

NASA HISTORY: CALENDAR YEAR 2005 IN REVIEW

NASA History Division
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Washington, DC 20546

I. Introduction

Throughout the past year, the NASA History Division, Office of External Relations, continued to focus on its core goals of conducting a high-quality, academically sound program of research pertinent to NASA leadership's concerns; effectively acquiring, preserving, and making available documentary information in the NASA Historical Reference Collection; and disseminating historical information to the widest practicable audience.

In pursuit of these objectives, the History Division has developed a detailed strategic plan. The full plan is attached as Appendix A. The division's top-level goals are as follows:

1. Research, Writing and Publication. Record, research, publish, and disseminate NASA history based on primary and secondary research. These historical materials should be prepared in accordance with the highest scholarly standards but also be accessible to the educated lay reader.

2. Archival Management. Maintain and provide access to the Historical Reference Collection in order to fulfill the mandate of the National Aeronautics and Space Act calling for the widest possible dissemination of information on aeronautics and astronautics.

3. Leadership Support. Provide NASA leaders historical information, analysis, and perspective vital to their planning, policy development, and decision making efforts, including lessons learned.

4. Development, Support and Coordination of Center History Programs. Support, enhance and coordinate those history and archival programs already in existence at NASA Centers, and encourage the development of history and archival programs at those Centers that lack the m.

5. Societal Impact Studies. Undertake historical studies of the impact of NASA's programs, and aeronautics and space flight in general, on society, including its commercial, economic, philosophical, educational, cultural and local impacts.

6. Advancement of Knowledge and Professional Development. Contribute to the advancement of knowledge and the professional development of students and scholars in the social sciences and humanities through conferences, fellowships, exchange programs, internships, and research, and by maintaining strong relations with professional societies, academic departments, and other federal history offices.

7. Communication and Outreach. Facilitate internal communications and public outreach related to NASA history.

8. Queries and Reference: Respond to reference requests for historical information in a timely and effective manner. Reference requests come from NASA staff, scholars, academics, government employees, and the general public. In compliance with the Agency's strategic plan to communicate knowledge to the public in a timely manner, responses to queries will meet or exceed a 15-day response turnaround 90% of the time.

As reflected below, progress was made in all of these areas over the past year. Among the Division's highlights were a conference on "Critical Issues in the History of Spaceflight," held at the Udvar-Hazy Center in March 2005; publication of the *Aeronautics and Space Report of the President* for fiscal year 2004; a wide variety of publications in aerospace history; and a series of 17 essays on "Why We Explore" on the nasa.gov website. Looking to the future, plans are well advanced for a conference on the "Societal Impact of Spaceflight," to be held in September 2006. This is to be followed in subsequent years by conferences on subjects related to the upcoming 50th anniversaries of the Space Age (2007) and of NASA itself (2008).

II. NASA Historical Publication Program

An important element of the NASA History Division strategic plan continued with the preparation of solid, well-researched works on the history of the U.S. civil space program.

NASA Special Publications

Chertok, Boris, *Rockets and People*, volume I (NASA SP-2005-4110).

Dawson, Virginia P. and Mark D. Bowles, eds., *Realizing the Dream of Flight: Biographical Essays in Honor of the Centennial of Flight, 1903-2003* (NASA SP-2005-4112). This publication contains a DVD of the *Realizing the Dream of Flight* symposium. The book is also available online at <http://history.nasa.gov/sp4112.pdf>.

Dick, Steven J., and Keith Cowing, eds., *Risk and Exploration: Earth, Sea, and Stars* (NASA SP-2005-4701), now online at <http://history.nasa.gov/SP-4701/riskandexploration.pdf>.

Laufer, Alex, Todd Post, and Ed Hoffman, *Shared Voyage: Learning and Unlearning from Remarkable Projects* (NASA SP-2005-4111).

Of Ashes and Atoms: A Documentary on the NASA Plum Brook Reactor Facility (NASA SP-2005-4605). DVD

Fueling Space Exploration: The History of NASA's Rocket Engine Test Facility (NASA SP-2005-4607). DVD

NASA History Division Books from Other Publishers

Kay, Woody, *Defining NASA: The Historical Debate Over the Agency's Mission* (Albany: State University of New York Press, 2005).

Conway, Erik M., *High-Speed Dreams: NASA and the Technopolitics of Supersonic Transportation, 1945-1999* (Baltimore: the Johns Hopkins University Press, 2005).

Other Publications

Aeronautics and Space Report of the President, Fiscal Year 2004 Activities.

Lambright, W. Henry, *NASA and the Environment: The Case of Ozone Depletion* (Monograph 38), available online at <http://history.nasa.gov/monograph38.pdf>.

McCurdy, Howard E., *The History of the Near Earth Asteroid Rendezvous (NEAR) Mission* (Monograph 36), available online at <http://history.nasa.gov/monograph36.pdf>.

Seamans, Dr. Robert, Jr., *Project Apollo: The Tough Decisions* (Monograph 37). This attractive, hard-cover monograph is also available online at <http://history.nasa.gov/monograph37.pdf>.

Nearing Publication

NASA historians worked toward the publication of several other histories on a wide diversity of subjects, including those below.

Bowles, Mark D., *Science in Flux: NASA's Nuclear Program at Plum Brook Station, 1955-2000*. This book explores the broad history of the nuclear research program at NASA's Plum Brook Station. It is a tale of nuclear research, political change, and the professional culture of the scientists and engineers who devoted their lives for more than 15 years to the facility. In the attempt to develop nuclear rockets and the challenge to clean up the radioactive ruins from the site that housed the research lies the story of one of the most powerful test reactors of its day.

Chertok, Boris, edited by Asif Siddiqi, *Rockets and People*, volume II. The second volume of the four-part series of memoirs provides insight into the post-World War II Soviet missile and space program. Chertok discusses his return to the Soviet Union in 1947, the reproduction of the German V-2, and the development of a domestic Soviet rocket industry at the famed NII-88 institute in the Moscow suburb Podlipki (now called Korolev).

Dick, Steven J., and Roger D. Launius, eds., *Critical Issues in the History of Spaceflight*. This volume contains the proceedings of the *Critical Issues* conference. It covers six main themes: motivations for spaceflight, human and robotic exploration, NASA and external relations (the aerospace industry, Department of Defense, and international cooperation), access to space, NASA cultures, and an examination of the state-of-the-art in space history.

Hansen, James R., with Jeremy Kinney, D. Bryan Taylor, and J. Lawrence Lee, eds., *The Wind and Beyond: A Documentary Journey into the History of Aerodynamics in America, Volume II: Reinventing the Airplane*. The second volume in *The Wind and Beyond* series discusses the airplane design revolution of the 1920s and 1930s and the quest for improved airfoils.

Matranga, Gene, Wayne Ottinger, and Cal Jarvis, *Unconventional, Contrary, and Ugly: The Story of the Lunar Landing Research Vehicle*. This well-illustrated monograph recounts the history of the Lunar Landing Research Vehicle (LLRV) from its inception through its service as a training tool at the Manned Spaceflight Center (now Johnson Space Center).

Meltzer, Michael, *Mission to Jupiter: A History of the Galileo Project*. This informative manuscript discusses the Galileo spacecraft program from its inception to its conclusion.

Wallace, Lane, *Nose Up: High Angle-of-Attack and Thrust Vectoring Research at NASA Dryden, 1979-2001*. This monograph examines three different programs that explored high-angle of attack flight: the F-18 High Alpha Research Vehicle (HARV), the X-31, and the F-15 Advanced Controls Technology for Integrated Vehicles (ACTIVE).

NASA History Award Winners

Andrew J. Butrica received the 2005 Robinson Prize from the National Council on Public History for his book, *Single Stage to Orbit: Politics, Space, Technology, and the Quest for Reusable Rocketry* (Baltimore: Johns Hopkins University Press, 2003). The Robinson Prize commemorates the legacy of Michael C. Robinson, a public works historian who promoted historical research as a significant part of policy formulation. His colleagues established the prize to recognize historical studies that contribute directly to the formulation of public policy.

