

# NASA HISTORY: CALENDAR YEAR 2006 IN REVIEW

## 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NASA leadership's concerns; effectively acquiring, preserving and making available documentary information in the NASA Historical Reference Collection; and disseminating historical information to the widest practicable audience.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 continued to follow its detailed strategic plan, as laid out in Appendix A. Among the Division's highlights were a conference on "Societal Impact of Spaceflight," held at the Hirshhorn Museum in September, 2006; a wide variety of publications in aerospace history; the implementation of the NASA Chief Historian's Survey of NASA Culture; and the continuing series of essays on "Why We Explore" at [http://www.nasa.gov/mission\\_pages/exploration/whyweexplore/index.html](http://www.nasa.gov/mission_pages/exploration/whyweexplore/index.html). Plans were also well advanced for the scholarly study and celebration of the 50<sup>th</sup> anniversary of the Space Age in October, 2007 and NASA's 50<sup>th</sup> anniversary in October, 2008.

## II. NASA Historical Publication Program

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

### NASA Special Publications

*Critical Issues in the History of Spaceflight* (NASA SP-2006-4702), Steven J. Dick and Roger D. Launius, eds.

*Science in Flux: NASA's Nuclear Program at Plum Brook Station, 1955-2005* (NASA SP-2006-4317), by Mark D. Bowles, is for sale by NASA CASI.

*Rockets and People: Creating a Rocket Industry, volume II* (NASA SP-2006-4110), by Boris Chertok, is for sale by NASA CASI.

*Unconventional, Contrary, and Ugly: The Lunar Landing Research Vehicle* (NASA SP-2006-4535), by Gene J. Matranga, C. Wayne Ottinger, Calvin R. Jarvis with D. Christian Gelzer, Monograph in Aerospace History 35. It is now available from NASA Dryden Flight Research Center.

## Nearing Publication

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

*Flights of Discovery: The History of the Dryden Flight Research Center*, by Lane E. Wallace. This history of the first 50 years at the NASA Dryden Flight Research Center captures the spirit of the role flight research has played in aeronautical research and development and provides insightful accounts of most of the major flight research projects from 1946 to 1996. The second edition will be published in 2007.

*The Wind and Beyond: A Documentary Journey into the History of Aerodynamics in America, Volume II: Reinventing the Airplane*, edited by James R. Hansen, with Jeremy Kinney, D. Bryan Taylor, and J. Lawrence Lee. 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. The volume is slated for publication in early 2007.

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

*Dictionary of the Space Age*, by Paul Dickson. This new book will augment and update *The Origins of NASA Names* (NASA SP-4402, 1975) by including terms not in common usage approximately 30 years ago, as well as etymological information.

*Facing the Heat Barrier: A History of Hypersonics*, by T. A. Heppenheimer. This book documents the history of hypersonics research in great detail.

*Mars Wars: The Rise and Fall of the Space Exploration Initiative*, by Thor N. Hogan. This book examines President George H. W. Bush's Space Exploration Initiative (SEI).

*Nose Up: High-Angle-of-Attack and Thrust Vectoring Research at NASA Dryden, 1979–2001* (NASA SP-2006-4534), by Lane Wallace. 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).

*Recovering from Columbia: Learning from NASA's Return to Flight*, by Andrew Butrica. This manuscript explains how the leaders of NASA's return to flight effort overcame dissent and technical hurdles to speed the RTF process.

