study
MAJ	Major
MAT	NAVMAT organizational code prefix
MDL	Mine Defense Laboratory
MEL	Marine Engineering Laboratory
MILCON	Military Construction
MIT	Massachusetts Institute of Technology
MK	Mark
NACA	National Advisory Committee on Aeronautics
NADC	Naval Air Development Center
NAEC	Naval Air Engineering Center
NAMU	Naval Air Modification Unit
NAPC	Naval Air Propulsion Center

NASA	National Aeronautics and Space Administration
NASL	Naval Applied Science Laboratory
NASM	National Air and Space Museum
NATO	North Atlantic Treaty Organization
NAVAIR, NAVAIRSYSCOM	Naval Air Systems Command
NAVMAT	Naval Material Command
NAVORD, NAVORDSYSCOM	Naval Ordnance Systems Command
NAVSEA	Naval Sea Systems Command
NAVSEC	Naval Ship Engineering Center
NAVSTAR	Navy Navigation Satellite
NCEL	Naval Civil Engineering Laboratory
NCSL	Naval Coastal Systems Laboratory
NDRC	National Defense Research Committee
NEL	Naval Electronics Laboratory
NELC	Naval Electronics Laboratory Center
NHC	Naval Historical Center
NIF	Navy Industrial Fund
NMARC	Navy and Marine Corps Acquisition Review Committee
NMC	Naval Material Command
NOL	Naval Ordnance Laboratory
NOL C	Naval Ordnance Laboratory (Corona)
NOL W/O	Naval Ordnance Laboratory (Whiteoak)
NORC	Naval Ordnance Research Calculator
NORDA	Naval Ocean Research and Development Activity
NOSC	Naval Ocean Systems Center
NOTS	Naval Ordnance Test Station
NOTSNIK	NOTS Satellite
NPG	Naval Proving Ground
NPRDC	Navy Personnel Research and Development Center
NRAC	Naval Research Advisory Committee
NRL	Naval Research Laboratory
NSAP	Navy Science Assistance Program
NSF	National Science Foundation
NSRDC	Naval Ship Research and Development Center
NSSNF	Naval Strategic Systems Navigation Facility
NSTEP	Navy Scientist Training Exchange Program
NSWC	Naval Surface Warfare Center
NUC	Naval Undersea Center
NURDC	Naval Undersea Research and Development Center
NUWRES	Naval Underwater Weapons Research and Engineering Station
NUSC	Naval Underwater Systems Center
NUSL	Naval Underwater Sound Laboratory
NWAG	Naval Warfare Advisory Group
NWC	Naval Weapons Center
NWCM	Naval War College Museum
NWL	Naval Weapons Laboratory
OASD	Office of the Assistant Secretary of Defense
ODDR&E	Office of the Director of Defense Research & Engineering

OIC	Officer in Charge
OMB	Office of Management and Budget
ONR	Office of Naval Research
OPNAV	Office of the Chief of Naval Operations
OSD	Office of the Secretary of Defense
OSRD	Office of Scientific Research and Development
PERT	Program Evaluation Review Technique
PRFA	Personnel Research Field Activity
RADM	Rear Admiral
REAC	Research Calculator
RCA	Radio Corporation of America
R&D	Research and Development
RDT&E	Research, Development, Technology and Evaluation
REFLEX	Resources Flexibility
RIF	Reduction in Force
SARAH	Semi-Active Radar Homing
SARS	Selected Acquisition Reporting System
SDRV	Submarine Deep Rescue Vehicle
SECDEF	Secretary of Defense
SECNAV	Secretary of the Navy
SER	Shore Establishment Realignment
SES	Senior Executive Service
SES	Surface Effect Ships
SOFAR	Sound Fixing and Ranging
SOLRAD	Solar Radiation
SUBROC	Submarine Rocket
SWPP	Salt Wells Pilot Plant
SYSCOMS	Systems Commands
T/E	Test and Evaluation
TD	Technical Director
UCLA	University of California, Los Angeles
USA	United States Army
USAF	United States Airforce
USDR&E	Under Secretary of Defense Research and Engineering
USNA	United States Naval Academy
USNI	United States Naval Institute
USNR	United States Navy Reserve
VADM	Vice Admiral
VLAP	Vietnam Laboratory Assistance Program
V/STOL	Vertical Short Take-Off and Landing Aircraft
WAVES	Women Accepted for Voluntary Emergency Service

## NAME INDEX

Abrams, Robert, 1\* [1]  
Adams, A. J., 2\*  
Adams, SECNAV Charles F., 139  
Adkins, Dr. John, 3\*  
Agnew, Harold, 4\*  
Allen, Dr. Robert C., 159, 173  
Alpers, Frederick C., 4\*  
Alter, Dr. Dinsmore, 17  
Alvarez, Dr. Luis W., 5\*  
Amlie, Dr. June, 6  
Amlie, Dr. Thomas S., 6\*, 7, 41, 43, 153, 200  
Anderson, Dr. Carl, 145  
Anderson, Evan, 8\*  
Andrews, CAPT Albert, 1, 192  
Andrews, Dr. Dan, 9\*  
Andrews, RADM B. F., 9\*  
Appleton, Robert, 160  
Argora, Larry, 137  
Armitage, LT John M., 54, 197  
Ashworth, VADM Frederick L., 9\*, 10\*, 33, 73  
Aslo, Izzy, 211  
Bagley, Jim, 90  
Bagley, VADM David H., 154, 218  
Bainbridge, Dr. Kenneth Tompkins, 11\*, 20  
Baker, Walter L., 12\*  
Baldwin, Dr. Ralph B., 2\*  
Ballentine, ADM John Jennings, 12\*  
Barnaby, CAPT Ralph, 13\*  
Bastedo, George, 14\*  
Baum, Dr. William A., 13\*  
Beach, CAPT Edward Latimer, 16\*  
Beach, Dr. Eugene H., 15\*  
Beahan, CAPT, 11  
Beckmann, CAPT Alcorn G., 16\*, 54  
Bennett, Dr. Ira, 98  
Bennett, Dr. Ralph, 15, 77, 116  
Bennett, RADM Rawson, 57, 83, 165  
Bergstralh, Thor, 17\*  
Berman, Dr. Alan, 18\*, 19\*, 36, 48, 90, 148  
Bernard, Charles W., 180  
Beshany, VADM Philip A., 19\*  
Birch, Dr. A. Francis, 20\*  
Bittenger, Charles, 95  
Black, CAPT Robert G., 21\*  
Black, Dr. K. C., 113  
Blandy, ADM George, 10, 35, 72, 99, 160, 169, 220  
Blifford, I. H., 17  
Blood, Dr. Howard, 21\*

[1] An asterisk indicates that the person was interviewed, and the page that the interview begins on.

Bodenburg, John, 22\*  
 Boeing, William, 214  
 Bohr, Dr. Nils, 119  
 Bolt, Dr. Richard Henry, 23\*  
 Bondi, Hermann, 79  
 Bourland, Langford, 103  
 Bowen, ADM Harold G., 139  
 Bowen, Dr. Edward G., 23\*  
 Bowen, Dr. Ira S., 25\*, 149  
 Bowen, Harold G., Jr., 25\*  
 Bowen, Ike, 60  
 Bowen, VADM Harold G., 24\*, 25  
 Bowyer, Dr. C. Stewart, 26\*, 39  
 Bradbury, Dr. Norris E., 26\*  
 Bradbury, Dr. Norris E., 169, 216, 220  
 Bramble, Dr. Charles C., 27\*, 136  
 Braun, RADM Boynton L., 28\*  
 Braun, Wernher von, 63, 111, 163 \*  
 Breslow, Arthur, 28\*  
 Brode, Dr. Wallace C., 16, 29\*, 142, 201  
 Brooks, Dr. Harvey, 30\*  
 Brooks, Dr. Lester, 2  
 Brown, Dr. Frederick W., 97, 200  
 Brown, Dr. Ira Sprague, 82  
 Brown, Paul, 58  
 Brundage, Dr. Everett G., 37, 58, 63  
 Bryan, Dr. Glenn L., 30\*, 58, 154, 177  
 Bucaro, Joe, 48  
 Buckley, William H., 138  
 Burke, ADM Arleigh A., 2\*, 31\*, 83  
 Burke, William, 136  
 Burns, Dr. Robert O., 32\*, 183  
 Burroughs, ADM Sherman E., 32, 34\*, 50, 53, 54, 60, 74, 81, 82, 99, 118, 145, 156, 166, 168, 187, 188, 197  
 Burroughs, Kay (Mrs. Sherman E.), 32  
 Burroughs, Martha Parsons, 66  
 Burroughs, Mrs. Robert (former Mrs. William S. Parsons), 33\*  
 Bush, Dr. Vannevar, 16, 29, 149, 202  
 Byrnes, CAPT James, 35, 50, 160, 167, 168  
 Byrum, E. T., 35\*  
 Camp, Victor W., 35\*  
 Carmondy, Hazel, 124  
 Carome, Dr. Edward F., 36\*, 48  
 Carstater, Dr. Eugene D., 37\*, 58, 176  
 Cartwright, Dr. Frank W., 7\*, 146  
 Chaffee, John, 65  
 Chaplin, Dr. Harvey R., 61  
 Chase, ADM John Dawson, 180  
 Christman, Albert B., 37\*  
 Chubb, Dr. Talbot A., 38\*, 103  
 Clarkin, CAPT James J., 176  
 Clearwater, Walter, 121  
 Cleeton, Dr. Claud E., 39\*, 90, 103