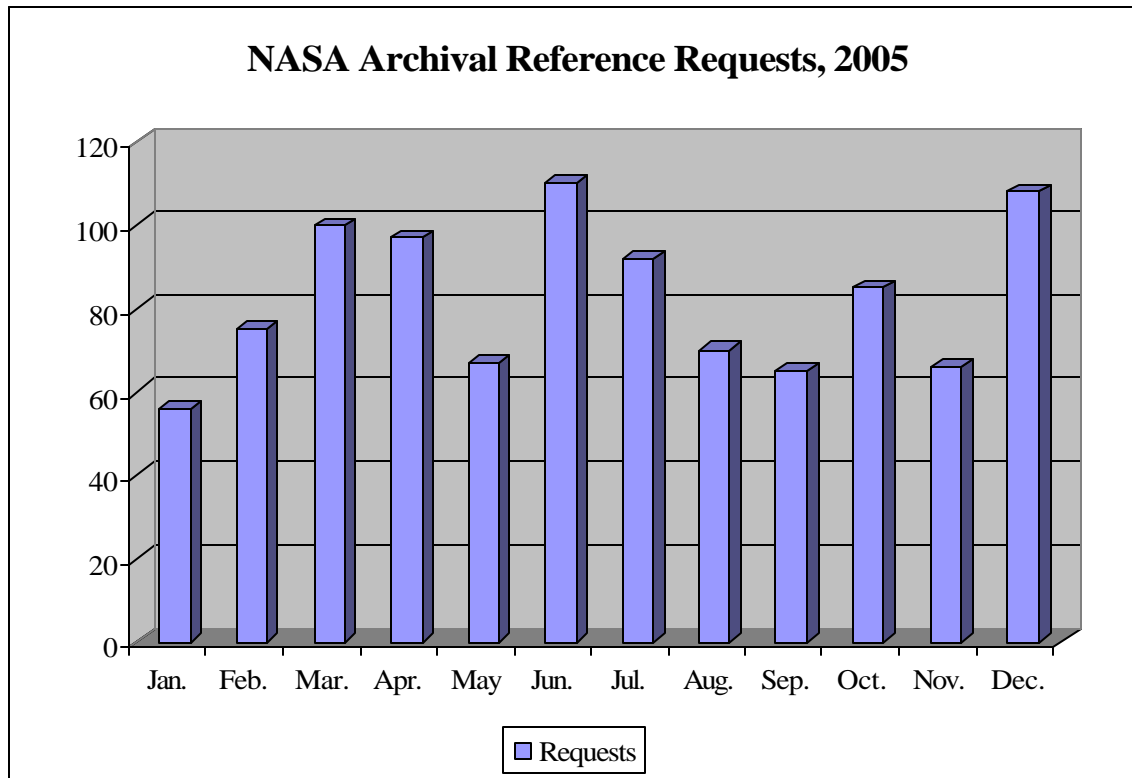
James R. Hansen, Jeremy R. Kinney, Bryan Taylor, and Larry Lee James received the 2005 Eugene S. Ferguson Prize from the Society for the History of Technology for *The Wind and Beyond: A Documentary Journey into the History of Aerodynamics in America* (NASA SP-2003-4409), which is the first of six projected volumes in *The Wind and Beyond* series. Inaugurated in 2005 to honor the memory of one of the founders of SHOT, the Ferguson Prize honors reference works that hold promise for supporting future scholarship in the history of technology.

III. NASA Historical Reference Collection

Reference Requests

During calendar year 2005, NASA History Division personnel answered a total of 991 research requests from governmental, educational, and private organizations on a diversity of topics. History Division personnel also provided research services to approximately 432 on-site researchers using the Historical Reference Collection. Table 1 displays the total number of information requests NASA History Division archival personnel handled per month during calendar year 2005.

TABLE 1



The advance of e-mail technology has resulted in significant annual increases in the number of queries the History Division receives from across the world. Such queries represent a growing workload for NASA History Division personnel. We remain committed to providing quality, timely service for those seeking information about NASA's history, but the challenges of doing so are becoming increasingly difficult as the number of requests continue to rise.

While the History Division has been able to reduce the amount of time given to each information request through greater efficiency, the annual workload for information requests requires more than two full-time equivalent personnel. Since the History Division does not have these resources in-house, we rely on student interns for some of this work, but the rise in the workload is a matter that requires continued attention if we are to meet NASA's obligations to the public.

Visitors

Although most reference requests arrive by email or telephone, the History Division has hosted researchers from a number of the Field Centers, including Ames Research Center, Dryden Flight Research Center, Jet Propulsion Laboratory, Johnson Space Center, Kennedy Space Center, Langley Research Center, Marshall Space Flight Center, and the United Space Alliance. Local visitors to the History Division included researchers from American University, George Washington University, Georgetown University, George Mason University, the University of Maryland, the National Air and Space Museum, JR Technical Publications, ASK Magazine, the Federation of American Scientists, the National Academies, and Technical Translation

Incorporated. Out-of-town researchers hailed from Syracuse University, Auburn University, the University of Pennsylvania, the University of Alabama (Huntsville), University of North Dakota, Princeton University, MIT, Arizona State University, the Georgia Institute of Technology, Monmouth University (New Jersey), Barnard College, Dowling College, and LeMoyne College (New York), the University of California (Santa Barbara), Rice University, Draper Labs, Lightworks Production Group, the U.S. Air Force, the Stafford Air and Space Museum, Random House, American Academy of Arts and Sciences, and Times Books. Our international visitors came from the University of British Columbia, York University (Toronto), the University of Wales, Osaka University, Tel Aviv University, the University of Southampton (England), and Apogee Books (Canada)

Acquisitions

The NASA History Division received approximately 72 cubic feet of material from various sources during 2005. Below are highlights of some of the donations:

- CD of Apollo 8 and Apollo 12 air-to-ground Recordings.
- Semiannual Report of the Inspector General, April 1 - September 30, 2004, from the IG's office.
- Half a cubic foot of CAIB meeting minutes, February - August 2003, from Office of Space Operations.
- Half a cubic foot of material on US/USSR Joint Working Group on Solar Terrestrial Physics, 1988-95, from the Science Office.
- Two dissertations -- one prepared by a University of Tübingen (Germany) student on the US space program in public discourse, 1961-72, and the other written by a University of Pennsylvania student comparing engineering practices in the Japanese and American space programs, 1958-80. Both students used our archive collection extensively.
- A number of video tapes from NASA TV, including:
 1. O'Keefe farewell ceremony in the Headquarters auditorium, Feb, 11, 2005
 2. House Science Committee hearing on the NASA budget with Acting Administrator Fred Gregory, Feb. 27, 2005
 3. Senate Confirmation hearing for nominee Mike Griffin, April 12, 2005
 4. NASA Update with Administrator Mike Griffin, April 14, 2005
 5. Two programs on the Mars Exploration Rovers that aired on public television
- Seven cubic feet of Educator Astronaut Program files and 2 cubic feet of Teacher in Space Program files, both from the Office of Education.
- Micro Electro Mechanical Systems (MEMS) oral histories, including transcripts, audio CDs, and related materials from the JSC oral historians.

- One cubic foot of former Administrator Sean O’Keefe’s books, plaques, photos, and posters from the Office of Public Affairs.
- Half a cubic foot of early NACA/NASA legislative history files (Space Act, lease of buildings, wind tunnels, renaming of MSC as LBJ Space Center), ca. 1949-73, donated by the Office of General Counsel.
- Three cubic feet of Space Station Freedom files, 1989-93, from the Office of Space Operations.
- Fourteen cubic feet of material from former NASA official Frank Hoban dealing with program and project management.
- Eighteen cubic feet of material, consisting primarily of publications and reports, from the Office of the Chief Scientist.
- Fourteen cubic feet of copies of Shuttle Mir documents from the JSC Archivist. The originals have been transferred to the National Archives – Southwest Region facility in Texas.
- Three cubic feet of Space Station Freedom book contract materials recalled from the Federal Records Center at Suitland, Maryland.
- Five cubic feet of astrobiology files recalled from the FRC at Suitland by an individual in the Science Office and donated to the History Division.