## **NASA History Award Winners**

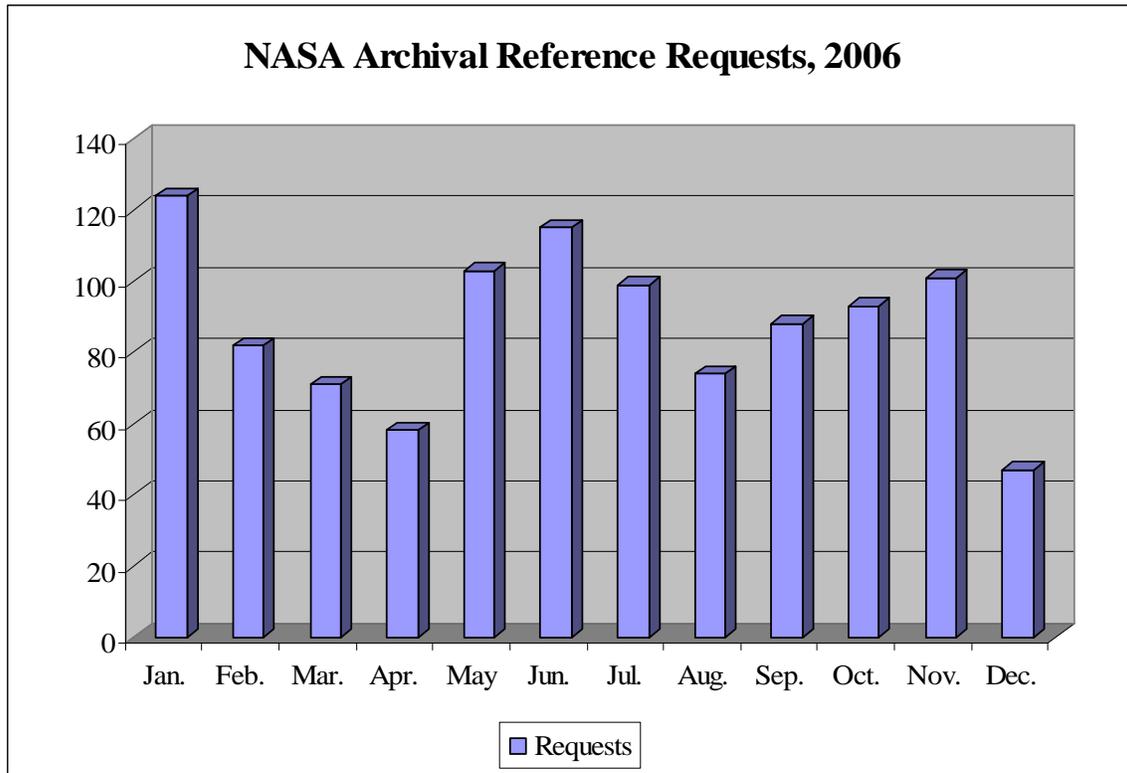
Thor Hogan's *Mars Wars: The Rise and Fall of the Space Exploration Initiative* won the American Institute of Astronautics and Aeronautics Historical Manuscript prize for 2006. The History Manuscript Award is presented for the best historical manuscript dealing with the science, technology, and/or impact of aeronautics and astronautics on society. The purpose of this award is to provide professional recognition to an author who makes a major and original contribution to the history of aeronautics or astronautics.

## **III. Historical Reference Collection**

### **Reference Requests**

During calendar year 2006, NASA History Division personnel answered a total of 1,055 research requests from governmental, educational, and private organizations on a wide variety of topics. History Division personnel also provided research services to approximately 324 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 2006.

**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 continues to host those who come in person to conduct research. In 2006, the History Division hosted visitors from several NASA installations, including Glenn Research

Center, Marshall Space Flight Center, Jet Propulsion Lab, and the Goddard Institute for Space Studies.

Local visitors to the History Division included researchers from American University, George Washington University, George Mason University, the University of Maryland, the National Air and Space Museum, Air and Space Magazine, History Associates, Inc., JR Technical Publications, ASK Magazine, the National Academy of Sciences, the National Research Council, Voice of America, and the Office of the Secretary of Defense.

Out-of-town researchers hailed from Syracuse University, the University of North Dakota, MIT, Arizona State University, the Georgia Institute of Technology, Monmouth University (New Jersey), the University of California at Santa Barbara, Johnson C. Smith University (North Carolina), the Aerospace Industries Association, Apogee Books, Blueberry Hill Productions, Orbital Sciences Corporation, Mitretek Systems (now Noblis), Lawrence Livermore Laboratory, Scott Air Force Base, and the U.S. Air Force Academy. International visitors came from Tel Aviv University, the University of Tokyo, the University of Alberta, and the Free University of Berlin.

### **Acquisitions**

The NASA History Division received over forty-two cubic feet of material from various offices at Headquarters in 2006. Below are highlights of the donations:

- Two cubic feet of planetary science files from the Science Mission Directorate.
- Three cubic feet of files documenting the legislative battle in the early 1990s to fund Space Station Freedom.
- Two cubic feet of astronomy, astrophysics, life sciences, and SETI materials, 1983-2001, from the NASA Planetary Protection Officer.
- One cubic foot of NACA reunion oral history interviews and accompanying materials from the 2005 reunion held in California. Interviews were conducted by the JSC Oral History team.
- Two cubic feet of material on space shuttle secondary payloads from the old Office of Biological and Physical Research.
- Electronic copies of over 100 speeches given by former Deputy Administrator Fred Gregory.
- One cubic foot of chronological correspondence files and reports, 2002-2005, from former Deputy Administrator Fred Gregory.

- Two cubic feet of Hubble material from the Science Mission Directorate.
- Three cubic feet of source files for *Facing the Heat Barrier: A History of Hypersonics*, from the author.
- Five cubic feet of source files for *Exploring the Unknown*, Volumes III through VII, from the author.
- One cubic foot of books and miscellaneous files, ca. 1971-1976 and 1992-2001, from the Executive Officer, Office of the Administrator.
- One cubic foot of source files for *NASA Historical Databook, Vol. VII*, from the author.
- Audio recordings of interviews with five different individuals conducted for the forthcoming life sciences history and donated by the author.
- Audio recordings and transcripts from interviews with former GRC Center Director, Julian Earls, conducted in Cleveland in February 2006 by the JSC oral history team.
- Two cubic feet of interviews and transcripts from *Space Station Decision* and from *Inside NASA*, donated by the author.
- Half of a cubic foot of science material on Mars exploration and lunar exploration, ca. 1978-1998, from the Science Mission Directorate.
- Sixteen cubic feet of Safety and Mission Assurance chronological correspondence files, ca. 1986-2001, donated by OSMA. These materials document the tenures of George Rodney and Fred Gregory as Associate Administrators.