Clement, Lewis M., 2\*  
 Clements, William, 201  
 Cody, Harold, 211  
 Cohen, Dr. Charles J., 136  
 Collins, Dr. John J., 31, 36, 40\*, 63, 154, 177, 218  
 Colvard, Dr. James E., 41\*, 180, 212  
 Compton, Karl, 11  
 Connolly, VADM Thomas, 42\*, 65  
 Cooper, Dr. Eugene P., 42\*  
 Couperus, Pierce G., 43\*  
 Cox, ADM, 195  
 Cozzens, Ernest G., 43\*  
 Crary, Dr. Albert P., 44\*  
 Crawford, Jack A., 7\*, 127, 199  
 Crook, Mary Charlotte, 1, 159  
 Crosbie, Richard, 44\*  
 Crosley, Al, 139  
 Cummins, Dr. William E., 45\*, 46\*  
 Currie, Dr. Lauchlin M., 2  
 Custer, CAPT Benjamin Scott, 47\*  
 Daley, Dr. John, 147  
 Davies, RADM Thomas, 179  
 Davis, Dr. Charles M., 36, 47\*  
 Davis, Tommy, 139  
 Dawson, Dr. Leo H., 95  
 de los Santos, Dr. Socrates, 61  
 Dement, Roger, 184  
 Diehl, CAPT Walter S., 48\*, 61  
 DiPol, C. John, 49\*  
 Donaldson, Earl J., 7\*  
 Donovan, Jack, 48  
 Doolittle, GEN James H., 11  
 Driggs, Ivan, 113  
 Drummeter, Dr. Louis F., 49\*  
 Dudek, Dr. Edward, 31, 106  
 Duncan, ADM Donald, 50\*  
 Duncan, CAPT James, 32, 35, 50\*, 160, 188  
 Duncan, Dr., 15  
 Dunlap, Jack, 51\*  
 Ebaugh, Paul, 51\*  
 Ebbert, CAPT Edwin L., 52\*  
 Eggert, CAPT Ernest F., 172  
 Eisenhower, PRES Dwight D., 219  
 Ekas, RADM Claude P., 52\*  
 Ellis, Dr. Emory L., 25, 32, 53\*, 54\*, 60, 206  
 Ellis, Marion (Mrs. Emory L.), 54\*  
 Ellsworth, William, 46, 138  
 Elster, Dr. Richard, 177  
 Entwistle, RADM Frederick I., 54\*  
 Etheridge, CAPT Melvin R., 56  
 Eyster, Dr. Eugene H., 55\*  
 Fallgatter, Calvin J., 56\*  
 Farrell, GEN, 10

Ferguson, Mary, 56\*, 57\*  
 Fermi, Enrico, 152  
 Fields, Dr. Victor, 31, 58\*  
 Fischer, LTC Frank, 195  
 Fitzpatrick, William, 59\*  
 Fletcher, Dr. Robert C., 4\*  
 Foladare, Dr. Joseph, 59\*  
 Foley, Dr. Henry M., 64  
 Ford, Curry, 2\*  
 Forrestal, SECNAV James, 29, 92, 99, 185, 201, 214  
 Foster, Dr. John S., 77, 121, 132, 153, 165  
 Fowler, Dr. William, 25, 59, 60\*, 82, 119, 156, 202  
 Franck, Dr. James, 63  
 Franke, William B., 83, 198  
 Freeman, ADM Rowland G., 22, 87  
 Fresh, J. Norman, 61\*  
 Friedman, Dr. Herbert, 62\*, 79, 104, 111, 134, 139, 191  
 Friedman, Sidney, 58, 63\*  
 Frosch, Dr. Robert A., 1, 24, 40, 64\*, 65\*, 72, 77, 88, 121,  
 151, 153, 154, 158, 165, 181, 200  
 Froude, William, 115  
 Fuller, Clarissa Parsons, 33, 65\*  
 Furlong, RADM William Rea, 28  
 Furth, RADM Frederick R., 66\*, 83  
 Galantin, ADM Ignatius J., 148  
 Gardner, Trevor, 59  
 Gates, SECNAV Thomas S., 67\*  
 Gebhard, Dr. Louis A., 68\*, 103, 139  
 Gertler, Morton, 172  
 Giallorenzi, Dr. Thomas G., 48, 67\*  
 Glass, Dr. Edward, 8, 178  
 Gleissner, Gene H., 136  
 Gleiter, Werner, 68\*, 94  
 Gloeckler, Fred W., 113  
 Goddard, Dr. Robert, 100, 189, 195  
 Goddard, Mrs. Robert, 69\*  
 Gold, Thomas, 79  
 Goldberg, Dr. Leo, 191  
 Goss, Dr. Wilbur, 70\*  
 Gould, Al, 174, 206  
 Gould, Gerald, 70\*  
 Gouldman, Harold M. Jr., 71\*  
 Gralla, VADM Arthur R., 1, 41, 71\*  
 Granum, RADM Alfred M., 72\*  
 Gray, R. Flanagan, 45  
 Grodsky, Jim, 72\*  
 Groves, GEN Leslie, 10, 11, 33, 73\*, 129  
 Guggenheim, Harry, 115  
 Gunn, Dr. Ross, 95  
 Guthrie, Dr. Robert C., 73\*, 139  
 Habicht, Frank, 74\*  
 Haff, CAPT William B., 75\*  
 Hafstad, Dr. Lawrence R., 2\*, 75\*

Hagen, Dr. John P., 103, 104  
 Hale, George Ellery, 202  
 Haley, Andrew, 166  
 Hall, Dr. John L., 76\*  
 Halsey, ADM William F., 35  
 Hardy, CAPT John I., 76\*, 98, 117\*  
 Hardy, Dr. James D., 45, 194  
 Harris, ADM William L., 22, 87  
 Hartmann, Dr. Gregory, 15, 77\*, 116, 159  
 Harwit, Dr. Martin, 78\*, 79\*  
 Hattabaugh, William R., 80\*  
 Havens, Dr. Ralph J., 17, 80\*  
 Hay, Marley Fotheringham, 81\*  
 Hays, Burrell, 157  
 Hayward, ADM John T., 10, 35, 50, 54, 74, 81\*, 82\*, 83\*,  
 84\*, 128, 156, 160, 197, 198, 201  
 Hedrick, CAPT David, 169, 189, 220  
 Heller, CDR S. K., 159  
 Henderson, J., 85\*  
 Henifin, CAPT Edward E., 48, 85\*, 90  
 Herget, Dr. Paul, 86\*  
 Herron, RADM Edwin W., 147  
 Hewins, Dr. Lyman, 116, 159, 172  
 Hickman, Dr. Roy Scott, 60  
 Hickman, Roger, 30  
 Highberg, Dr. Ivar E., 86\*  
 Hill, Johnny, 46  
 Hillyer, Robert, 22, 80, 87\*, 89, 120, 148, 212, 213  
 Himes, Allen W., 88\*, 89\*  
 Hollings, Anthony J., 90\*  
 Hollingsworth, Dr. Guilford L., 98  
 Holmes, Julian, 103  
 Hooker, Ruth, 91\*  
 Hooper, ADM Edwin B., 91\*, 92\*  
 Hooper, RADM Stanford C., 220  
 Hopper, COMO Grace Brewster (Murray), 93\*  
 Horton, Dr., 96, 122  
 Howard, Jim, 68, 94\*  
 Huang, Theodore S., 1, 89  
 Hughes, David, 1  
 Hulburt, Dr. Edward O., 95\*, 105, 134, 139, 168, 191  
 Hunsaker, Jerome Clarke, 96\*  
 Hunt, F. L. "Pete", 96\*  
 Hunt, Prof. Ted, 30  
 Hunter, Dr. Hugh, 97\*, 98\*, 142  
 Hussey, VADM George F., 2\*, 16, 29, 34, 54, 82, 98\*, 99\*,  
 127, 160, 171, 188  
 Hustvedt, VADM Olaf M., 100\*  
 Ide, John, 97  
 Jackson, VADM Andrew McBurney, Jr., 100\*  
 James, Richard, 101\*  
 Janes, Charlie, 46  
 Jennison, James H., 101\*, 102\*

