

# NASA HISTORY: CALENDAR YEAR 2007 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NASA leadership's concerns; effectively acquiring, preserving and making available documentary information in the NASA Historical Reference Collection; and disseminating historical information to the widest practicable audience.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 for 2007 were a conference "Remembering the Space Age," held October 22-23 at the AAAS Auditorium in Washington, D.C. on the occasion of the 50<sup>th</sup> anniversary of the Space Age; a wide variety of publications in aerospace history; the final report of the NASA Chief Historian's Survey on NASA Culture; and the continuing series of essays on "Why We Explore" at [http://www.nasa.gov/mission\\_pages/exploration/whyweexplore/](http://www.nasa.gov/mission_pages/exploration/whyweexplore/). Plans were also well advanced for the scholarly study and celebration of NASA's 50<sup>th</sup> anniversary in October, 2008. In conjunction with the Society for the History of Technology (SHOT) an annual grant for the history of aerospace technology was established, in addition to the long-running NASA-American Historical Association grant in aerospace history, and the NASA-History of Science Society grant for the history of space science established last year. The volume on *Societal Impact of Spaceflight* was published as the first of a series of studies on this subject, undertaken in accordance with objective 4 of section 102 of the National Aeronautics and Space Act. Reference requests and hits on the history website continued to set records, especially during the month of October during the 50<sup>th</sup> anniversary of the Space Age.

## 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. Most of these works are available at the [history.nasa.gov](http://history.nasa.gov) website

### New NASA History Special Publications

Michael Meltzer, *Mission to Jupiter: A History of the Galileo Project* (NASA SP-2007-4231), by Michael Meltzer is for sale by NASA CASI. The Galileo project had a significant impact on planetary science and spacecraft design. Michael Meltzer describes the challenges faced by the scientists and engineers working on the project and the stunning successes they achieved.

*Aeronautics and Space Report of the President, Fiscal Year 2005 Activities*, was published. Hard copies are available from the NASA History Division and an electronic version is available at <http://history.nasa.gov/presrep2005.pdf> online.

The Johns Hopkins University Press editorial board accepted Paul Dickson's *A Dictionary of the Space Age* manuscript for publication in its New Series in NASA History.

*Mars Wars: The Rise and Fall of the Space Exploration Initiative* (NASA SP-2007-4410), by Thor Hogan was published. The Space Exploration Initiative was an overly ambitious project aimed at returning man to the Moon, creating an orbital space station, and completing a mission to Mars. *Mars Wars* describes the failure of the project, citing it to be the result of flawed decision-making processes rather than budgetary constraints.

*Facing the Heat Barrier: A History of Hypersonics* (NASA SP-2007-4232), by T.A. Heppenheimer. Hypersonics is a study relative to supersonics that has enabled thermal protection during atmospheric reentry and advanced high-speed propulsion. *Facing the Heat Barrier* examines this science and its importance in the fields of aeronautics and space flight. This book is available for public sale.

*William H. Pickering: America's Deep Space Pioneer* (NASA SP-2007-4113), by Douglas J. Mudgway. A thoroughly researched, insightful biography of William Pickering, a pioneer of U.S. robotic spaceflight and significant actor in the Explorer I project. This book is available for public sale.

*U.S. Human Spaceflight: A Record of Achievement, 1961-2006* (NASA SP-2007-4541), compiled by Judith A. Rumerman and updated by Chris Gamble and Gabriel Okolski was released. This Monograph in Aerospace History is available to the public for the cost of a self-addressed envelope.

*The Wind and Beyond: A Documentary Journey into the History of Aerodynamics in America, Volume II: Reinventing the Airplane* (NASA SP-2007-4409), edited by James R. Hansen with Jeremy Kinney, D. Bryan Taylor, Molly Prickett, and J. Lawrence Lee. Following up on Volume I's account of the invention of the airplane and the creation of the original aeronautical research establishment in the United States, Volume II explores the airplane design revolution of the 1920s and 1930s and the quest for improved airfoils. This book is available for public sale.

*The Societal Impact of Spaceflight* (NASA SP-2007-4801), edited by Steven J. Dick and Roger D. Launius. The first in a new subseries for societal impact studies, this large volume contains the edited papers from a conference held in September 2006. The essays cover a wide range of topics including ideology, turning points in history, and applications satellites, as well as social, cultural, and economic impacts. This book is available for public sale.