### **Processing Activities**

The History Division staff processed (i.e., appraised, arranged, described, and preserved) or partially processed a number of collections in 2006. Other materials were placed in the backlog for processing at a later date. History Division staff processed a total of 70 cubic feet. Collections processed include:

- Six cubic feet of chronological correspondence files of several significant individuals in the Office of the Administrator (John R. Dailey, Michael Mott, and France Cordova).
- Five cubic feet of astrobiology files, ca. 1976-1996.
- Two cubic feet of Hubble Space Telescope files.

- Three cubic feet of material on the legislative battle in the early 1990s over funding for Space Station Freedom.
- One cubic foot of exploration files.
- One cubic foot of History Division files.
- Four cubic feet of hypersonics material.
- Four cubic feet of PAO files on ISS working group activities and launch briefing books.
- Three cubic feet of source files for an unpublished book on Space Station Freedom.
- Two cubic feet of files from the NASA Headquarters Chief Scientist.
- Two cubic feet of astronomy, astrophysics, life sciences, and SETI materials.
- Two cubic feet of planetary science files.
- One cubic foot of former Administrator James Fletcher's files.
- One cubic foot of Shuttle Mir material.
- Nine cubic feet of Other Histories, a variety of manuscripts, theses, and dissertations sent to the History Division in the past for review.
- Forty cubic feet of National Advisory Committee on Aeronautics Collection, ca. 1915-1958. PROCESSING ONGOING.
- Appraised ten cubic feet of subject files containing mission files, press packages, and publications in the Office of Legislative Affairs.
- Appraised seven cubic feet of material in the Science Mission Directorate Office. Included were reports and other publications, photos and slides from missions, and ISOO audit files from an investigation of their program.
- Reviewed the files of the Aerospace Safety Advisory Panel for historical value and eventual transfer to the National Archives.
- Drafted preliminary descriptions of chronological correspondence files found in the Administrators' Chronological Files collection.

- Photocopied four cubic feet of deteriorating material in the early human spaceflight files as a preservation measure.
- Created a preliminary inventory for three cubic feet of records of former Chief of Staff John Schumacher.

### **Other Archival Activities**

In early 2006, the Chief Archivist distributed to the Center History POCs the “Study of Archival Management Practices at NASA History Program Repositories.” This study represents the culmination of one and a half years of examination of this topic by a small committee comprised of the Chief Archivist as well as archivists from GRC, KSC, and ARC. It compares archival practices Agency-wide, highlighting similarities and differences at each Center.

The Chief Archivist completed a review of approximately fifty cubic feet of material as a member of the Headquarters declassification review team. In December 2006, the group concluded their review of hundreds of boxes of material in response to Presidential Executive Order 12958. Additionally, the Chief Archivist assisted with the review and disposition of the records of several former officials-in-charge and worked with the Chief Historian to determine and/or revise archive access policies and procedures. The archival staff worked with the Headquarters IT staff to upgrade the History Division’s archival database and provided guidance to interns working 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 forty cubic feet of Current News articles. This task will be ongoing for some time since this collection spans NASA's forty-eight year history. By the end of 2006, over two-thirds of the collection had been digitized. Additionally, History Division staff received electronic copies of more than 100 speeches given by former Deputy Administrator Fred Gregory, successfully moving them into the database and making them full text searchable.

During the year, History Division staff scanned and checked into the Document Management System (DMS) over 84,000 items and created 6,144 cataloging records describing these documents. Approximately 350 records describing our non-scanned or hardcopy holdings were updated, and 112 new cataloging records were created as hardcopy materials were subsequently added to the reference collection. Through these efforts, NASA historical materials have become more widely available to 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 all the major projects of the agency, 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, the agency increasingly has undertaken oral history for its own sake as a means of preserving knowledge. Often supporters of this effort have been motivated by the realization that the first generation of agency officials are passing from the scene and that it is important to capture as much of their knowledge as possible. Accordingly, several discrete projects have been undertaken, and some are still in progress, recording the recollections of key officials.

Often these oral history efforts record the entire careers of individuals covering a broad spectrum of activities. They have a similarity 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. They often also are copied and find

permanent retention 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. The oral histories document organizational culture, 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.
- 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, 2001-2003.
- J.R. Thompson – NASA Deputy Administrator, 1989-1991, and Director of the Marshall Space Flight Center, 1986-1989.
- Richard Truly, NASA Administrator, 1989-1992, and Associate Administrator, 1986-1989.

Added to this list during 2006 were Julian Earls, former Center Director and longtime employee from Glenn Research Center; and Josie Soper, who provided administrative support for 43 years at NASA Headquarters, including over twenty-five years in the Office of the Administrator.