Processing Activities

The History Division staff processed (i.e., arranged, described, catalogued, and preserved) a number of the collections listed above in 2005. Other collections were placed in backlog for processing at a later date. History Division staff processed 131 cubic feet of material in total. Items processed include:

- NASA Advisory Council Files, a loan from the Advisory Committee Management Division, Office of External Relations. The History Division staff reviewed and copied selected items of historical interest from this collection and assisted with the transfer of the official records to the National Archives.
- Materials from a variety of Headquarters division offices, including the Office of Applications, the Office of Advanced Research and Technology, the Microgravity Science and Applications Office, and the Procurement Office.
- Additions to the Space Shuttle, Space Station Freedom, and International Space Station collections.
- Additions to the Key Personnel Announcements collection.

- Report of the Committee on the Future of the U. S. Space Program (Augustine Report).
- Additions to the NASA Advisory Council chronological correspondence files.
- Books, plaques, photos, and posters given to former Administrator Sean O’Keefe and donated by the Office of Public Affairs.
- Records of Administrator Sean O’Keefe. This collection is housed at Headquarters and eventually will be transferred to the National Archives.
- Life sciences material collected by scientist and author Mae Mills Link.
- Early legislative history files (Space Act, Unitary Wind Tunnel, and Renaming the Manned Spaceflight Center after President Johnson).
- X-vehicle collection.
- Gravity assist propulsion files.
- Equal Employment Opportunity files.
- Publications, reports, and files from the Chief Scientist’s Office.
- Early human spaceflight files.

Archival Management Activities

With assistance from a committee composed of archivists from several Center history offices, the Chief Archivist conducted a study of archival management practices. The committee’s final report compares archival practices Agency-wide, highlighting similarities and differences at each Center. The Chief Archivist also worked with Headquarters IT staff to upgrade the History Division’s archival database, assisted with the review and disposition of the records of several former officials-in-charge, and determined and/or revised archive access policies and procedures.

Additionally, she completed a call for submissions for an Agency-wide oral history inventory and another call for updating chapters in *Research in NASA History* on NASA History archival holdings and access procedures for researchers. She also provided guidance to the interns as they worked on reference requests and small processing projects.

NASA History Division Online Catalog (Database)

The current database, which began operating in May 1998, alleviates space constraints in the NASA History Division by storing discreet parts of the NASA Historical Reference Collection. Thanks to the database’s full-text searching capability, historical materials are more

readily available to History Division staff and others. Ongoing efforts to scan and electronically store historically significant documents from paper collections maintained in the NASA Historical Reference Collection accomplish several tasks, including:

- Preserving Agency records that are critical to understanding the Agency and its historical development.
- Allowing the disposition of paper originals to the National Archives where they belong in keeping with the Archive's mission of maintaining a record of the activities of the federal government.
- Freeing up space within the NASA History Division to allow for further collection of historically significant Agency documents.
- Making historical materials available to a wide body of researchers from NASA, other government agencies, the academic community, and the public.

Work began in 2005 on the digitization of 35 cubic feet of Current News articles. This task will be ongoing for some time since this collection spans NASA's 48-year history. To date, almost a third of the collection has been digitized. This effort received high praise recently from one of our contractors who was able to sit down at a computer and search ten years worth of news articles in a fraction of the time it would have taken to search manually. Additionally, History Division staff received electronic copies of more than 150 speeches given by former Administrator O'Keefe and successfully moved these into the database, making them full text searchable.

During the year, History Division staff scanned and checked into the Document Management System (DMS) nearly 24,000 items and created 2,778 cataloging records describing these documents. Approximately a dozen database records describing our non-scanned holdings were updated, and 54 new cataloging records were created as hardcopy materials were subsequently added to the reference collection. Through these efforts, we have succeeded in making NASA historical materials more widely available to NASA staff and visitors.

IV. Oral History Projects

Recording, transcribing, and permanently accessioning in the NASA Historical Reference Collection the recollections of NACA/NASA personnel has been one of the most important activities undertaken by the NASA History Division since its inception in 1959. Many NASA oral histories originated when historians interviewed participants to obtain firsthand information to facilitate writing their volumes in the NASA History Series. Other oral histories can be more properly categorized as exit interviews. The NASA Historical Reference Collection holds over 2,000 oral histories on a widely divergent set of individuals. They include oral histories focusing on major projects, organizational culture, engineering practice, program management, aerospace medicine, and other specialized topics.

Other NASA centers also have large collections of oral histories. The Johnson Space Center, for example, has a collection of over 2,000 oral histories. While the majority of the oral histories available from NASA have been conducted during the course of writing specific historical works—increasingly so as time progresses—the Agency has undertaken oral history

for its own sake as a means of preserving knowledge. Supporters of this effort often have been motivated by the realization that the first generation of Agency officials are passing from the NASA scene. Accordingly, several discrete projects have been undertaken to record the recollections of key officials.

These oral history efforts often record the entire careers of individuals covering a broad spectrum of activities. They are similar to the oral histories of Columbia University's Oral History Research Office and to the senior officer oral history programs of the various armed services. In every case, these works are transcribed, edited, and placed in the history collections of the Agency. Often they are copied and retained permanently in various presidential libraries and university special collections departments.

Administrators Oral History Project

Started in 2001, this effort gathers information and knowledge from individuals who have served in major administrative roles for the Agency regarding organizational culture, methodology, program management, decision-making rationales, and details of events that occurred during that person's tenure. The following oral histories have been completed to date:

James Beggs – NASA Administrator, 1981-1985; Julian M. Earls – Director of NASA Glenn Research Center, 2003-2005; Harold Finger – NACA Engineer and Director, Nuclear Systems, NASA Headquarters, 1958-1967; Edward A. Frankle – General Counsel, NASA Headquarters, 1988-2001; Arnold Frutkin – NASA Assistant Administrator for International Affairs, 1963-1978; Carolyn Huntoon – NASA Center Director, Johnson Space Center, 1994-1995; Dr. Wesley Huntress – NASA Associate Administrator of the Office of Space Science, 1993-1998; Dr. Charles Kennel – NASA Associate Administrator for Mission to Planet Earth, 1994 - 1996, and former Chair of the NASA Advisory Committee; Joe Rothenberg – NASA Associate Administrator, Office of Space Flight, 1998-2001, and Director of Goddard Space Flight Center, 1995-1998; Courtney Stadd – Former NASA Chief of Staff and White House Liaison; J.R. Thompson – NASA Deputy Administrator, 1989-1991, and Director Marshall Space Flight Center, 1986-1989; and Richard Truly, NASA Administrator, 1989-1992, and Associate Administrator, 1986-1989.

Oral History Projects at Johnson Space Center

The oral history project team collected interviews with former members of the National Advisory Committee for Aeronautics (NACA) during its reunion, which was held in September 2005. The team conducted thirteen audio interviews that reflect the history of four NACA research laboratories. The team also gathered more than 50 “written” oral history packets submitted by attendees.

Last year, the team documented the history of Micro-Electromechanical Systems (MEMS) to identify and highlight the societal benefits of this technology. The team conducted interviews at Ames Research Center with researchers associated with the MEMS project more than thirty years ago. The NASA Headquarters History Division is currently sponsoring an historical study of the MEMS project.

The Johnson Space Center is in its ninth year of sponsoring an oral history project. More than 1,000 hours of history have been recorded from almost 400 people. A minimum of 50 hours are added each year. Updated on a quarterly basis, the transcripts from the interviews are placed on the NASA Johnson Space Center History Portal website. Also available are the transcripts from the following oral history projects sponsored by the NASA Headquarters History Division: Administrators; Herstory; Aviatrix Pioneers; Ballistic Missile Development Pioneers (and in the near future, the NACA interviews). Available since September 2002, the website, located at www.jsc.nasa.gov/history, also contains links to the database of the JSC History Collection.