Joakim, W. F., 137  
 Johnson, ADM Roy L., 106\*  
 Johnson, Charles Y., 103\*, 104\*  
 Johnson, Dr. Ellis, 216  
 Johnson, Dr. Frances Severin, 105\*  
 Johnson, Dr. Gerald, 1, 8, 65, 72, 77, 88, 120, 148, 153,  
 174, 181, 192  
 Johnson, Everatt Emmil, 159  
 Johnson, Robert, 138  
 Jones, Dr. Earl, 106\*, 130  
 Kaiser, Herman F., 63  
 Karle, Dr. Isabella Lugoski, 95  
 Karle, Dr. Jerome, 95  
 Karman, Dr. Theodore von, 69, 166, 172  
 Keach, CAPT Donald, 148  
 Keener, Charles E., 107\*  
 Kegley, Larry, 103  
 Keil, Dr. Alfred H., 61, 108\*, 159, 172, 173  
 Kell, ADM Claude O., 159  
 Kelly, CAPT James F., 108\*  
 Kelly, Jim, 138  
 Kemper, Dr. William, 184  
 Kendig, Dr. Paul M., 109\*  
 Kennedy, PRES John F., 3, 181  
 Kidd, ADM Issac C., Jr., 120, 121, 128, 179, 192  
 King, FADM Ernest, 12, 28, 137, 156, 214  
 Kinnear, RADM George E. R., 154, 218  
 Kirk, ADM Alan Goodrich, 110\*  
 Kirschke, Jim, 214  
 Kistiakowsky, Dr. George B., 29  
 Kitterman, Warren, 214  
 Kleback, Thomas, 1, 120  
 Klein, Dr. Elias, 90  
 Knemeyer, Franklin H., 146  
 Knudson, Dr. Vern, 23, 149  
 Koesey, Calvin, 110\*  
 Kondracki, Henry, 78\*  
 Krause, Dr. Ernst H., 17, 104, 105, 111\*, 163, 191  
 Kron, Dr. Gerald Edward, 112\*  
 Krutter, Dr. Harry, 68, 112\*, 113\*  
 Kunz, D. A., 114\*  
 LaBerge, Dr. Walter, 7, 98, 142, 146, 200, 209  
 Lahr, CAPT John Jude, 87  
 Laird, SECDEF Melvin, 65, 181  
 Land, ADM Emory S., 115\*, 211  
 Landsdown, Mrs., 100  
 Landweber, Dr. Louis, 46, 115\*, 172  
 Langenbeck, Earl H., 116\*  
 Langille, CAPT John, 1, 89  
 Lauritsen, Dr. Charles C., 5, 25, 34, 35, 54, 59, 60, 76,  
 81, 82, 117\*, 118\*, 119, 127, 145, 156, 160, 167, 188, 202,  
 216  
 Lauritsen, Dr. Thomas, 60, 119\*

Law, Howard, 89, 119\*, 144  
Lawson, Dr. Joel, 18, 88, 89, 120\*, 128, 148, 153, 159, 181  
Lazo, John, 143  
Leary, VADM Herbert F., 28, 216  
Lewis, Russell, 121\*  
Libby, VADM R. E., 83  
Lindsay, John, 63  
Lindvall, Dr. Frederick C., 102  
Livermore, Cliff, 56  
Lockhart, Dr. Luther, 122\*  
Lockwood, VADM Charles A., 123\*  
Loeb, Dr. Leonard, 169, 170  
Longwell, Paul, 55  
Lyddane, Dr. Russell H., 124\*, 180  
Malina, Dr. Frank J., 111  
Marcy, ASN (R&D) H. Tyler, 177  
Maris, Harry, 95  
Martell, VADM Charles B., 24, 129\*  
Marten, William H., 130\*  
Mason, Dr. Max G., 202  
Mason, Russell, 68  
Masterson, VADM Kleber S., 130\*  
McCain, ADM John S., 166  
McClaren, CDR, 53  
McCrary, John A., 61  
McDowell, Perceval E. (Pete), 147  
McDowell, Rensler, 123\*  
McEntee, CAPT William, 172  
McKibbin, Mrs. Joseph (Dorothy), 124\*  
McLaughlin, Jack, 56  
McLaughlin, R. B., 163  
McLean, Dr. William B., 5, 6, 7, 10, 15, 41, 42, 43, 49, 51, 77, 80, 87, 97, 98, 125, 126\*, 127\*, 128\*, 142, 175, 178, 199, 200, 201, 205, 206, 207, 208, 209, 210  
McLean, Edith LaVerne (Mrs. William B.), 125, 126\*, 210  
McLean, Jack, 126  
McLean, Mark, 126  
McMillan, Dr. Edwin M., 129\*  
McNamara, SECDEF Robert S., 10, 24, 52, 65, 77, 83, 92, 113, 133, 153, 158, 165, 178, 192, 198, 205, 219  
McPherson, Dr. Herbert G., 2  
Menzel, Dr. Donald, 191  
Meyer, Irwin, 23  
Meyers, Wesley W., 131\*  
Michaelis, ADM Frederick, 148  
Michelson, Dr. Albert A., 99, 168, 202  
Miller, Laymon N., 132\*  
Millikan, Dr. Robert A., 25, 59, 202, 204  
Minter, Jerry, 2\*  
Mitchell, GEN William, 100  
Mitscher, ADM Marc, 156  
Moffett, ADM William A., 214  
Moran, VADM William J., 132\*

Morse, Dr. Robert W., 18, 121, 148  
 Morton, RADM Thomas, 133\*  
 Moses, William, 35  
 Moulton, Prof. Forest Ray, 99, 188  
 Mumma, RADM Albert G., 116, 173  
 Mutch, Warren, 90  
 Nash, Dr. Harold, 96  
 Nastromeno, John, 213  
 Newell, Dr. Homer E., 104, 134\*  
 Niedermair, John Charles, 135\*  
 Niemann, Ralph A., 135\*  
 Nitze, SECNAV Paul, 64, 72, 205  
 Noel, Lee, 90  
 Norley, William, 116  
 Noyer, Arthur, 202  
 Nutt, Mr. Harold V., 136\*  
 O'Neill, William, 137\*  
 Offenhauser, William, 2\*  
 Oppenheimer, Dr. Robert, 5, 10, 11, 27, 33, 66, 73, 125,  
 129, 152, 185  
 Owen, RADM Thomas B., 90, 138\*  
 Page, Dr. Robert Morris, 139\*  
 Paisley, Dr. Melvyn R., 212  
 Parham, CAPT John S., 158  
 Parker, CAPT Donald F., 177  
 Parrish, CAPT David, 1, 89, 148  
 Parsons, Clare, 66  
 Parsons, Clarissa, 66, 140  
 Parsons, Critchell, 66, 140  
 Parsons, Harry R., 140\*  
 Parsons, Martha, 125  
 Parsons, Mrs. William S., 33\*  
 Parsons, RADM William S., 2, 4, 5, 7, 10, 11, 20, 27, 29,  
 33, 34, 55, 66, 70, 72, 74, 81, 82, 92, 99, 118, 119, 125,  
 129, 140, 149, 164, 167, 169, 171, 182, 185, 188, 189, 220  
 Patton, Harold, 206  
 Pearce, John, 2\*  
 Pehrson, Gordon, 141\*  
 Peterkin, Ernest W., 141\*  
 Petersen, ADM Forrest Silas, 142\*  
 Philpott, LaVerne, 139  
 Pickering, Dr. William H., 111  
 Pielemeier, Dr. Walter H., 109  
 Plain, Dr. Gilbert, 142\*  
 Polin, Jerry, 143\*, 144\*  
 Polis, Dr. David, 143  
 Pollak, George, 144\*  
 Pollock, CAPT Thomas, 145\*, 146\*, 156, 197  
 Poppin, CAPT Jack R., 45  
 Porter, Henry, 70\*  
 Potter, Russell, 59  
 Powell, Dr. Alan, 173, 190  
 Powers, Kenneth, 146\*