## **NASA History Award Winners**

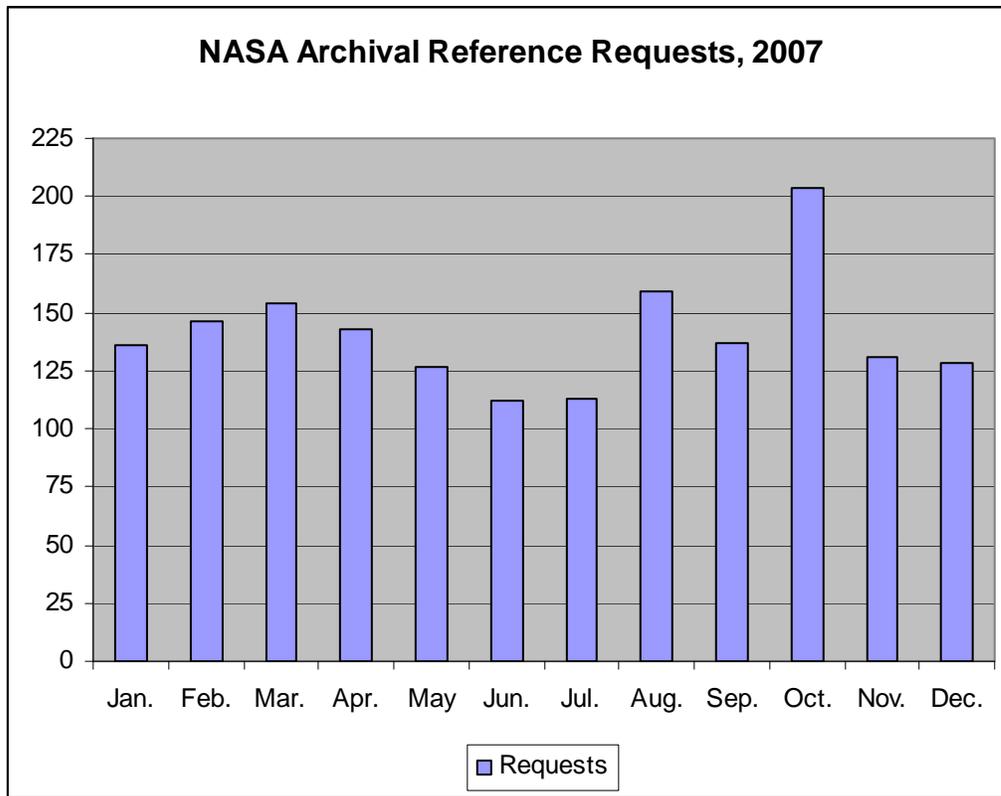
Douglas Mudgway's *William H. Pickering: America's Deep Space Pioneer* won the American Institute of Astronautics and Aeronautics Historical Manuscript prize for 2007. The History Manuscript Award is presented for the best historical manuscript dealing with the science, technology, and/or impact of aeronautics 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 2007, NASA History Division personnel answered a total of 1,690 research requests from governmental, educational, and private organizations on a wide variety of topics. This was a 60% increase over the previous year. History Division personnel also provided research services to approximately 243 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 2007.

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 three 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 2007, the History Division hosted visitors from several NASA installations, including Ames Research Center, Goddard Space Flight Center, and Johnson Space Center.

Local visitors to the History Division included researchers from American University, George Washington University, the University of Maryland, George Mason University, the National Air and Space Museum, the Library of Congress, National Research Council, JR Technical Publications, the American Red Cross, and the Universities Space Research Association, and Air and Space Magazine.

Out-of-town researchers hailed from MIT, University of Colorado at Boulder, University of California at Santa Barbara, Rice University, Rutgers University, University of Texas, LeMoyne College (NY), University of Kansas, Princeton University, University of Michigan, Fordham University, University of Central Florida, University of Pennsylvania, Georgia Tech, Yale University, National Defense University, National Park Service, Federal Aviation Administration, Ares Corporation, Scott Air Force Base (IL), and Global Security.org. International visitors came from Leichhardt Library in New South Wales, Australia, and University of Cumbria in Lancaster, UK.