Also in 2006, the NASA History Office commissioned a special oral history project to gather information from former members of the NACA while they were gathered at a reunion. From the effort, thirteen oral history interviews were recorded during the event representing the four NACA facilities and its headquarters, giving a reflection of contributions and projects from each of the original centers. As another part of the project, fifty people responded to a request to submit information for a “written” oral history project. Some replies were brief, others extensive, and a few included photos or other materials to be placed in the Historical Reference Collection at Headquarters.

### **Oral History Projects at Johnson Space Center**

The Johnson Space Center is in its tenth year of sponsoring an oral history project. More than 1,125 hours of history have been recorded from more than 500 people. A minimum of thirty 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 from former NACA employees. Available since September 2002, the website, located at [www.jsc.nasa.gov/history](http://www.jsc.nasa.gov/history), also contains links to the database of the JSC History Collection.

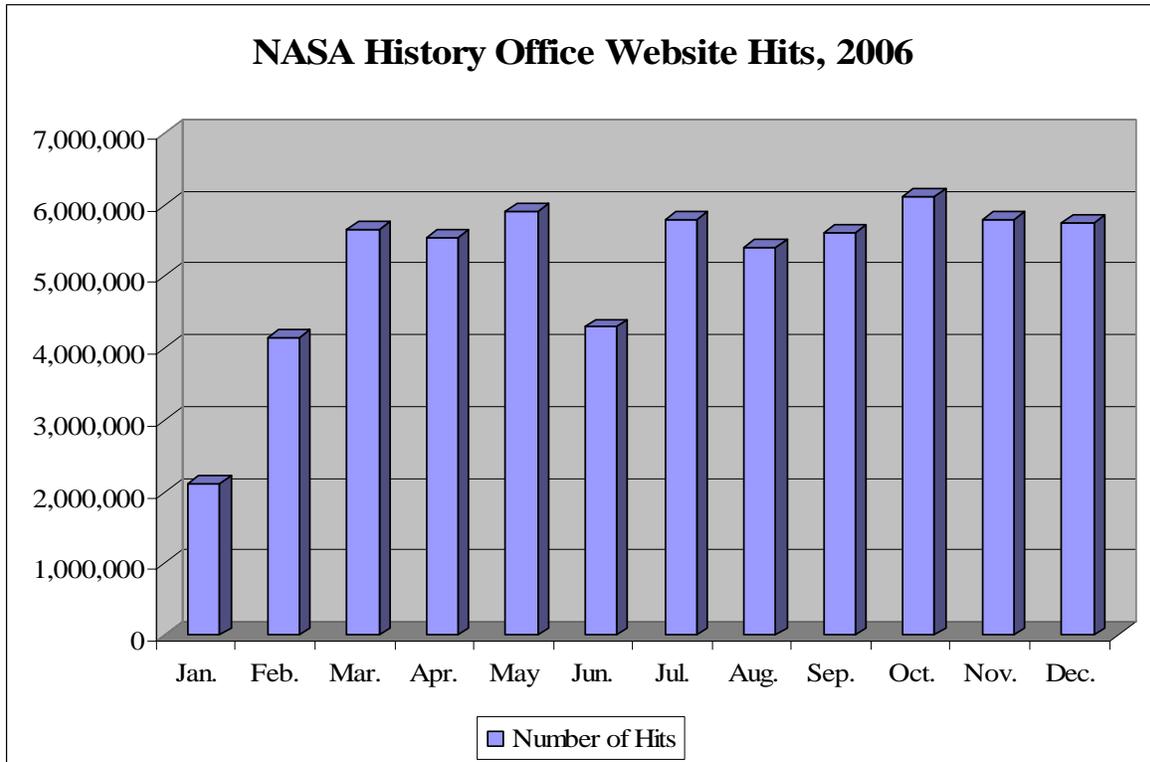
Since 1994, the NASA History Office has supported oral history interviews documenting significant aspects of NASA's spaceflight and other major programs. More than one hundred interviews have yielded at least 500 hours of recorded material. Interviewees have included: Jimmy Carter, Aaron Cohen, Charles Donlan, Lennard Fisk, James Fletcher, Gerald Ford, Robert Frosch, Noel Hinners, 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 2006 by the Johnson Space Center History Office included interviews with Robert Crippen, Charles Deiterich, John Fabian, James Hannigan, Dick Richards, Norm Chaffee, Mark Craig, Emery Smith, Rick Nygren, Dave Whittle, Paul Lachance, and Charles Bourland.

## **V. NASA History Web Site**

For the last several years the NASA History Division has been working to place as much information as possible on the internet. During 2006, the NASA History Division substantially increased its electronic resources, especially on the World Wide Web. Our main page has continued to be <http://history.nasa.gov>. The generic history office e-mail account for public information requests is [histinfo@hq.nasa.gov](mailto:histinfo@hq.nasa.gov). In addition to being one of the largest NASA web sites, the NASA History 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 History web site per month.