Press, Frank, 64  
 Pressly, Eleanor, 103  
 Price, D. George, 21, 31, 36, 37, 40, 58, 63, 130, 147\*, 176  
 Printy, Rich, 157  
 Priori, Dr. E., 66\*  
 Probus, Dr. James H., 18, 48, 89, 116, 120, 148\*, 151, 154  
 Pryor, CAPT William L., 97, 149\*  
 Purcell, D., 150\*  
 Purnell, RADM William R., 73  
 Quarles, Gilford G., 150\*  
 Rabi, Isidor I., 64, 152, 217  
 Rabinowitz, Leo, 116  
 Raborn, VADM William F., Jr., 77, 151\*  
 Ramras, Eugene M., 151\*, 154, 218  
 Ramses, Dr. Eugene, 36, 63  
 Ramsey, Dr. Norman, 4, 10, 29, 152\*  
 Ramsey, RADM DeWitt, 82  
 Raney, Dr. William, 72, 152\*, 158  
 Reed, Edith, 103  
 Rees, Mina, 153\*  
 Regan, Dr. James J., 40, 109, 154\*, 177  
 Reich, VADM Eli T., 155\*  
 Renard, RADM Jack C., 60, 145, 156\*  
 Renne, Clarence J., 157\*  
 Rexroth, John, 128, 157\*  
 Reynolds, Dr. Melvin F., 184  
 Rich, Harry L., 158\*  
 Richardson, CAPT Holden C., 61  
 Richmond, CDR John, 16, 32, 35, 56, 74, 160\*  
 Ricketts, COMO Myron V., 161\*, 190  
 Rickover, ADM Hyman, 16, 19, 150, 172  
 Riffolt, Nils, 27  
 Riggs, Leroy, 5  
 Rigney, Dr. Joseph, 31, 154  
 Rimland, Dr. Bernard, 130  
 Rivero, ADM Horacio, 10, 92, 93, 165, 192  
 Roach, James, 161\*  
 Robert L. Hansen, 52\*  
 Roberts, Dr. Walter Orr, 191  
 Robinson, ADM Samuel M., 162\*, 211  
 Robinson, Dr. Preston, 2  
 Robinson, K. H., 117\*  
 Roman, Nancy Grace, 162\*  
 Rosen, Milton, 17, 104, 163\*  
 Rostker, Dr. Bernard, 177  
 Rothman, Dr. Samuel, 77, 192  
 Roy, Dr. Max, 164\*  
 Ruble, ADM W. J., 217  
 Ruckner, RADM Edward A., 164\*, 165\*  
 Russell, ADM James S., 156, 166\*  
 Russell, Scott, 115  
 Ryland, Robert, 136  
 Sabin, Palmer, 167

Sagdahl, John, 167\*  
Sage, Dr. Bruce, 16, 55, 59, 60, 97, 142, 160, 167\*, 202,  
207  
Sam, Dr. Albert, 172  
Sams, Gerald R., 14  
Sanderson, Dr. John A., 168\*  
Sandquist, CAPT Oscar, 160, 168\*  
Sapp, Earl, 90  
Saunders, CAPT Harold E., 46, 61, 116, 135, 159, 172  
Sawyer, Dr. Ralph A., 169\*, 170\*, 220  
Saylor, William, 42, 102, 114  
Schab, Henry, 138  
Schein, Prof. Marcel, 111  
Schneider, RADM R. J., 170\*  
Schoeffel, RADM Malcom F., 35, 99, 171\*  
Schoenherr, Dr. Karl E., 46, 115, 171\*  
Schoman, Dr. Charles M., 172\*  
Schreiber, J. Raymond, 7\*  
Schuyler, CAPT Michael, 99, 189  
Schuyler, RADM Garret Lansing, 28  
Schwede, Harold, 2\*  
Schwinger, Dr. Julian S., 111  
Sette, Dr. William J., 173\*  
Sewell, Robert G. S., 174\*  
Seymour, Dr. Harry R., 176\*  
Seymour, VADM Ernest R., 175\*, 176\*  
Shajenko, Peter, 48  
Sheehy, Myles, 177\*  
Shenk, Dr. John H., 97  
Sherwin, Dr. Chalmers, 3, 8, 77, 128, 153, 177\*, 181, 192,  
205  
Shugg, Carleton, 178\*  
Sides, ADM, 182  
Sikorsky, Igor, 214  
Sims, ADM William, 211  
Sjoholm, Dr. Allan A., 21, 31, 58, 177, 218  
Skinner, COL, 60  
Smith, Bernard, 41, 179\*, 180\*  
Smith, Charles P., 7\*  
Smith, Chuck, 7, 146  
Smith, Clane, 137  
Smith, Dr. Robert, 154  
Smith, Fred, 43  
Smith, Howard, 1, 18, 120, 181\*, 192  
Smith, VADM Levering, 92, 97, 131\*, 207  
Smith, Watt, 137  
Smitley, Charles Raymond, 182\*  
Smyth, Henry D., 11  
Snyder, RADM J. Edward, 183\*  
Spangenburg, George, 183\*  
Sprague, ADM Thomas L., 130  
Sprague, Robert C., 2\*  
St. Denis, Manley, 46, 172

Stark, ADM Harold R., 189  
 Stone, Dr. Harris B., 183\*  
 Stoner, Donald W., 184\*  
 Strand, Dr. Kai Aa., 185\*  
 Strasberg, Dr. Murray, 173  
 Strauss, Lewis L., 76  
 Strauss, RADM Louis L., 185\*  
 Stuhlinger, E., 63  
 Stump, ADM Felix Budwell, 186\*  
 Sullivan, ADM William, 186\*  
 Sweeney, MAJ Charles W., 10, 11  
 Swiggum, George, 89  
 Switzer, VADM W. G., 82, 160, 201  
 Sykes, Mrs. James, 187  
 Sykes, RADM James B., 16, 29, 54, 82, 160, 187\*, 197, 201  
 Szilard, Dr. Leo, 11  
 Tanczo, Dr. Frank I., 158  
 Tase, Johnny, 115  
 Taylor, ADM Henry, 211  
 Taylor, Dr. A. Hoyt, 95, 103, 139, 217  
 Taylor, RADM David W., 135, 137, 172  
 Teller, Dr. Edward, 1  
 Temple, RADM H. B., 82  
 Thompson, Arthur, 187\*  
 Thompson, Dr. Louis T. E., 7, 10, 16, 27, 28, 29, 33, 34,  
 42, 44, 51, 54, 55, 69, 82, 87, 97, 99\*, 102, 118, 127, 128,  
 160, 169, 170, 171, 175, 180, 182, 188\*, 189\*, 200, 204,  
 207, 209, 220  
 Thorne, George, 116  
 Tibbets, COL Paul, 5, 10, 73  
 Tibbitts, CAPT Barrick F., 190\*  
 Tizard, Henry, 203, 204  
 Toftoy, BG Holger N., 111  
 Tolman, Dr. Richard C., 202  
 Tombaugh, Clyde, 17, 163  
 Tousey, Dr. Richard, 17, 95, 104, 105, 111, 190\*  
 Towle, CAPT Bernard, 1, 120, 181, 191\*, 192\*  
 Tremblay, Harold, 113, 193\*, 194\*  
 Trexler, James Hugh, 195\*  
 Trotter, Dr. Herbert, 2\*  
 Truax, CAPT Robert, 195\*  
 Truscott, Starr, 61  
 Tubman, Benjamin, 184  
 Turney, Robert F., 130  
 Tuve, Dr. Merle, 2, 55, 70, 76, 99, 216  
 Uppgren, A., 196\*  
 Van Allen, Dr. James, 191, 196\*  
 Van Swearingen, CAPT Earl K., 130, 147  
 Vieweg, RADM Walter V. R., 74, 201  
 Vincent, CAPT Manuel da Costa, 137  
 Volmut, Rosemary, 1  
 Vossler, RADM Curtis F., 197\*  
 Wakelin, Dr. James H., 165, 198\*, 205