## **Acquisitions**

The NASA History Division received over thirty-six cubic feet of material from various offices at Headquarters in 2007. Below are highlights of the donations:

- Ledger recording press releases issued from 1959-65, Office of Public Affairs.
- "Remembering Apollo 1" ceremony held at KSC, 1/27/07, acquired on DVD from NASA TV.
- One-half cubic foot of John Young memos to distribution re his technical observations on shuttle and station, 1994-2004, donated by Lynn Cline in Space Operations. He was serving as Associate Director (Technical) at JSC during that time.

- Six cubic feet of chronological correspondence files from the former Office of Life and Microgravity Sciences and Applications, 1993-2002.
- Six cubic feet of miscellaneous books, reports, and files from the Acting Chief of Strategic Communications.
- Two cubic feet of miscellaneous books and reports from the Office of External Relations (OER) front office and three cubic feet of books and old History Division files from the Chief Historian in preparation for the OER move.
- Nine cubic feet of OER chronological correspondence files, 1999-2002.
- Audio recording and transcript of Wernher von Braun interview conducted October 1961 as part of the CIA's Oral History Program, from Center for the Study of Intelligence.
- One cubic foot of source files for NASA Historical Databook, Vol. VIII, from the author.
- Interview with Janet Evans, wife of former Apollo astronaut Ron Evans, conducted by Jennifer Ross-Nazzal in 2003.
- Six cubic feet of launch vehicle technology materials from the author of the book on this topic.
- Three Ernst Stuhlinger and Werner von Braun items from the former AIAA president.
- Interviews conducted in 2006 with former HQ employees Josie Soper and William Taub, from the JSC oral historians.
- Four dozen electronic copies of speeches of former Associate Deputy Administrator Rex Geveden from Office of Public Affairs.
- One cubic foot of photos of NASA exhibits, 1989-96, at the Paris Air Show, IAF Conference, and World Space Congress, along with images of a Space Station mock-up from Office of Public Affairs.
- Five oral history interviews donated by the author of the forthcoming book on the history of NASA's international relations.
- Large expanding folder of material on Spacelab pricing policy from Office of Manned Space Flight.
- Reviewed two cubic feet of Public Affairs files left in an office when a staffer retired and selected a few items to place in the Historical Reference Collection.

- Sixteen cubic feet of Office of Policy and Plans files (previously processed) were prepared for transfer to National Archives. Historically significant items were photocopied for inclusion in the Historical Reference Collection.
- Two dozen boxes of Viking history documents from the Records Center were recalled for the purpose of copying historically significant items for inclusion in the Historical Reference Collection.

### **Processing Activities**

The History Division staff processed (i.e., appraised, arranged, described, and preserved) or partially processed a number of collections in 2007. Other materials were placed in the backlog for processing at a later date. History Division staff processed a total of 102 cubic feet, retaining 82 cubic feet. Collections processed include:

- One cubic foot of former Deputy Administrator Fred Gregory's files consisting of chronological files and reports. This office advised on the transfer of his official records to National Archives.
- A small collection of John Young chronological correspondence files, 1994-2004, on space shuttle and space station.
- Two cubic feet of books and reports received from the OER front office prior to their move.
- Twelve cubic feet of Frank Hoban files. Historically significant items were photocopied for inclusion in the Historical Reference Collection; the official records were prepared for transfer to NARA. Hoban was an HQ employee from the early 1960s to mid-1990s who worked on project management and Space Station Task Force issues, among others.
- Six cubic feet of books and reports from the Acting Chief of Strategic Communications.
- Ten cubic feet of Educator Astronaut and Teacher in Space material.
- Twelve cubic feet of Life and Microgravity Sciences chronological and subject files, 1987-2002.
- Twelve cubic feet of life sciences collection, ca. 1958-1973.
- Four dozen speeches made by Associate Deputy Administrator Rex Geveden.
- Six cubic feet of Shuttle Mir material.

- Two cubic feet of Equal Employment Opportunity (EEO) files.
- Forty cubic feet of biographical files, subject files, patent files, reunion files, photographs, and other materials from the NACA collection, ca. 1915-1958.
- Seven cubic feet of solar exploration materials, partially processed by a University of Maryland archival practicum student.
- Eleven cubic feet of deteriorating news clippings found in the early human spaceflight files and older biographical files were photocopied, thereby preserving this material from loss.