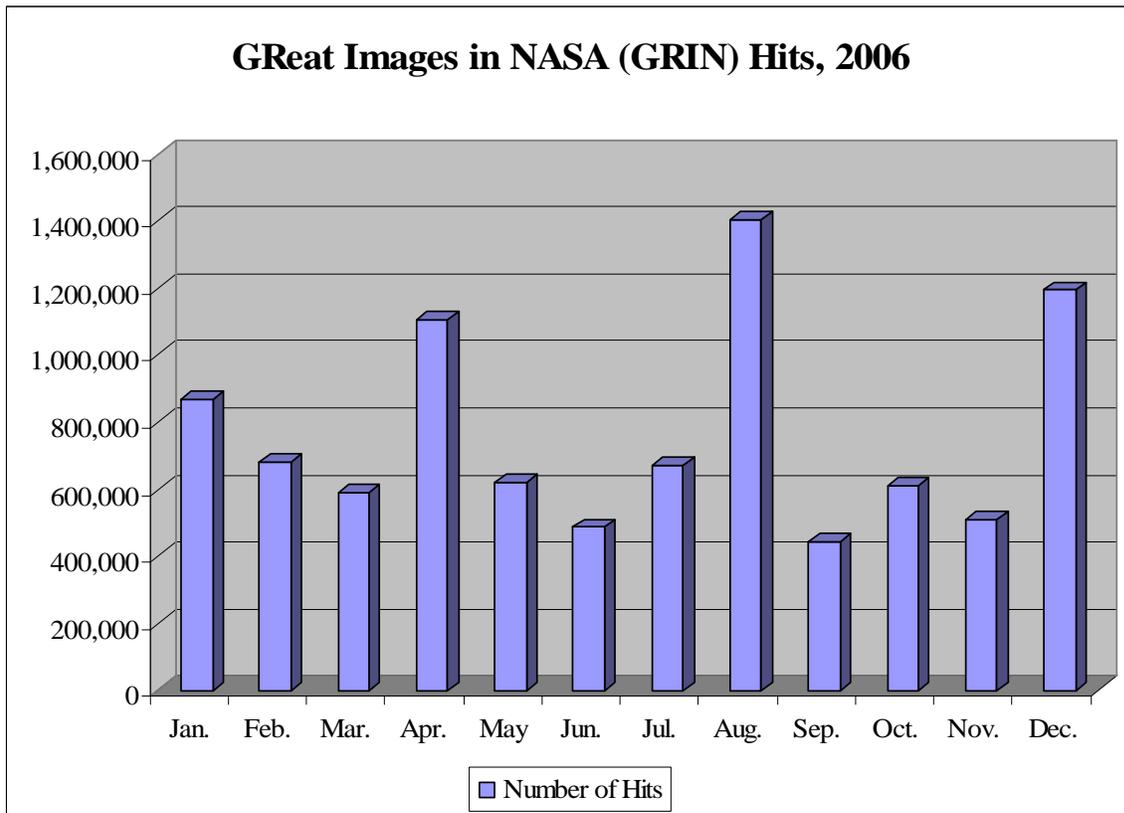
**TABLE 2**



Throughout the year there were 62,183,862 hits on the NASA History web site. During the last year, we added several new web pages or sites. While some of these were put together and/or hosted at field centers or other NASA offices, outside volunteers take the credit for most of these new sites. These volunteers have scanned and formatted for the web a number of book-length publications that are typically out of print and thus not easily found in hard copy elsewhere. NASA History interns and the NASA Headquarters printing and design office also made significant contributions to our web presence.

The NASA History Division continues to build its online resource for historical photos. GREAT Images in NASA (GRIN) is online at <http://grin.hq.nasa.gov> and features over 1,000 historically significant black and white and color images in four resolutions ranging from thumbnail to a high resolution that is suitable for publishing. Public users may download any of these images without charge. While other somewhat similar photo databases are online, the specific format of this one is unique and attracts a steady flow of users. GRIN received 9,189,913 hits this year. Table 3 illustrates the monthly GRIN hit breakdown for 2006.

TABLE 3



**New Web Materials:**

*Journey in Aeronautical Research: A Career at NASA Langley Research Center*, an autobiographical monograph by W. Hewitt Phillips is available online at <http://history.nasa.gov/monograph12/monograph12.htm>.

*Journey in Space Research: Continuation of a Career at NASA Langley Research Center*, an autobiographical monograph by W. Hewitt Phillips is available online at [http://history.nasa.gov/SP-4540/sp4540\\_1.pdf](http://history.nasa.gov/SP-4540/sp4540_1.pdf).

*On the Moon with Apollo 16: A Guidebook to the Descartes Region* (EP-95, 1972) by Gene Simmons is available online at <http://history.nasa.gov/EP-95/ep95.htm>.

*Aiming at Targets: The Autobiography of Robert C. Seamans* (NASA SP-4106, 1996) is now online at <http://history.nasa.gov/SP-4106/sp4106.htm>.

*Wingless Flight: The Lifting Body Story* by R. Dale Reed with Darlene Lister (SP-4220, 1997) is now online at <http://history.nasa.gov/SP-4220/sp4220.htm>.