Walker, Eric A., 109, 199\*  
 Walker, John, 136  
 Wallace, Dr. Raines, 31  
 Wallace, John D., 69  
 Ward, ADM A. G., 93  
 Ward, Dr. Newton E., 7\*, 127, 199\*, 200\*  
 Warner, Dr. Arthur H., 16, 142, 200\*  
 Waterman, Dr. Peter, 90, 201\*  
 Watkins, ADM James, 176  
 Watson, Clement, 202\*  
 Watson, Dr. Earnest C., 59, 201\*  
 Watson-Watt, Sir Robert Alexander, 203\*  
 Waynick, Arthur H., 203\*  
 Weaver, Dr. Warren, 204\*  
 Webster, Dr. A. G., 69  
 Welford, Randolph, 204\*  
 White, ADM Alfred J., Jr., 22  
 White, Dr. Howard J., Jr., 205\*  
 Whitmarsh, David, 206\*  
 Whittle, ADM Alfred J., Jr., 89, 109, 148, 212  
 Wiegand, Dr. James, 206\*  
 Wilcox, Douglas, 144, 207\*, 208\*  
 Wilcox, Dr. Howard A., 7, 146, 208\*, 209\*, 210\*  
 Willey, Thomas, 210\*  
 Williams, ADM Henry, 211\*  
 Williams, ADM John G. Jr., 212\*  
 Wills, James R., 212\*  
 Wilson, CAPT Eugene Edward, 214\*  
 Wilson, Dr. Haskell G., 6, 7\*, 97, 98, 125, 142, 157, 158,  
 200, 205, 207, 208, 213\*  
 Windenburg, Dr. Dwight F., 159, 173  
 Windsor, Harry, 48  
 Winger, Dr. Ralph, 59  
 Wingo, Carl H., Jr., 214\*  
 Winnick, Robert L., 215\*  
 Wiskoff, Dr. Martin, 176  
 Wislicenus, Dr. George F., 215\*  
 Withington, RADM Frederick S., 216\*  
 Wolff, Dr. Irving, 217\*  
 Wood, R. W., 63  
 Worchesek, CAPT Robert R., 217\*  
 Word, Thomas J., 218\*  
 Wright, RADM Edward Alvey, 172  
 York, Dr. Herbert, 219\*  
 Young, Dr. Leo C., 103, 139, 219\*  
 Youngblood, Curtis, 220\*  
 Zahl, Dr. Harold A., 217  
 Zahm, Dr. Albert F., 61  
 Zimanski, CAPT Frank, 58  
 Zimmerman, LT, 160  
 Zisman, Dr. William A., 122, 221\*  
 Zumwalt, ADM Elmo, 19, 106, 121, 130, 132, 137, 147, 183,  
 213

## SUBJECT INDEX

A-NEW Program, 143, 211  
ASP Munition, 39  
Acoustic Torpedos, 114  
Acoustics Research, 12, 23, 30, 37, 43, 52, 67, 109, 123, 132, 150, 182, 188, 199, 203, 206, 216  
Advanced Research Projects Agency, 18, 64, 65, 219  
Advanced Technical Objectives Working Groups, 148  
Aerial Bombing, 28, 100  
Aerobee Rocket, 17, 39, 63, 78, 104, 105, 111, 163, 191, 197  
Aerodynamics, 48, 61  
Aerojet General Corporation, 207  
Aeronautical Computer Laboratory, 194  
Aeronautical Electronics and Electrical Laboratory, 113  
Aeronautical Engineering, 186  
Aeronautical Instruments Laboratory, 113  
Aeronautics, 48  
Aerospace Medicine, 45, 194  
Aircraft Antennas, 107  
Aiken Relay Calculator, 27  
Air Cushion Vehicles, 61  
Air Warfare Research Department, 107  
Air to Air Missiles, 127  
Airblast, 174  
Airborne Early Warning Radar, 114  
Airborne Early Warning Systems, 74  
Airborne Height Finder, 114  
Airborne Radar, 140, 203  
Aircraft Armament Laboratory, 113  
Aircraft Design, 48, 96, 101  
Aircraft Launched Torpedos, 167  
Aircraft Testing, 198  
Airships, 96, 100, 172  
Alamogordo, NM., 73  
Albuquerque, NM., 164  
American Institute of Physics, 26, 39  
American Medical Acceleration Laboratory, 45  
Annapolis, MD., 66, 165  
Anti-Submarine Warfare Laboratory, 113, 211  
Antiaircraft Missiles, 155, 156  
Antisubmarine Aircraft, 69, 94, 101, 143, 211  
Antisubmarine Rocket, 209  
Antisubmarine Warfare, 69, 94, 101, 114, 143, 211  
Antisubmarine Warfare Research, 94, 113  
Antivehicle Weapons, 78  
Applied Electrical and Electronics Laboratory, 107  
Applied Mathematics Panel, 204  
Applied Mechanics Laboratory, 159, 173  
Applied Physics Laboratory, 2, 41, 85, 111, 158, 191, 197  
Applied Research Laboratory, 12, 52, 109, 203  
Armor, 184  
Armor and Projectile Laboratory, 169, 170  
Artillery, 3  
Assistant Secretary of Defense (R&D), 83

Assistant Secretary of the Navy, 64  
Assistant Secretary of the Navy (R&D), 8, 24, 121, 132, 165,  
179, 193, 198, 219  
Astronomy, 26, 38, 62, 76, 78, 79, 81, 86, 112, 133, 134,  
162, 163, 185, 196  
Astrophysics, 14, 63  
Atlas Missile, 78  
Atmospheric Research, 79, 81, 104, 134, 164  
Atomic Energy Commission, 78, 92, 100, 186, 216  
Atomic Research, 33  
Atomic Submarines, 16, 123  
Atomic Weapons, 131  
Austin Report, 205  
Aviation Ordnance, 35  
B-29 Bomber, 29  
Baldwin Piano Company, 2  
Ballistic Missile Submarines, 31, 51, 67, 131, 141, 151,  
178, 202  
Ballistic Research Laboratories, 133  
Ballistic Trajectories, 194  
Ballistics, 124, 184  
Bat Missile, 14  
Bat II Missile, 5  
Bearings, 137  
Bell Laboratories, 64, 217  
Bell Report, 88  
Berkeley, CA., 23  
Billet Analysis, 130  
Black Holes, 26  
Blue Ribbon Defense Panel, 3  
Boeing Airplane Company, 13, 45, 138  
Bomb Sights, 204  
Bombs, 184  
Bombsights, 184  
Bowdin, 17  
Budget, 57  
Bulbous Bow, 172  
Bureau System, 38  
Bureau of Aeronautics, 14, 50, 53, 61, 69, 83, 84, 100, 113,  
115, 166, 186, 191, 192, 193  
Bureau of Construction and Repair, 61, 172  
Bureau of Engineering, 139, 162  
Bureau of Medicine and Surgery, 45  
Bureau of Naval Personnel, 21, 36, 37, 40, 58  
Bureau of Ordnance, 1, 2, 14, 53, 72, 74, 78, 83, 84, 92,  
99, 100, 102, 120, 145, 158, 159, 165, 166, 179, 182, 184,  
188, 189, 192, 197, 198, 206, 216  
Bureau of Ordnance Experimental Section, 100  
Bureau of Ships, 1, 61, 115, 135, 137, 139, 159, 162, 172,  
211  
Bureau of Standards, 14  
Bureau of Weapons, 1, 72, 120, 131, 158  
California Institute of Technology, 14, 34, 53, 54, 55, 59,

60, 82, 111, 118, 145, 156, 166, 168, 202, 215  
Cambridge, MA., 30, 43  
Camouflage, 95  
Captured German Equipment, 123  
Carderock, MD., 46, 61, 116  
Cavitation, 46, 138, 173  
Center of Excellence, 31, 58, 147  
Centrifuges, 45  
Chemical Coatings, 122  
Chemical Research, 221  
Chicago, IL., 66  
Chief of Naval Development, 121, 179  
Chief of Naval Material, 18, 36, 40, 72, 88, 89, 113, 121, 128, 132, 147, 158, 166, 179, 192, 193, 212  
Chief of Naval Operations, 31, 53, 133, 153, 158, 184, 212  
China Lake, CA., 6, 7, 10, 16, 25, 35, 41, 42, 54, 82, 87, 142, 145, 160, 175, 207, 213, 218  
China Lake Pilot Plant, 167, 207  
COBOL, 93, 94  
Columbia University, 64, 69, 97  
Commanding Officer, 13, 77, 84, 88, 109, 133, 160, 198  
Commercial Activities, 161  
Communications, 107  
Comptroller, 57  
Comptroller of the Navy, 57  
Comptroller of the Office of Naval Research, 57  
Computer Language, 93, 94  
Computer Research, 193  
Computer Simulation, 87, 193, 194  
Computer Software, 194  
Computers, 27, 45, 93, 94, 114, 136  
Condor Missile, 6  
Contracting, 117, 161  
Convair Rocket, 163  
Coordinator of Research and Development (Navy), 96  
Cornell, 78, 79  
Corona, CA., 88, 213  
Coronagraphic Studies, 191  
Corporate Plan, 120, 148, 212  
Corvus Missile, 5  
Cosmic Ray Physics, 105  
Cosmic Ray Research, 17, 111  
Cosmic Rays, 103, 111, 197  
Crosley Corporation, 2  
Dahlgren, VA., 12, 15, 27, 28, 33, 34, 41, 51, 55, 60, 69, 99, 110, 116, 133, 136, 165, 169, 180, 186, 188, 194, 216, 220  
David Taylor Model Basin, 46, 48, 61, 108, 116, 135, 138, 159, 173  
David Taylor Naval Ship Research and Development Center, 46, 61, 116, 137, 138, 159, 161, 173, 190  
Deep Submersibles, 108  
Defense Advanced Research Projects Agency, 47