NASA Career Oral History Project

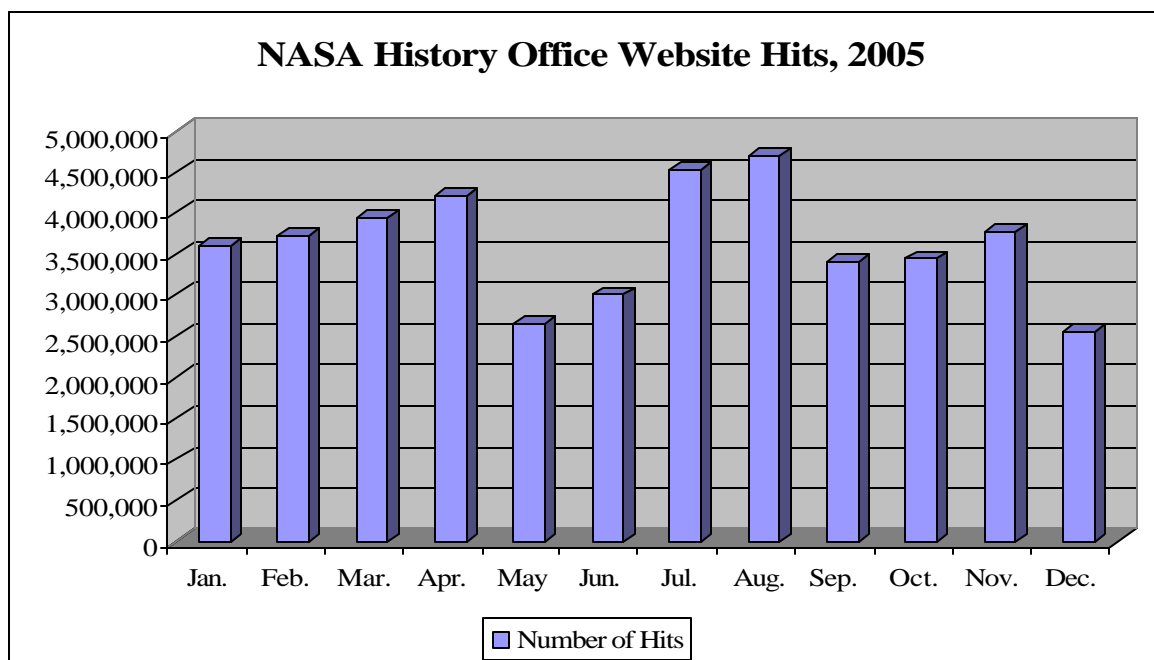
Since 1994, the NASA History Division has supported oral history interviews documenting significant aspects of NASA's spaceflight and other major programs. More than 100 interviews have yielded at least 500 hours of recorded material. Interviewees have included: Jimmy Carter, Aaron Cohen, Charles Donlan, Lennard Fisk, James Fletcher, Gerald Ford, Robert Frosch, Noel Hinnens, John Hodge, George Low, Hans Mark, Story Musgrave, Dale Myers, Thomas Paine, Frank Press, Robert Seamans, James Webb, and Casper Weinberger.

Career oral histories conducted in 2005 by the Johnson Space Center History Office included interviews with Joe Allen, Bonnie Dunbar, Charlie Walker, Wayne Koons, Anne Accola, William Lenoir, John Blaha, Mike Fox, Jay Greene, Fred Gregory, Hal Beck, Bob Heselmeyer, Denny Holt, Don Lind, Chuck Pace, and Mike Reynolds.

V. NASA History Division Web Site

The NASA History Division has been working for the last several yeas to place as much information as possible online in an easy-to-navigate public web site. During 2005, the NASA History Division substantially increased its electronic resources, especially on the World Wide Web. Our main page remains <http://www.history.nasa.gov>. The generic History Division e-mail account for public information requests is histinfo@hq.nasa.gov. In addition to being one of the largest NASA web sites, the NASA History Division web site continues to be one of the most popular NASA Headquarters sites, as seen from Table 2, which shows the number of hits to the site per month.

TABLE 2



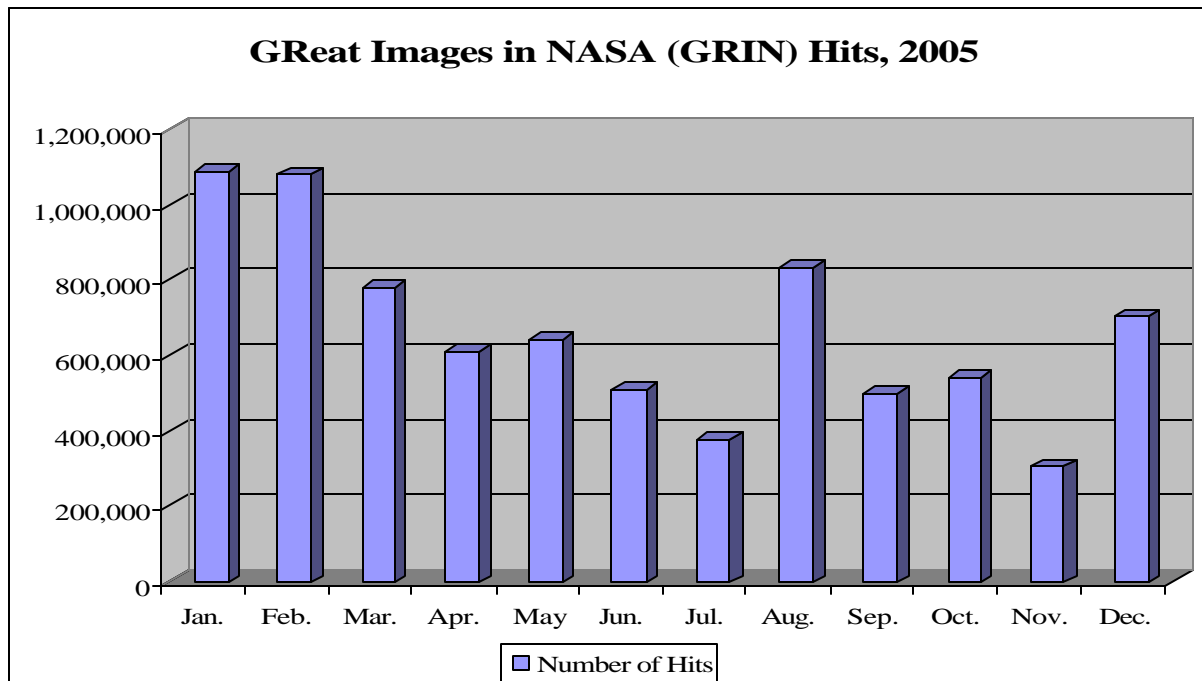
The NASA History Division web site received 43,536,299 hits in 2005. The History Division also added seven significant, new web pages or sites in the past year. While Field Centers or other NASA offices put together and/or hosted some of these new sites, outside volunteers created most of these new sites. Volunteers have scanned and formatted for the web a number of book-length publications, most of which are out of print and thus not easily found in hard copy elsewhere. History Division interns and the NASA Headquarters Printing and Design Office also made significant contributions to improve the NASA History web presence.

Great Images in NASA (GRIN)

The NASA History Division continues to build its online resource for historical photographs. Great Images in NASA, which is online at <http://grin.hq.nasa.gov>, features over

1,000 historically significant black and white and color images in four resolutions, ranging from thumbnail-sized to high resolution images that are suitable for publishing. Public users may download any of these images without charge. While other somewhat similar databases exist online, GRIN is unique in its format and is quite popular, as indicated by the 7,971,714 hits it has received this year. The History Division hopes to add many more images to GRIN in the future. Table 3 illustrates the monthly GRIN hit breakdown for 2005.

TABLE 3



Online History Publications

Dawson, Virginia P., and Mark D. Bowles, *Taming Liquid Hydrogen: The Centaur Upper Stage Rocket, 1958-2002* (NASA SP-2004-4230), available online at <http://history.nasa.gov/SP-4230.pdf>.

Dawson, Virginia P., and Mark D. Bowles, eds., *Realizing the Dream of Flight: Biographical Essays in Honor of the Centennial of Flight, 1903-2003* (NASA SP-2005-4112), available online at <http://history.nasa.gov/sp4112.pdf>.