*Wind and Beyond: A Documentary Journey into the History of Aerodynamics in America, Volume 1: The Ascent of the Airplane* (SP-42003-4409), edited by James R. Hansen is now available at [http://history.nasa.gov/SP-4409/SP-4409\\_1.pdf](http://history.nasa.gov/SP-4409/SP-4409_1.pdf).

We have a new page covering the Congressional Space Medal of Honor at <http://history.nasa.gov/spacemedal.htm>. We also have an extensive set of NASA and even NACA organizational charts available online at <http://history.nasa.gov/orgcharts/orgcharts.html>.

We have a new site which details the oral history holdings of NASA Headquarters and the Field Centers at <http://history.nasa.gov/oralhistory/ohcatalog.htm> online.

*Dreams, Hopes, and Realities: NASA's Goddard Space Flight Center, the First Forty Years* (NASA SP-4312, 1999) by Lane E. Wallace. Is now online at <http://history.nasa.gov/SP-4312/sp4312.htm>.

*The Birth of NASA: The Diary of T. Keith Glennan* (NASA SP-4105, 1993) is now online at <http://history.nasa.gov/SP-4105/sp4105.htm>.

*Innovation in Flight: Research of the NASA Langley Research Center on Revolutionary Advanced Concepts for Aeronautics* (NASA SP-2005-4539) by Joseph R. Chambers. This monograph is available at [http://history.nasa.gov/monogrpah39/mon\\_39a.pdf](http://history.nasa.gov/monogrpah39/mon_39a.pdf) online.

*Science in Flux: NASA's Nuclear Program at Plum Brook Station, 1955-2005* by Mark D. Bowles (NASA SP-2006-4317) is available online at <http://history.nasa.gov/sp4317.pdf>.

An online version of Boris Chertok's *Rockets and People, volume II: Creating a Rocket Industry* (NASA SP-2006-4110) is now available at <http://history.nasa.gov/SP-4110/vol2.pdf>.

Volumes I and II of *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program* (NASA SP-4407) are now available at <http://history.nasa.gov/SP-4407/sp4407.htm>.

## **VI. Societal Impact of Spaceflight**

As we approach the 50<sup>th</sup> anniversary of the Space Age in 2007, and the 50<sup>th</sup> anniversary of NASA in 2008, it is appropriate to examine the effects of spaceflight on the larger society. Has the Space Age had an impact on society? If so, what are those influences? What do we mean by an "impact" on society? And what parts of society? Conversely, has society had any effect on spaceflight? The NASA History Division and the National Air and Space Museum History Division sponsored a conference to examine these and related questions through scholarly research, making use especially of the tools

of the historian and the broader social sciences and humanities. The conference was held at the Hirshhorn Museum on September 19-21, 2006.

Through a succession of case studies built around major themes the participants in this conference undertook a broad overview of the affect of space exploration on the social fabric. Six major areas were covered:

1. Turning Points in the History of Spaceflight
2. Commercial and Economic Impact
3. Applications Satellites, the Environment and National Security
4. Social Impact
5. Cultural Impact
6. Ideology and Space Advocacy

A thorough historical examination of the societal impact of spaceflight should highlight tangible and intangible returns on our national investment in space and add a beneficial, thought-provoking chapter to American history. The Proceedings of this conference will be published in the NASA History series.

In parallel with the conference the NASA History Division also sponsored a variety of studies on the societal impact of spaceflight. Among the studies are NASA's role in microelectronic mechanical systems (MEMS), integrated circuits (ICs), management techniques, medical applications, space law, applications satellites, and the environmental movement. Again, the approach is rigorous historical study. These studies will be part of the new sub-series of NASA History publications on societal impact of spaceflight.

## **VII. Other Activities**

Members of the History Division staff were involved at several levels in professional activities germane to aerospace history during 2006.

Chief Historian Steven Dick won the LeRoy E. Doggett Prize for Historical Astronomy, given by the American Astronomical Society. The Prize was "for his distinguished career and publication record that has significantly influenced the field of the history of astronomy." He presented the Doggett Prize Lecture at the Society's annual meeting in Washington. In October Dick also presented the International Academy of Astronautics' Billingham Cutting-Edge Lecture at the International Astronautical Congress in Valencia Spain. At the triennial meeting of the International Astronomical Union in Prague he was active in the sessions of Commission 41 (History of Astronomy), and participated in the famous Pluto debate, resulting in the downgrading of Pluto as a planet. In September, together with the National Air and Space Museum, he convened the meeting on Societal Impact of Spaceflight. A Proceedings will be forthcoming. As a Shapley Lecturer of the American Astronomical Society, he delivered addresses at Williamstown College and at Hampden-Sydney College, and lectured at Harvard University among other places. He