Defense Logistics Agency, 143  
Defense Spending, 216  
Defense Systems Acquisition Review Council, 133, 148  
Department of Defense, 198  
Department of Defense Research and Engineering, 128  
Department of Terrestrial Magnetism, 2  
Department of the Navy Systems Acquisition Review Council,  
148  
Deputy Chief of Naval Material, 212  
Deputy Chief of Naval Material (Laboratories), 1, 87, 89  
Deputy Chief of Naval Operations (Development), 24, 83, 165,  
166  
Deputy Chief of Naval Operations (Submarine Warfare), 19  
Diesel Engines, 162  
Digital Fuze Control, 87  
Digital Systems, 39  
Dillon Report, 205  
Dillon Study, 1  
Director, Plans & Programs, 173  
Director of Defense Research and Development, 121  
Director of Defense Research and Engineering, 8, 24, 78, 83,  
166, 178, 193, 198, 219  
Director of Laboratory Programs, 8, 18, 65, 153, 181  
Director of Navy Laboratories, 1, 8, 18, 24, 41, 65, 78, 87,  
88, 89, 112, 120, 121, 128, 148, 153, 158, 181, 192, 193,  
212  
Director of Research, Development, Test & Evaluation, 184  
Director of Technology, 173  
Dove Missile Project, 14, 199  
Dynasoar, 111  
Eagle Missile Project, 114  
Eastman Kodak Company, 2  
Eaton Canyon, CA., 25, 53, 59  
Electric Ship Propulsion, 162  
Electro-Optical Sensor System, 215  
Electronic Counter-measures, 195  
Electronic Equipment, 39  
Electronic Warfare, 75  
Electronics, 68  
Electronics Research, 182  
Elsie Project, 131  
Engineering Duty Officers, 182, 190  
Engineering Experiment Station, 137  
ENIAC Computer, 194  
Enola Gay, 11  
Experimental Model Basin, 46, 48, 61, 116, 135, 172, 173,  
186  
Experimental Physics, 191  
Explorer Program, 197  
F-14 Project, 143  
Fat Man Bomb, 29  
Federal Aviation Administration, 6  
Federal Contract Research Centers, 45, 120

Federal Power Commission, 163  
Fiber Optic Hydrophone, 37, 48, 67  
Fiber Optics, 37, 48, 67  
Fiber Optics Sensor System, 37, 48, 67  
FIDO Torpedo, 46  
Fire Control, 14  
Fire Control Computers, 27, 136, 194  
Fire Control Laboratory, 127  
Fire Control Radar, 139  
Fire Control Systems, 114  
Fiscal Management, 57  
Five Year Plan, 173  
Fleet Ballistic Missile Program, 124, 136  
Fleet Ballistic Missiles, 31, 51, 67, 141, 151, 178, 202  
Fleet Support Office, 161  
Flying Boats, 47, 96, 106  
Ford Aeronautics, 17, 80  
Foundational Funding, 92  
Franke Board, 57  
Franklin Arsenal, 8  
Ft. Huachuca, 184  
Ft. Monmouth, 184  
Ft. Sumner, NM., 66, 140  
Fuel, 137  
Funding, 57, 216  
Furnes Report, 205  
Fuze Research, 213  
Fuzes, 184, 204  
Gamma Rays, 103  
Gemini Project, 194  
General Accounting Office, 154  
General Tire and Rubber Co., 55  
Glass Report, 3  
Goat Island, RI., 123  
Goldstone Lake, CA., 25, 53, 59, 60, 119, 145, 157  
Greater Underwater Propulsive Power, 47  
Grumman F6F, 101  
Guided Missile Computers, 193  
Guided Missiles, 127  
Guided Projectiles, 214  
Gun Directors, 216  
Gunblast, 174  
Hadamard Transform Spectroscopy, 79  
Harpoon Missile Project, 6, 53  
Harvard University, 30, 43, 51, 97, 109, 182, 191, 199, 203  
Helicopters, 101  
Hermann Study, 1  
High Energy Laser, 49  
Hiroshima, Japan, 10, 11, 20, 73, 152  
Hoover Company, 2  
Hudson Laboratories, 19, 64  
Hull Design, 46  
Human Centrifuge, 45, 143, 194

Human Factors Engineering, 40, 143  
Hurricane Project, 193  
Hydroacoustics, 48  
Hydrodynamic Research, 138  
Hydrodynamics, 46, 61, 135, 138  
Hydrodynamics Division, 173  
Hydroelasticity, 138  
Hydrofoils, 138  
Hydrogen Peroxide Engines, 137  
Hydromechanics, 46  
Hydrophones, 37, 48, 67  
Hyperbolic Navigation, 44  
Independent Research/Independent Exploratory Development,  
174  
Indian Head, MD., 60  
Infrared Astronomy, 79  
Infrared Sensors, 191  
Inspector General, 109  
International Business Machine Company, 101, 136  
International Geophysical Year, 44, 95, 104, 134, 197  
Inyokern, CA., 10, 30, 34, 35, 51, 53, 55, 59, 60, 73, 75,  
84, 145, 157, 164, 167, 169, 171, 187, 202  
Ionospheric Physics, 104  
Ionospheric Research, 104  
JASON, 64  
Jet Propulsion Laboratory, 111, 163  
John Carroll University, 36, 47  
Johns Hopkins University, 2, 63, 85, 95, 172  
Johnson Space Center, 45  
Johnsville, PA., 114  
Julie Sonobuoy Project, 94  
Kawai Rocket, 104  
Korean War, 7, 125, 159  
Krokura, Japan, 11  
Laboratory Administration, 89  
Laboratory Consolidations, 1, 22, 41, 88, 89, 117, 120, 121,  
122, 178, 216  
Laboratory Management, 1, 22, 85, 88, 89, 144, 173, 175,  
178, 190, 201, 218  
Laboratory Utilization Study, 148  
Langley, VA., 61  
Laser History, 117  
Laser Research, 117  
Laser Technology, 122  
Lawrence Livermore Laboratory, 26  
Libby Board, 83  
Light Airborne ASW Vehicle, 143  
Light Airborne Multi-Purpose System, 101, 143  
Limpet Weapons, 78  
Lockheed Corporation, 26  
Long Range Navigation, 44  
Long Range Planning, 108, 184, 190  
Los Alamos, NM., 4, 5, 10, 11, 12, 20, 27, 29, 33, 55, 66,

73, 125, 129, 152, 164, 173  
Low Frequency Radar, 94  
Lubrication, 137  
Lunar Research, 17  
Lyman-Alpha, 191  
Magnetospherics, 197  
Manhattan Project, 4, 5, 10, 11, 12, 20, 27, 29, 33, 34, 47,  
50, 55, 56, 66, 73, 82, 84, 105, 118, 125, 129, 131, 152,  
160, 186, 188  
Manpower Modeling, 107  
Mansfield Amendment, 3, 64, 192  
Marine Engineering Laboratory, 137, 173  
Marine Science Council, 108  
Martin Company, 199  
Martin Marietta, 143  
Massachusetts Institute of Technology, 12, 17, 76, 79, 93,  
108, 115, 165, 172  
Maverick Missile, 175  
McQuay-Norris Corporation, 2  
Mercury Project, 194  
Metallurgy, 137  
Meteorology, 80, 105  
Michelson Laboratory, 87, 167, 171  
Microwave Communications, 39  
Microwave Radar, 140, 217  
Military Construction, 190  
Mine Mark 24, 172  
Missile Research, 5, 6, 163  
Missile Systems, 114, 193  
Missiles, 50, 199  
Model Basins, 46  
Model Testing, 47, 62, 116, 172  
Muroc, CA., 20, 29  
Nagasaki, Japan, 10, 11, 73  
National Academy of Science, 153  
National Advisory Committee on Aeronautics, 50, 61, 80  
National Aeronautics and Space Administration, 26, 64, 78,  
79, 103, 104, 134, 163  
National Air and Space Museum, 26, 39  
National Bureau of Standards, 5  
National Defense Agency, 115  
National Defense Research Committee, 11, 23, 30, 60, 74,  
118, 139, 152, 204, 215  
National Science Foundation, 3, 8, 108, 153, 192  
National Security Act, 57  
Nautical Almanac, 86  
Nautical Almanac Office, 86  
Naval Air Development Center, 45, 61, 69, 94, 101, 107, 112,  
113, 143, 144, 193, 194, 211  
Naval Air Modification Unit, 74, 107, 193  
Naval Air Systems Command, 101, 113, 142, 175, 176, 211  
Naval Aircraft Factory, 84  
Naval Architecture, 81, 96, 115, 135, 172, 211