Dick, Steven J., and Keith Cowing, eds., *Risk and Exploration: Earth, Sea, and Stars* (NASA SP-2005-4701), available online at <http://history.nasa.gov/SP-4701/riskandexploration.pdf>.

Aeronautics and Space Report of the President Fiscal Year 2004 Activities, available online at <http://history.nasa.gov/presrep2004.pdf>.

A new site offers a wealth of information about the Hubble Space Telescope, including a brief history, a bibliography, a chronology, related reports and articles, and relevant web links. It is online at <http://history.nasa.gov/hubble/index.html>.

The Apollo 12 Flight Journal is online at <http://history.nasa.gov/ap12fj/index.htm>. This remarkable reference tool is similar to the Flight Journals for the Apollo 8, 15, and 16 missions and contains complete, annotated mission transcripts, as well as a bounty of other useful information.

To commemorate the 30th anniversary of the Apollo-Soyuz Test Project, the NASA History Division posted a special site at <http://history.nasa.gov/30thastp/index.html> on the Web. This site features a wealth of information including biographies, a basic timeline of events, a bibliography, audio-visual clips, and more.

Why We Explore Essays

The Chief Historian continued his series of "Why We Explore" essays at http://www.nasa.gov/mission_pages/exploration/whyweexplore/index.html. Seventeen essays have now appeared in the series, which draws parallels with the Age of Discovery in the 15th and 16th centuries, and tells the story of Space Age voyages further and further from our home planet.

VI. Special Events

Critical Issues in the History of Spaceflight Conference, March, 2005

The NASA History Division held a meeting entitled "Critical Issues in the History of Spaceflight," on 15-16 March 2005, at the National Air and Space Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia. The meeting, co-sponsored by the Space History Department of the National Air and Space Museum, brought together historians and historically minded political scientists and sociologists to assess the current state of space history and to identify issues in the field for further exploration.

The conference was divided into six themes: motivations for spaceflight, human and robotic exploration, NASA and external relations (the aerospace industry, Department of Defense, and international cooperation), access to space, NASA cultures, and the state-of-the-art in space history. In addition to the important ideas and questions that arose from individual presentations, all of the sessions generated discussion about methodology and the proper boundaries of scholarship in the field of space history. A detailed proceedings of the meeting will be published in June 2006.

Publication of Boris Chertok, *Rockets and People*, volume I, March 2005

Early 2005 saw the publication in the NASA History series of the English translation of volume I of Boris Chertok's *Rockets and People*. Chertok participated for six decades in the Soviet and Russian aviation and space programs, including many years as the Deputy to the

founding figure of the Soviet space program, Chief Designer Sergei Korolev. Series editor Asif Siddiqi spoke about the project at a ceremony at NASA Headquarters 14 March 2005. Other speakers included William Readdy, Associate Administrator for the Space Operations Mission Directorate (which funded the translation), and Jesco von Puttkamer, the space station senior engineer who initiated and has helped to sustain the project.

On 30 March, another memorable event took place in Moscow, with Chertok himself present at age 93. Among the 100 attendees were top management from Roskosmos (the Russian Federal Space Agency) and RSC Energia, many veteran cosmonauts (e.g., Alexandrov, Popovich, Savynikh, Baturin), and distinguished guests including Natalia Koroleva, Chair of Surgery at the Moscow Medical Academy and daughter of Sergey Korolev.

Among the speakers at the dedication ceremony was the U. S. Ambassador to Russia, Alexander Vershbow, who pointed to the publication of Chertok's book in the United States as "more evidence of the growing interest in Russia's history and enormous expertise in space exploration." After recalling the history of Soviet/Russian and U. S. cooperation in space, Ambassador Verhsbow noted that "this longstanding cooperation is based on mutual respect and admiration for the capabilities brought to the table by the other side. In this way, we believe that we have forged a true partnership. This has been most recently demonstrated since the Space Shuttle Columbia accident. While the Shuttle fleet has been grounded for the last two years, Russia has been providing the International Space Station with crews and cargo, keeping the station human-tended and productive. We all look forward to the Shuttle's safe return to flight in May of this year." The Ambassador also noted that "the Vision for U.S. Space Exploration announced by President Bush over a year ago sets many challenging tasks for NASA. One of the objectives of this initiative is to promote international cooperation in the exploration of the moon, Mars, and beyond."

Chertok himself gave a lively address, expressing his surprise and delight that the Americans were taking such a renewed interest in Soviet/Russian space history, and called this revelation a "second discovery of America."

The Chertok event and the attending remarks point to an important role for the NASA History Division, and one that fits well into its parent organization, the Office of External Relations, which has responsibility for international relations. By helping to increase understanding of the past, history strengthens ties among countries in the present and the future. The three additional volumes of Chertok that will appear over the next three years will continue to foster good relations. A variety of other projects are possible, including translation of Koroleva's two-volume biography of her father.

Dibner Seminar on Cosmic Evolution and Astrobiology, May 2005

The History Division co-sponsored a seminar, together with the Dibner Institute for the History of Science and Technology at MIT, on "Cosmic Evolution and Astrobiology." Held 15-22 May 2005 at the Marine Biological Laboratory in Woods Hole (one of the sixteen NASA Astrobiology Institute teams), the seminar brought together students, historians, philosophers, and scientists for a week of intensive discussions.

Among the highlights, NASA's Planetary Protection Officer, John Rummel, opened the meeting with a presentation about astrobiology and the high-stakes need to protect "all of the planets all of the time," including Earth, against biological contamination from another planet. Historian Bernard Lightman discussed the 19th century origins of the idea of cosmic evolution, the guiding principle for NASA's space science program and much of the astronomy done today, and Steve Dick traced the idea through the 20th century. Other historians (Jim Strick and Iris Fry) discussed the history of origins of life research and SETI. A stellar array of scientists described their work on extremophiles (Lynn Rothschild), endosymbiosis (Lynn Margulis), the three domains of life (Carl Woese), and extrasolar planets (Phil Crane). Philosopher Carol Cleland tackled the always-controversial question "what is life?" All the while, the students kept the proceedings lively with a constant barrage of questions.

The meeting was dedicated to the memory of MIT physicist Philip Morrison, who died on 22 April 2005. Presentations are posted online at the Dibner website at <http://dibinst.mit.edu/DIBNER/DIConferences/WoodsHole/WoodsHoleTopic.htm>.

VII. Professional Activities

Members of the History Division staff engaged in a variety of professional activities germane to aerospace history during 2005.

Chief Historian Steven Dick was elected to the International Academy of Astronautics, and was inducted at the November meeting of the American Astronautical Society in Houston. He traveled to Moscow in March to participate in the ceremony described in Section VI of this report, on the occasion of the publication of the English translation of Boris Chertok's *Rockets and People*. In July, he participated in the Workshop on History of Astronomy at the University of Notre Dame, return to flight activities for STS-114, and World Year of Physics events in Italy. He attended the meeting of the Division of Planetary Science of the American Astronomical Society, held 5-9 September 2005 in Cambridge, England, where he presented a paper on "NASA and the Search for Planetary Systems: An Historical Perspective." He participated in a meeting in Paris on "French-American Relations in Space, 1957-1975," organized by the Institut Francais d'Histoire de l'Espace and sponsored by the French Minister of Foreign Affairs. While in Moscow Steve visited Star City, home of the Gagarin Cosmonaut Training Center, where he sat in a Soyuz simulator, toured the neutral buoyancy facility, and viewed many historic facilities and artifacts. He also visited the Russian Mission control where the MIR space station had been tracked, and where the International Space Station is currently tracked in cooperation with NASA Mission Control at Johnson Space Center. Finally, he visited the production facilities of the Rocket Space Corporation Energia, which also house an excellent museum that includes Gagarin's charred capsule.

Jane Odom attended the Society of American Archivists' annual meeting in New Orleans in mid-August. She attended sessions on access, standardized metrics for assessing use and user services, reference services and the technology explosion, and copyright and digitization, as well as a session reporting the results of a census of the archival profession. John Hargenrader attended a one-day Society of American Archivists-sponsored Basic Archives training course in State College, Pennsylvania, in March, while Colin Fries participated in a two-day SAA-sponsored Understanding Photographs workshop held at the Library of Congress in November.