worked on a variety of activities for the upcoming 50<sup>th</sup> anniversaries, including the Conference "Remembering the Space Age," and (with the Office of Public Affairs) served as co-editor of a large-format book of NASA images, to be published by Abrams. He facilitated a number of book projects, including a history of deep space navigation, a history of NASA's international relations, and a classified history of NASA-NRO relations. In order to fill one of the large gaps in NASA history, working with the Science Mission Directorate he implemented requests for proposals on the History of the Scientific Exploration of Earth and Space (HSEES). In the same area, working with History Division staff, he inaugurated the NASA-History of Science Society grant for the History of Space Science. He was involved in sessions of the History of Science Society in Vancouver, the American Anthropological Association in San Jose, and the Society of the Study of Literature and the Arts in New York City. Finally, he implemented the Chief Historian's NASA Culture Survey, results of which were presented in early 2007 to the Senior Management Council. The survey is an update to the one that originally appeared in Howard McCurdy's book *Inside NASA*.

Nadine Andreassen coordinated the "Societal Impact of Spaceflight" conference and dinner in September. She attended the Society for the History of Technology annual meeting in October and managed the NASA History Division book display for the meeting. She coordinated with others to ensure that NASA history publications were displayed at the History of Science Society meeting in November. She also prepared for the History Division move to the 7th floor of NASA Headquarters, sent out all recent History Division publications for book review, and started planning for next year's History Division Annual Meeting and Training at Dryden Flight Research Center. She also worked on logistics for the upcoming conference on the 50th anniversary of the Space Age, to be held in Washington, D.C., 22–23 October 2007. She also worked on contracts, grants, budget, personnel, and improving the History Division's marketing and outreach efforts.

Glen Asner and his coauthor Steve Garber continued to work on a project documenting the history of the Decadal Planning Team and the formulation of the Vision for Space Exploration. Glen and Steve completed all of their oral history interviews for the project in the spring of 2006. Glen delivered an overview presentation in September on the social impact of spaceflight at the History Division's "Societal Impact" conference. He also gave a presentation in April at the Fourth Laboratory History Conference in Vancouver, Canada, and chaired a session on "Technology and Play" at the Society for the History of Technology annual meeting in October in Las Vegas, Nevada. Glen continued to make progress on current writing projects; reviewed chapters of manuscripts under contract with the NASA History Division; and worked steadily on several ongoing tasks, including the NASA History Division newsletter and the Aeronautics and Space Report of the President.

Steve Garber and his coauthor Glen Asner completed the research phase of their study on the Decadal Planning Team and the Vision for Space Exploration. Steve edited the transcripts of the oral histories from the project and completed drafts of all of his chapters during the summer. He took an excellent weeklong statistics class at the United States

Department of Agriculture graduate school in Washington, D.C. Steve also prepared a two-hour presentation on NASA history for the Foundations of Aerospace at NASA class for new NASA employees. The ongoing course is sponsored by NASA's Academy for Program, Project, and Engineering Leadership (APPEL) in the Office of the NASA Chief Engineer. This history orientation may become a regular part of this course, which will be held at a different NASA Center every 6 to 8 weeks. Steve also continued work on numerous book projects and spearheaded updates for the NASA history website.

Jane Odom attended the Society of American Archivists' annual meeting in Washington, D.C. in August 2006. She attended sessions on the impact of archival institutes, providing reference services in high profile instances, secrecy vs. access, preservation of digital documents, and others. In January 2006, Colin Fries successfully completed the Modern Archives Institute, a two-week, intensive course offering participants training in archival theory and practice and in the responsibilities of archival work. The Institute, offered by the National Archives, held its 100<sup>th</sup> session in summer 2006.

## **VIII. NASA History Program Review, 2006**

Since early in the history of NASA, the Agency's History Program began holding periodic meetings with our center history points-of-contact and with a group of 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 program reviews provide an opportunity for the people working on historical issues at NASA to reflect on their accomplishments, exchange information on best practices, and plan for the future.

The NASA History Division held its annual history program review at the U.S. Space and Rocket Center in Huntsville, Alabama, 4-6 April 2006. Staff from the NASA History Division, history points-of-contact from the various Field Centers, and friends of NASA History attended this meeting and discussed the various history activities under way and planned throughout the Agency. The agenda for this program review included:

- A welcome talk from James Bilbro, the Chief Technologist at MSFC
- An overview of the NASA headquarters history program
- Presentations on historic preservation and disaster preparedness activities
- Presentations on archival resources in Huntsville and the history of Marshall
- Talks from invited presenters on a wide range of historical topics
- A discussion of common projects and issues across the NASA history centers

Program review attendees also toured facilities at the Marshall Space Flight Center and the U.S. Space and Rocket Center. The tour of MSFC included a visit to the Payload Operations and Integration Center, which coordinates all science payloads for the International Space Station, and to the National Center for Advanced Manufacturing. Meeting participants also had the pleasure of visiting two national landmarks: the historic Redstone Test Stand and the Solid Rocket Motor Structural Test Facility.