Naval Aviation, 13, 28, 35, 47, 48, 50, 84, 186  
 Naval Aviation Development Center, 13  
 Naval Construction, 115, 187, 211  
 Naval Electronics Laboratory, 78, 177, 210  
 Naval Electronics Laboratory Center, 138  
 Naval Engineering, 162  
 Naval Gun Factory, 116, 124, 186, 216  
 Naval Gunnery, 214  
 Naval Material Command, 1, 48, 109, 144, 175, 212  
 Naval Mine Warfare, 78  
 Naval Observatory, 76, 86, 112, 185  
 Naval Ocean Systems Center, 9, 22, 102, 109, 120, 149, 208  
 Naval Ordnance Laboratory, 5, 15, 78, 84, 116, 124, 128, 180, 214  
 Naval Ordnance Research Calculator, 27, 136  
 Naval Ordnance Systems Command, 72, 87, 133  
 Naval Ordnance Test Station, 5, 7, 9, 10, 16, 25, 29, 30, 32, 33, 34, 35, 41, 42, 44, 51, 53, 54, 55, 56, 59, 60, 73, 74, 77, 82, 83, 84, 87, 92, 97, 98, 99, 102, 114, 118, 125, 126, 127, 128, 142, 145, 146, 156, 157, 160, 164, 168, 169, 171, 174, 175, 182, 187, 188, 197, 199, 200, 201, 202, 207, 208, 209, 210, 213  
 Naval Postgraduate School, 27, 165  
 Naval Proving Ground, 2, 12, 27, 28, 34, 51, 55, 60, 69, 71, 92, 99, 110, 124, 131, 136, 165, 169, 170, 184, 186, 188, 189, 194, 216, 220  
 Naval Research, 77, 156, 184  
 Naval Research Advisory Committee, 3, 21, 31, 130, 154, 177  
 Naval Research Laboratory, 14, 17, 18, 19, 26, 33, 36, 38, 39, 47, 49, 52, 63, 64, 67, 68, 74, 76, 78, 79, 80, 85, 90, 91, 95, 103, 104, 105, 111, 113, 117, 122, 134, 136, 139, 141, 149, 150, 161, 163, 168, 188, 191, 195, 197, 220, 221  
 Naval Sea Systems Command, 46, 190, 215  
 Naval Ship Research and Development Center, 45, 46, 61, 108, 120, 138, 159  
 Naval Ships Systems Command, 87  
 Naval Surface Weapons Center, 15, 41, 71, 116, 120, 133, 180, 188  
 Naval Torpedo Station, 123, 206  
 Naval Undersea Center, 22, 102, 126, 127, 207, 210  
 Naval Underwater Sound Laboratory, 150  
 Naval Underwater Systems Center, 85, 97, 110, 120, 122, 215  
 Naval Weapons Center, 5, 6, 7, 10, 14, 22, 41, 42, 44, 49, 56, 75, 77, 80, 87, 92, 97, 98, 102, 125, 126, 127, 142, 145, 146, 153, 157, 175, 200, 207, 208, 209, 210, 213, 218  
 Naval Weapons Laboratory, 15, 116, 133, 136, 179, 180, 184, 216  
 Navigation, 17  
 NAVSTAR, 17  
 Navy Ballistic Missiles Committee, 131  
 Navy Industrial Fund, 3, 78, 91, 120, 128, 148, 159, 161, 179, 190, 212  
 Navy Personnel Research and Development Center, 21, 31, 36,

37, 40, 58, 63, 106, 109, 130, 147, 151, 154, 177, 218  
Navy Personnel and Training Research Center, 151  
Navy Research and Development, 38  
Navy Science Assistance Program, 1, 120, 148, 159, 161  
Navy Scientist Training Exchange Program, 144  
Nebulae, 39  
Neptune, 111  
Neutron Stars, 26, 39  
New London, CT., 69, 97  
Newport, RI., 85, 97, 123, 206  
Nike Missile, 191  
Nike-Dan Rockets, 39  
Norden Bombsight, 13, 28  
North Atlantic Treaty Organization, 79, 166, 213  
Northwestern University, 185  
Notre Dame, 172  
NOTSNIK, 209  
Nuclear Missiles, 31, 51, 67, 131, 141, 151, 178, 202  
Nuclear Powered Fleet Ballistic Missile Submarines, 31, 51,  
67, 131, 141, 151, 178, 202  
Nuclear Propulsion, 19, 123  
Nuclear Reactors, 17  
Nuclear Submarines, 20  
Nuclear Test Detection, 64  
Oberlin College, 79  
Ocean Floor Modeling, 64  
Ocean Technology, 108  
Oceanography, 44, 91  
Office of Naval Research, 3, 18, 31, 40, 48, 57, 58, 83, 91,  
92, 93, 94, 103, 137, 138, 147, 153, 166, 184  
Office of Scientific Research and Development, 2, 23, 82,  
97, 118, 149, 215  
Okinawa, Japan, 11  
Operation Crossroads, 78, 160, 169, 174  
Operation Paperclip, 111, 159  
Optical Radar, 49  
Optics, 63, 95, 168, 191  
Optics Research, 95  
Ordnance, 3, 27, 28, 84, 93, 99, 110, 124, 133, 165, 170,  
184, 204, 214, 216  
Ordnance Laboratories, 133  
Ordnance Research, 30, 52, 83, 123, 182, 206  
Ordnance Research Laboratory, 12, 52, 132, 150, 187, 206  
Ordnance Training, 93  
Orlando, FL., 69  
PBY Flying Boat, 106  
Pasadena Annex, 102, 145  
Pasadena, CA., 34, 42, 103, 145, 167, 207  
Pearl Harbor, HI., 3  
Pennsylvania State University, 12, 52, 109, 132, 150, 187,  
203, 206  
Pensacola, FL., 12, 48, 50, 84, 186  
Personnel Management, 152

Personnel Research, 21, 31, 36, 37, 40, 58, 63, 107, 109,  
130, 147, 152, 154, 177, 218  
Personnel Research Division, 21, 37, 40  
Personnel Research Field Activity, 40  
Petrel Missile, 14  
Philadelphia Navy Yard, 143  
Philadelphia, PA., 84  
Philco-Ford Corporation, 143  
Phoenix Missile Project, 114  
Photoelectric Photometry, 76, 112  
Photoelectric Sensors, 191  
Photographic Emulsions, 191  
Physics, 17, 63, 85, 111, 197  
Polaris Missile, 198  
Polaris Program, 31, 47, 51, 67, 107, 131, 136, 141, 151,  
158, 159, 178, 202  
Polaris Submarines, 20, 211  
Polymers, 122, 211  
Potsdam, East Germany, 11  
Princeton University, 193  
Program Evaluation Review Technique, 64, 141  
Program Management, 148  
Project 97, 88  
Project Artemis, 64  
Project Media, 64  
Project REFLEX, 3, 78, 121  
Project Rainbarrel, 63  
Project Sherwood, 197  
Project Vela, 64  
Projectiles, 184, 214  
Propellers, 172  
Proteus System, 211  
Proximity Fuze, 3, 33, 34, 55, 70, 76, 99, 118, 182, 197,  
202  
Puma Missile Project, 5  
Quantum Optics, 50  
Radar, 39, 68, 74, 76, 103, 104, 107, 114, 123, 139, 152,  
163, 165, 203, 217, 220  
Radar Research, 12, 23, 33, 74, 140  
Radiation Laboratory, 11, 152, 217  
Radio, 150  
Radio Communications, 68, 103  
Radio Corporation of America, 74, 139, 193, 217  
Radio Detection, 139, 220  
Radio Telescope Research, 195  
Radio Transmitters, 74, 103  
Radiometry, 49  
Range Finders, 204  
Ranger Hard Lander, 17  
REAC Computers, 193  
Redstone Rocket, 163  
Reduction in Force, 1, 148  
Research, Development, Test, and Evaluation, 24