Glen Asner participated in two conference sessions at the annual meeting of the Society for the History of Technology in Minneapolis in November. He spoke about his personal experiences working for NASA in a special session on careers in history outside of academia. He also presented a paper with Babson College Professor Gaurab Bhardwaj on the history of thermoelectric materials research. Also in November, Glen presented a paper with Steve Garber at the National Air and Space Museum on the history of NASA's Decadal Planning Team. Glen attended a number of conferences and meetings throughout the year, including a congressional briefing for NASA, a conference at the National Defense University on "Eisenhower and National Security for the 21st Century," and the annual meeting of the Oral History Association of the Mid-Atlantic Region.

Steve Garber graduated in June from the U.S. Department of Commerce Science Technology Fellowship (ComSci) Program. Through the ComSci program, Steve gained greater familiarity with national and international issues relating to the development, application, and management of science and technology. Steve also presented a paper with Glen Asner on the history of NASA's Decadal Planning Team and the formulation of President Bush's Vision for *Space Exploration* at the National Air and Space Museum on 17 November 2005.

Nadine Andreassen coordinated special events, including the NASA History Program Review at Johnson Space Center and a reception for Boris Chertok's *Rockets and People* at NASA Headquarters. She also organized and staffed booths at the Wallops 50th anniversary celebration and the joint SHOT/HSS meeting in November.

VIII. NASA History Program Review, 2005

Since the early days of NASA, the History program has held periodic meetings with Center history points-of-contact, outside scholars, and aerospace professionals to assess the state of the program. These annual reviews have been exceptionally important in helping to shape the direction and even the nature of the NASA History Program. The meeting provides an opportunity to draw together individuals working on historical issues at NASA, to reflect on the nature of the program, and to plan its future.

The NASA History Division held its annual history program review at the Johnson Space Center (JSC) 5-7 April 2005. Staff from the NASA History Division, history points-of-contact from the various Field Centers, and informal outside advisers attended this meeting and discussed the various history activities underway and planned throughout the Agency. The meeting included joint sessions with NASA records managers. The agenda for this program review included:

- An overview of the NASA Headquarters history program
- History publications status report
- Plans for upcoming events and conferences
- An overview of National Archives and Records Administration resources
- A presentation on One NASA goals
- A forum on ways to improve center and Headquarters history programs

Program review attendees also toured the Johnson Space Center and the JSC Archives at the University of Houston, Clear Lake. The JSC tour included visits to three mission control centers and the Sonny Carter Training Facility's Neutral Buoyancy Laboratory.

IX. Personnel

Interns

The NASA History Division had several new and returning interns in 2005. The office was at full intern capacity throughout the year. Elizabeth Suckow, a master's student in history at American University, joined the History Division in the spring. She assisted with two History Division book projects, compiled finding aids for Garber and Asner's DPT files, developed content for the NACA anniversary web site, and updated the Apollo-Soyuz Test Project Anniversary web site. The History Division also benefited in the spring from the assistance of intern Annette Lin, a junior majoring in science and technology studies at Cornell University who came to the History Division through the Cornell-in-Washington program. Annette helped prepare the NEAR monograph for publication and entered a large number of photographs in the GRIN database.

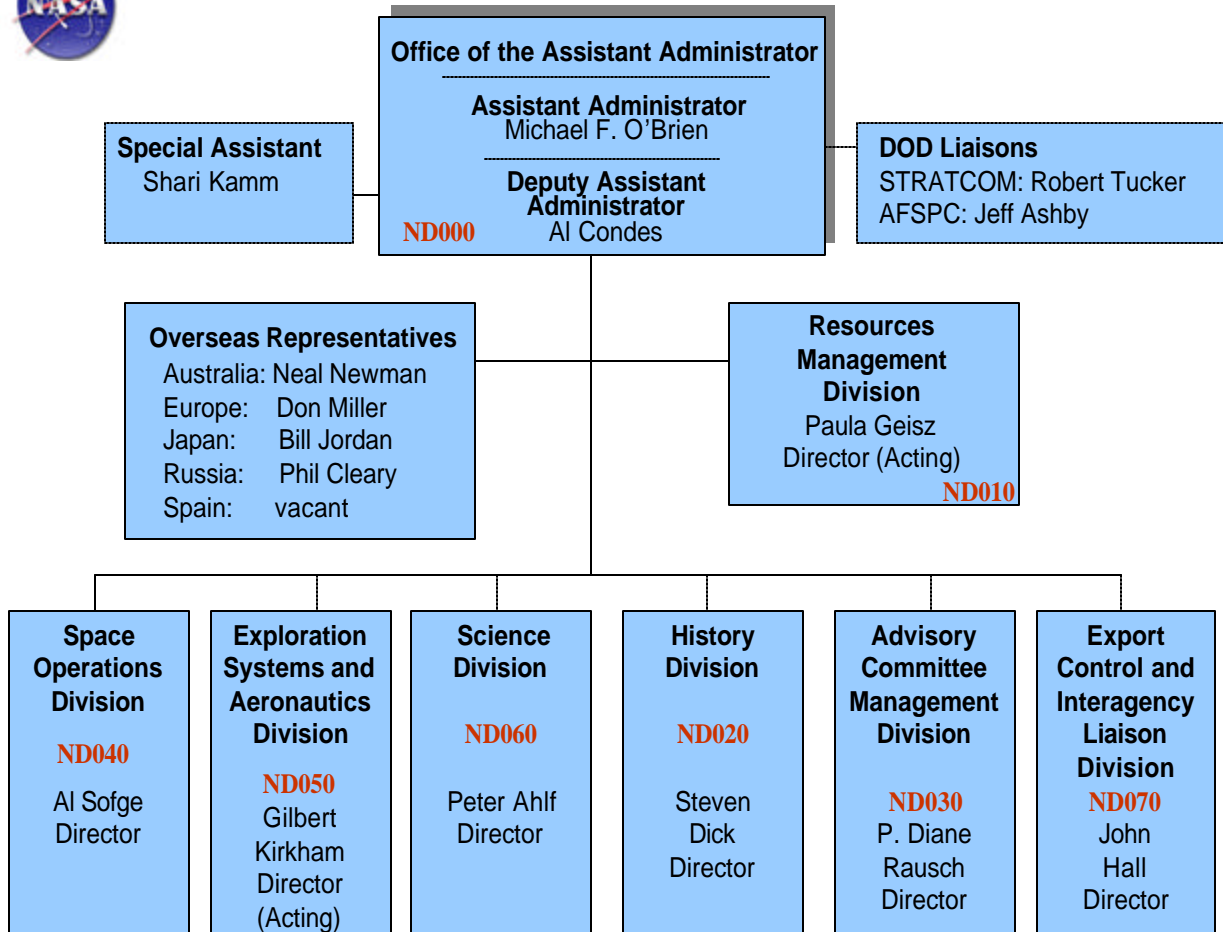
Mike Makara, a senior at Virginia Tech who had served as an intern in the summer 2004, joined the History Division again in the summer 2005. Mike assisted Garber and Asner with their study of the Decadal Planning Team, including writing part of an early draft chapter on the impact of DPT on President George W. Bush's *Vision for Space Exploration*. Mike also contributed to the *Aeronautics and Space Report of the President for FY 2004*.

Giny Cheong, a master's student at George Mason University, interned with the History Division throughout the year, as a volunteer intern in the spring and continuing in a federal internship program over the summer. Among her many contributions to the History Division, Giny assisted with the publication of James Hansen's *The Wind and Beyond*, volume II, and Boris Chertok's *Rockets and People*, volume I. She helped to update the Apollo-Soyuz Test Project (ASTP) web site. Giny also served as editor of *News and Notes*, organized book distribution, and coordinated special events. She completed her work as an intern in our office in December and moved to the Office of Program Analysis and Evaluation (PA&E) within the Federal Student Education Employment Program.