The annual NASA History Award is given to a civil servant or contractor at one of NASA's Centers who has excelled in the promotion of NASA history to our internal and external audiences. During the program review the 2006 NASA History Award was presented to Rebecca Wright of Johnson Space Center (JSC). Bringing with her a background in humanities, journalism, and technical publishing, along with nearly 10 years experience as a JSC contract employee, Rebecca joined the Johnson Space Center Oral History Project in 1997 and has since assumed the role of Project Coordinator. Rebecca and her team of historians, technical specialists, and interns have researched, prepared for, and conducted over 650 interviews for JSC and Headquarters.

## **IX. Personnel**

### **Interns**

Julia Sawyer, a senior history major from the University of Maryland, served as an intern in the NASA History Division from January through May 2006. Gabriel Okolski from George Washington University also served as intern through June 2006. During the spring semester, Gabriel helped to move publications on the Galileo mission to Jupiter and NASA's Plum Brook nuclear test reactor through the editing and design process. Gabriel and Julia worked together to design and develop a Website commemorating the 25th anniversary of the first Space Shuttle mission. In addition to helping to create an online database of oral histories and various other tasks, Julia helped edit the oral history interviews that Glen Asner and Steve Garber conducted for their study examining the origins of the Vision for Space Exploration.

Caitlin Gallogly joined our staff as a summer intern. A history major at Lawrence University in Wisconsin, Caitlin had just finished her sophomore year. Her salary was paid by the Wisconsin Space Grant Consortium and she worked under NASA GSFC's formal Summer Internship Program. Matthew Barrow, a double major in history and psychology at Virginia Polytechnic Institute and State University, served as an intern in the fall.

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.<sup>1</sup> 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 50<sup>th</sup> anniversary of the Space Age in 2007, and the 50<sup>th</sup> 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.

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<sup>1</sup> 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.

## **Mission**

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 50<sup>th</sup> 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.

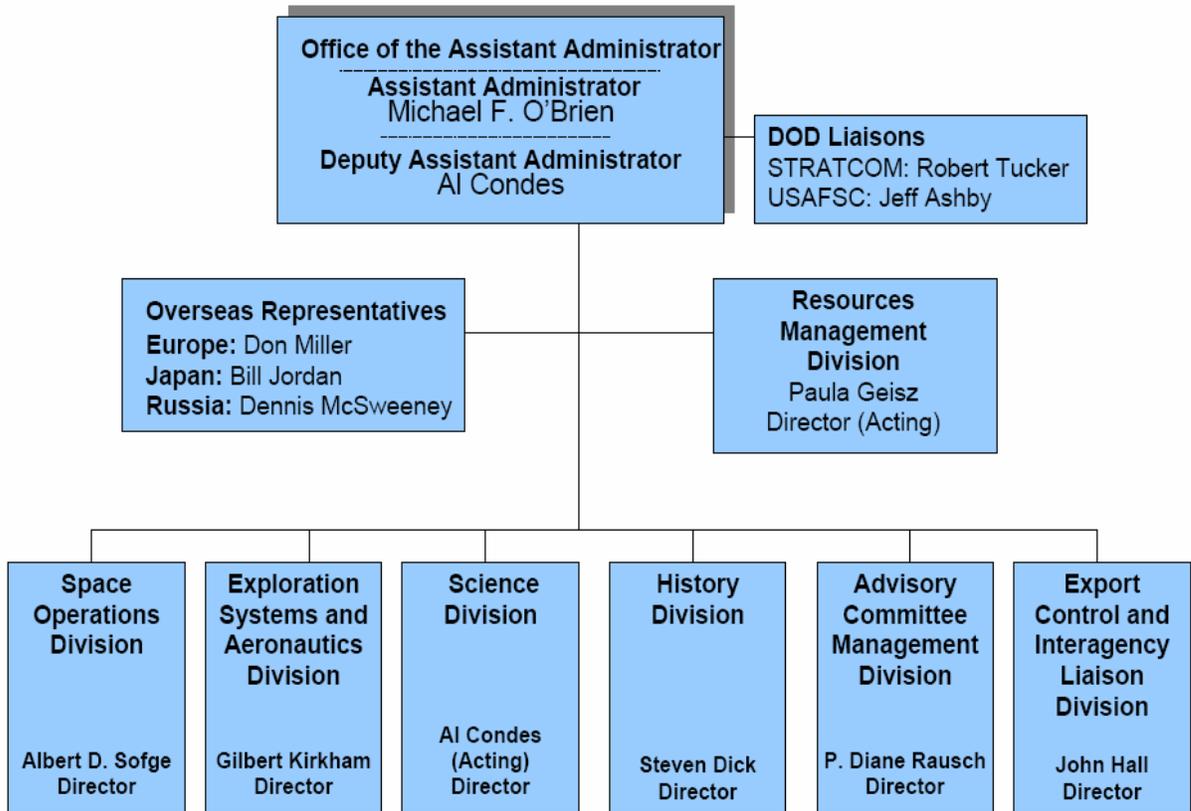
Objective 8.5

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.

# Office of External Relations



**History Division—January 2007**  
**Office of External Relations**