Research Management, 82, 85, 111  
Research and Development, 57, 64  
Research and Development Funding, 57  
Ridenour Report, 140  
Rocket Engines, 166  
Rocket Propellents, 119, 202  
Rocket Research, 75, 83, 100, 118, 119, 145, 156, 196, 207  
Rocket Testing, 198  
Rocket-Sonde, 63, 79, 105, 111, 134, 163  
Rocketry, 17, 80, 104, 163  
Rockoon, 63, 79, 197  
Royal Navy, 91  
Ryan Aircraft, 156  
S-4 Submarine, 135  
S-51 Submarine, 135  
SARAH Missile Project, 6  
SOLRAD Program, 63, 141  
SSQ-15 Sonobouy, 69  
SUBROC Missile Project, 78  
Salt Wells Pilot Plant, 27, 55, 92, 164, 167, 187  
Salvage, 135  
San Diego, CA., 36, 40, 103, 109, 147, 207  
Satellite Tracking, 87  
Satellites, 63, 64, 104, 105, 191, 197, 209  
Saturn Rocket, 104  
Schlieren Laboratory, 36  
Seakeeping, 47  
Seaplanes, 106  
Seaworthiness, 46  
Secretary of Defense, 24, 131, 205  
Secretary of the Navy, 67, 205, 219  
Seismology, 64  
Selected Acquisition Reporting System, 53  
Senior Executive Service, 22  
Sexual Discrimination, 57  
Sherwin Plan, 3, 8, 128, 153, 192, 193, 205  
Sherwin Report, 88  
Ship Characteristics Board, 165  
Ship Design, 135, 190  
Ship Storage, 137  
Shock, 91, 159, 173  
Shock Hardening, 159  
Shock Testing, 159  
Shock and Vibration Centralization Activity, 159  
Shore Establishment Realignment, 120  
Sidewinder Missile Project, 6, 7, 14, 33, 44, 125, 126, 127,  
147, 169, 174, 179, 199, 201, 210  
Sivorsky, 101  
Skyhook, 104  
Skylab, 104  
Society of Naval Architects, 46  
Solar Physics, 105, 191  
Solar Spectrograph, 17, 105

Solar Spectroscopy, 63  
Solar X-Ray Radiation, 191  
Solid State Physics, 30  
Sonar, 30, 97, 122, 123, 150, 215  
Sonobouy Research, 94  
Sonobuoys, 69, 94, 143  
Sound Fixing and Ranging, 44  
Space Astronomy, 64, 111, 134, 163  
Space Research, 95  
Space Shuttle, 134  
Space Simulation, 194  
Space Simulation Chambers, 45  
Space Surveillance System, 39  
Space Telescope, 134  
Spectrometry, 122  
Spectroscopy, 122  
Sproul Observatory, 185  
Sputnik, 134, 197, 209, 219  
Standards and Calibration Laboratory, 69  
Stanford University, 36  
Starfish, 17  
Strain Gauges, 159  
Structural Mechanics Department, 159  
Structures Department, 159  
Stump Neck, MD., 195  
Submarine Communications, 107  
Submarine Deep Rescue Vehicles, 137  
Submarine Design, 81  
Submarine Detectors, 118  
Submarine Launched Ballistic Missiles, 31, 51, 67, 131, 141, 151, 178, 202  
Submarine Propulsion Systems, 137  
Submarine Rescue Chambers, 212  
Submarine Research, 97, 127  
Submarine Snorkels, 137  
Submarines, 46, 135, 150  
Sugar Grove, WV., 195  
Surface Chemistry, 221  
Surface Missile Systems Project, 155, 156  
Surface to Air Missiles, 155, 156  
Synthetic Lubricants, 221  
Systems Analysis and Electronics Department, 107  
Systems Approach, 45, 107, 114  
Systems Commands, 38, 48, 78, 87, 88, 120, 121, 128, 148, 158, 179, 180, 193, 215, 220  
Systems Engineering, 211  
Talos Missile, 155, 156, 159  
Tank Landing Ships, 135  
Tartar Missile, 155, 156, 159  
Task Force 97, 205  
Technical Development Plan, 83, 179  
Technical Director, 6, 7, 36, 41, 65, 88, 109, 113, 114, 124, 127, 133, 137, 154, 158, 173, 180, 208

Teflon, 221  
 Telemetry, 17, 103  
 Temple University, 143  
 Tentative Specific Organizational Requirement, 198  
 Terrier Missile, 14, 155, 156, 159  
 Testing and Development, 13  
 Thin Man Bomb, 29  
 Thompson Ramo-Wooldridge Corporation, 36, 48  
 Tinian, 4, 10, 20, 73, 152  
 Titanium, 137  
 Tizard Mission, 23, 74, 140  
 Torpedo Directors, 216  
 Torpedo Mark 13, 102  
 Torpedo Mark 43, 167  
 Torpedo Mark 48, 85  
 Torpedos, 46, 85, 114, 123, 132, 150, 167, 172, 206, 215  
 Trinity Test, 29, 152  
 Typhoon Project, 45, 114, 193  
 U. S. Air Force, 210, 213  
 U. S. Army, 2, 74, 79, 184, 185, 194  
 U. S. Army Chemical Corps, 79  
 U. S. Army Signal Corps, 74, 79, 95, 139, 182, 217  
 U. S. Naval Academy, 66, 93, 115, 196  
 USS BOSTON, 159  
 USS DRAGONET, 159  
 USS FLAGSTAFF, 138  
 USS HIGH POINT, 138  
 USS LEARY, 74, 140  
 USS LOS ANGELES, 20  
 USS NEW JERSEY, 215  
 USS NEW YORK, 140  
 USS NORTON SOUND, 47, 104, 197  
 USS OMAHA, 159  
 USS PLAINVIEW, 138  
 USS SHENANDOAH (ZR), 100  
 USS SQUALUS, 123  
 USS TEXAS, 140  
 USS THRESHER, 20, 64, 91, 137, 159  
 USS TROUT, 159  
 USS TUCUMCARI, 138  
 Ultra Violet Solar Spectroscopy, 191  
 Ultra-Violet Solar Spectrograph, 14  
 Underwater Explosives Research Division, 173  
 Underwater Sound Laboratory, 30, 43, 51, 69, 109, 182, 199, 203  
 Unilinear Navy, 3  
 University of Alberta, 105  
 University of California, 23  
 University of Michigan, 79, 80  
 University of Minnesota, 17  
 University of Pennsylvania, 45, 163, 194  
 Upper Air Rocket Research Panel, 191  
 V-2 Rocket, 14, 17, 63, 81, 95, 104, 105, 111, 134, 163,

191, 193, 197  
Van Allen Radiation Belt, 197  
Vanguard Program, 95, 105, 134, 136, 197  
Variable-Angle Torpedo Launcher, 102, 114  
Vertical Take Off and Landing Aircraft, 62  
Very Low Frequency Communications, 107  
Vibration, 91, 159  
Victor Talking Machine Company, 217  
Vietnam Laboratory Assistance Program, 110, 120, 137, 174  
Vietnam War, 122, 125, 134, 174, 209  
Viking Rocket, 17, 81, 104, 105, 111, 163  
Walleye Missile Project, 127, 174, 199  
Walleye II Missile Project, 5  
Washington, DC., 40, 46, 116, 147, 187, 216  
Washington Navy Yard, 15, 46  
Waveform Generators, 46  
Waveforms, 46  
Weapons Development, 22  
Weapons Systems, 31, 51, 67, 131, 141, 151, 155, 156, 178,  
202  
Weapons Systems Evaluation Group, 131  
Webb Institute, 46  
Westinghouse Corporation, 163  
Whirlwind Project, 193  
White Oak, MD., 15, 41, 116, 180, 216  
White Sands, NM., 14, 17, 104, 105, 111, 163  
Wind Tunnels, 61, 96  
Woods Hole, MA., 173  
Woods Hole Oceanographic Institute, 64, 91  
X-15 Project, 194  
X-Ray Astronomy, 26, 39, 191  
Yerkes Observatory, 163, 185

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