Interns Jennifer Chu and Gabriel Okolski joined the History Division in the fall 2005. An undergraduate at the University of California, Davis, majoring in political science and communications, Jennifer helped update the GRIN database and assisted with preparations for the publication of the second volume of Boris Chertok's *Rockets and People*. Gabriel, an undergraduate student at George Washington University, assisted with the publication of *The Galileo Mission* by Michael Meltzer and *Science in Flux* by Mark D. Bowles. Gabriel also created a web site on the history of the Hubble Space Telescope, which is located at <http://www.history.nasa.gov/hubble/index.html>.

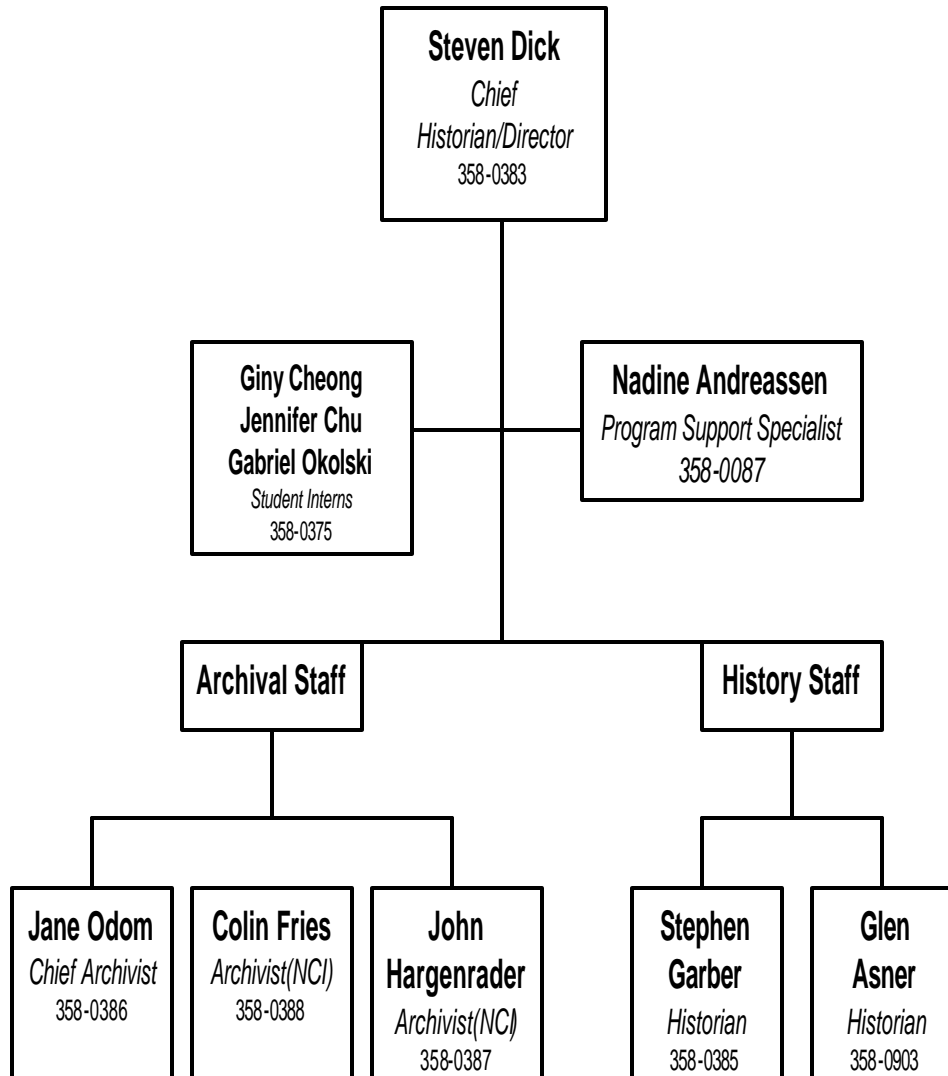


Office of External Relations



History Division–2005

Office of External Relations



Appendix A.
History Division
Office of External Relations
National Aeronautics and Space Administration
Five-Year Strategic Plan, 2005-2009
29 April 2005

I. Foreword

The NASA History Division, Office of External Relations, NASA Headquarters, records and preserves the history of the Agency through historical studies based on primary research. It maintains the NASA Historical Reference Collection, and provides responses to historical inquiries. It provides Headquarters leadership with information, analysis, and perspective essential for informed planning, policy development, and decision making. It supports and coordinates history programs at the NASA Centers. The History Division also studies the societal impact of NASA's work through rigorous historical methods.

T. Keith Glennan, the first Administrator of NASA, established the NASA history program in 1959, the year after NASA's founding.¹ This action was an early recognition of the need to record and analyze NASA's historic mission. The publication of historical research is one of the ways NASA responds to the provisions of the National Aeronautics and Space Act of 1958, as amended, that requires NASA to "provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof" [42 U.S. C. 2473 (a)(3)], and to provide for "long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes" [42 U.S.C. 2451 (d)(4)].

As we approach the 50th anniversary of the Space Age in 2007, and the 50th anniversary of NASA in 2008, history should play an important role both in the celebration of the events of the past 50 years and in their scholarly analysis and societal impact.

II. Vision and Mission, and Core Values

Vision

Expert historical knowledge is essential for an understanding of NASA's accomplishments, and is vital for lessons learned and informed and effective decision making. The research, writing, and publications of the NASA History Division will serve as vital resources for these purposes, as well as providing historical facts and perspective to the general public.

Mission

¹ The history of the NASA History Division is given in Roger D. Launius, "NASA History and the Challenge of Keeping the Contemporary Past," *The Public Historian*, 21, no. 3 (1999), 63-81.

To ensure, through research, writing, and the strategic goals herein, a sound and thorough understanding of the history of NASA in carrying out its mission, as well as the impact of NASA's work on society.

Core Values

In addition to striving for the personal attributes expected of every NASA employee, History Division personnel aim for excellence in providing objective, constructive, accurate and in-depth historical research, writing, and analysis.

III. Strategic Goals

- 1. Research, Writing and Publication.** Record, research, publish, and disseminate NASA history based on primary and secondary research. These historical materials should be prepared in accordance with the highest scholarly standards but also be accessible to the educated lay reader.
- 2. Archival Management.** Maintain and provide access to the Historical Reference Collection in order to fulfill the mandate of the National Aeronautics and Space Act calling for the widest possible dissemination of information on aeronautics and astronautics.
- 3. Leadership Support.** Provide NASA leaders historical information, analysis, and perspective vital to their planning, policy development, and decision making efforts, including lessons learned.
- 4. Development, Support and Coordination of Center History Programs.** Support, enhance and coordinate those history and archival programs already in existence at NASA Centers, and encourage the development of history and archival programs at those Centers that lack them.
- 5. Societal Impact Studies.** Undertake historical studies of the impact of NASA's programs, and aeronautics and space flight in general, on society, including its commercial, economic, philosophical, educational, cultural and local impacts.
- 6. Advancement of Knowledge and Professional Development.** Contribute to the advancement of knowledge and the professional development of students and scholars in the social sciences and humanities through conferences, fellowships, exchange programs, internships, and research, and by maintaining strong relations with professional societies, academic departments, and other federal history offices.
- 7. Communication and Outreach.** Facilitate internal communications and public outreach related to NASA history.
- 8. Queries and Reference:** Respond to reference requests for historical information in a timely and effective manner. Reference requests come from NASA staff, scholars, academics, government employees, and the general public. In compliance with the Agency's strategic plan to communicate knowledge to the public in a timely manner, responses to queries will meet or exceed a 15-day response turnaround 90% of the time.

IV. Objectives

Strategic Goal 1: Research, Writing and Publication

Record, research, publish, and disseminate NASA history based on primary and secondary research. These historical materials should be prepared in accordance with the highest scholarly standards but also be accessible to the educated lay reader.

Objective 1.1

Support the NASA mission by maintaining and expanding the NASA History Series of publications including books, monographs, and electronic media.

Objective 1.2

Maintain and expand the NASA History web sites.

Objective 1.3

Base historical studies produced by the NASA History Division on primary documents, including oral histories, to the greatest extent possible. Support a robust oral history program consistent with available funding.

Objective 1.4

Oversee the production of these historical studies, from research to writing, peer review, editing, typesetting, publishing, and distribution. Streamline and improve the production processes.

Objective 1.5

Strive for accuracy, objectivity, candor, and the highest standards of writing, editing, and historical methods.

Objective 1.6

Seek out topics for historical research that have not been heavily covered already and that can inform and enlighten our internal and external audiences.

Objective 1.7

Seek out innovative methods for distribution of publications to the widest possible audience (see also Strategic Goal 7).

Strategic Goal 2: Archival Management

Maintain and provide access to the Historical Reference Collection in order to fulfill the mandate of National Aeronautics and Space Act calling for the widest possible dissemination of information on aeronautics and astronautics.

Objective 2.1

The Chief Archivist, in consultation with the Chief Historian, will determine archival policies on the management of the Historical Reference Collection. Upon request, the Archivist and/or Historian will participate in the review of draft records schedules.

Objective 2.2

Acquire historically significant materials to support the Agency and, more broadly, the national and international communities with interests in space history. Collect documents, oral histories, books, and other materials, in accordance with NASA records management policy. Work cooperatively with the Headquarters Records Manager to preserve historically valuable materials. Refer potential non-NASA donors to suitable external repositories.

Objective 2.3

Appraise collections for historical value, eliminating material with little or no value to researchers.

Objective 2.4

Arrange, describe, and catalog all materials held in the Historical Reference Collection, providing preliminary descriptions of all newly acquired and unprocessed materials. Add descriptive information to the History Division Online Catalog (database).

Objective 2.5

Provide timely and effective reference service to NASA staff and visitors and in response to mail, email, and telephone requests. Provide copies of historically significant documents and oral histories to researchers. Facilitate access to complementary collections at other institutions.

Objective 2.6

Digitize selected historical collections in an effort to increase their accessibility.

Objective 2.7

Intensify preservation efforts for materials with high research and historical value.

Objective 2.8

Provide read only database access to historians and archivists at the Centers. Release to the public on DVD, a large number of scanned documents from the database. In compliance with the Agency's strategic plan to communicate knowledge to the public, one new electronic document (CD/DVD) will be produced per year.

Strategic Goal 3: Leadership Support

Provide NASA leaders with historical information, analysis, and perspective vital to their planning, policy development, and decision making efforts, including lessons learned.

Objective 3.1

Research and write/sponsor special studies and events for NASA managers to learn from the past, both from NASA's successes and failures as well as from other relevant outside experiences.

Objective 3.2

Select and prioritize research and writing subjects, in consultation with senior leadership, to ensure that the historical research and writing efforts meet the needs of current and future NASA policy makers.

Objective 3.3

Maintain and expand the NASA oral history program. Much history is in the minds of participants and not simply in the available documents. Oral histories are an important part of any history program and should be used to supplement or fill in gaps in the written record.

Objective 3.4

In all History Division products and consultations, provide accurate information and analyses for NASA managers (both political and civil service leaders) for decision making and policy formulation.

Strategic Goal 4. Development, Support and Coordination of Center History Programs.

Support, enhance and coordinate those history and archival programs already in existence at NASA Centers, and encourage the development of history and archival programs at those Centers that lack them.

Objective 4.1. Write and implement a NASA Policy Directive (NPD) on the NASA History Program that encourages a permanent position for at least one historian and one archivist at every NASA Center, and provides guidance about their duties and functions.

Objective 4.2. Ensure the coordination and free flow of information between NASA HQ and history programs at NASA Centers via quarterly telecons, the Annual History Review Meeting (held at a different Center each year), and access to the History Division Online Database (see objective 2.8).

Objective 4.3. Ensure archival management at the Center level with the same objectives as Strategic Goal 2 at the Headquarters level.

Objective 4.4. Encourage Center history programs to promote awareness of Center history and impact at the local level.

Objective 4.5. Encourage Center history programs to provide to Center managers leadership support and lessons learned, with the same objectives as Strategic goal 3.

Objective 4.6. Promote study and understanding of Center cultures and their relationship to Headquarters.

Strategic Goal 5. Societal Impact Studies.

Undertake historical studies of the impact of NASA's programs, and aeronautics and space flight in general, on society, including its commercial, economic, philosophical, educational, cultural and local impacts.

Objective 5.1. Sponsor conferences on the societal impact of space flight.

Objective 5.2. Sponsor focused published studies of NASA's impact in specific subject areas using rigorous historical methods.

Objective 5.3. Encourage studies of the impact of aeronautics and space flight on international cooperation.

Strategic Goal 6. Advancement of Knowledge and Professional Development

Contribute to the advancement of knowledge and the professional development of students and scholars in the social sciences and humanities through conferences, fellowships, exchange programs, internships, and research, and by maintaining strong relations with professional societies, academic departments, and other federal history offices.

Objective 6.1

Sponsor and attend conferences, symposia, seminars, and special events to disseminate knowledge and to encourage scholarship in all aspects of aerospace history.

Objective 6.2

NASA Historians should assume leadership roles in one or more subject areas of space history through research, publications, lectures, and participation on the committees and boards of institutions and professional societies that support aerospace history.

Objective 6.3

Host Presidential Management Fellows to support the professional development of future NASA leaders. Encourage greater awareness of NASA history among NASA employees and assure that NASA historians remain aware of contemporary agency issues and concerns through the short-term exchange of personnel.

Objective 6.4

Encourage leading scholars in the social sciences and professionals outside of NASA to conduct research in NASA historical archives.

Objective 6.5

Maintain an active internship program to facilitate explorations of NASA and aerospace history among graduate and undergraduate students at a broad range of academic institutions in the United States.

Objective 6.6

Sponsor graduate fellowships to broaden the pool of historians and social scientists engaged in the study of aerospace history.

Objective 6.7

Pursue positive relations with professional societies, academic departments, and government history offices to maintain channels for the promotion of NASA and aerospace history and to assure that the History Division remains at the cutting-edge of the historical profession in terms of methods, technology, and knowledge.

Strategic Goal 7. Internal Communications and Public Outreach

Facilitate internal communications and public outreach related to NASA history.

Objective 7.1

Devise new and innovative ways to distribute NASA history publications, both within NASA and to scholars and the general public.

Objective 7.2

Expand and enhance the History Division web site as a means of disseminating historical information and reference material.

Objective 7.3

Maintain and enhance the quarterly Newsletter as a means of disseminating information about historical activities at Headquarters and the Centers. Seek innovative methods of dissemination to widest practicable audience, including NASA, interested members of the public, historians and archivists, colleges and universities, and NASA retirees.

Objective 7.4

Encourage improved international relations and understanding through translation of historically significant works related to space exploration.

Objective 7.5

Undertake public and scholarly lectures about NASA history among a wide variety of audiences.

Objective 7.6

Sponsor conferences that bring NASA history to the general public, in particular for the upcoming 50th anniversaries of the Space Age and NASA.

Objective 7.7

Make NASA employees aware of NASA's rich history, beginning with new employee orientation.

Strategic Goal 8. Queries and Reference

Respond to reference requests for historical information in a timely and effective manner. Reference requests come from NASA staff, scholars, academics, government employees, and the general public. In compliance with the Agency's strategic plan to communicate knowledge to the public in a timely manner, responses to queries will meet or exceed a 15-day response turnaround 90% of the time.

Objective 8.1

Uphold our legal obligation to assist the FOIA Officer in responding to Freedom of Information Act requests.

Objective 8.2

Work cooperatively with the Headquarters Records Manager to locate historically valuable information for NASA staff and other researchers.

Objective 8.3

Respond to people around the world who contact us via a generic email account on our history web site. Provide them with a form letter response containing useful information as well as links to web sites on their topic.

Objective 8.4

Refer researchers to our history web site which contains thousands of pages of information on just as many topics. Maintain and continue to build upon the History Division's web site.

Objective 8.5

When appropriate, refer researchers to NASA Center history offices, external academic institutions, and the National Archives.

Objective 8.6

When necessary, provide reference assistance to Center history offices.