Other processing actions included de-accessioning unwanted materials and transferring scheduled records to National Archives. Four cubic feet of LC-39 Site Activation Status Reports, 1966-68, which duplicated a set of reports found in the KSC Archives, were disposed of; and three cubic feet of Virginia Dawson's sources files for *Engines and Innovations: Lewis Laboratory and American Propulsion Technology* were transferred to the Glenn Research Center archives. Additionally, the Chief Archivist approved the transfer of 122 cubic feet of scheduled records from the Federal Records Center to National Archives.

### **Other Archival/History Activities**

The Chief Archivist, along with Law Librarian and Head Librarian, began serving on a committee in November to implement plans for downsizing the Headquarters Library.

The Chief Archivist, assisted by the archival staff, began working with the IT staff nearly a year ago to modify the existing online archival catalog database so that documents may be marked as public or private, with those marked as public eventually finding their way onto an external website.

With the loss of a historian from our staff last year, the archival staff took on additional responsibilities such as maintaining and improving the history web site and adding additional images and captions to the GRIN photo database. They were also called upon to compile appendices to the 2006 *Aeronautics and Space Report of the President* and fact-check a number of other publications including a chronology for the Office of Legislative Affairs, captions for a new art book for the Office of Public Affairs, a reprint of the U.S. Human Spaceflight monograph, and a space dictionary. Also, assisting with the burgeoning workload is our archival practicum student turned volunteer who re-joined us in November and has the job of updating the oral history inventory.

## **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 January 2005 on the digitization of forty cubic feet of Current News articles. Two and a half years later this project has come to fruition, and all the news articles have been digitized and are full text searchable in our database. The History Division staff has begun scanning the speeches of former Administrators, Deputy Administrators, and Associate Deputy Administrators into the database. This project is ongoing. Additionally, History Division staff received four dozen electronic copies of speeches of Associate Deputy Administrator Rex Geveden. These were successfully moved into the database and made full text searchable.

During the year, History Division staff scanned and checked into the Document Management System (DMS) nearly 92,000 items and created over 4200 cataloging records describing these documents. Approximately 565 records describing our non-scanned or hardcopy holdings were updated, and 559 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

*Julian M. Earls*, former Center Director and longtime employee from Glenn Research Center, 1968 - 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 L. Huntoon*, NASA Center Director, Johnson Space Center, 1994-1995.

*Wes Huntress*, NASA Associate Administrator of the Office of Space Science, 1993-1998.

**Charles Kennel**, NASA Associate Administrator for Mission to Planet Earth, 1994-96; former Chair --NASA Advisory Committee

**Joe Rothenberg**, NASA Associate Administrator, Office of Space Flight, 1998-2001, and Director of Goddard Space Flight Center, 1995-1998.

**Josie Soper**, longtime administrative support personnel at NASA Headquarters, 1962 - 2006

**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.

**William Taub**, NASA Senior Photographer, 1958-1975; NACA Photographer, 1941-1958

Also in 2007, the NASA History Office commissioned a special oral history project to gather thoughts, experiences, and reflections from NASA's top managers as part of a NASA at 50 publication to be released as part of the agency's anniversary activities. Those interviewed include:

<b>Michael D. Griffin</b>	Administrator
<b>Shana L. Dale</b>	Deputy Administrator
<b>Rex Geveden</b>	Associate Administrator
<b>Christopher Scolese</b>	Associate Administrator; Chief Engineer
<b>Bill Gerstenmaier</b>	Associate Administrator, Space Operations
<b>Dr. Scott Horowitz</b>	Associate Administrator, Exploration Systems
<b>Scott Pace</b>	Associate Administrator, Program Analysis and Evaluation
<b>Michael O'Brien</b>	Assistant Administrator, External Relations
<b>Charles Scales</b>	Associate Deputy Administrator
<b>Bryan O'Connor</b>	Chief, Safety & Mission Assurance
<b>Robert Cobb</b>	Inspector General
<b>J. T. Jezierski</b>	Deputy Chief of Staff/White House Liaison
<b>Michael Coats</b>	Center Director, Johnson Space Center
<b>Charles Elachi</b>	Center Director, Jet Propulsion Laboratory
<b>Richard Gilbrech</b>	Center Director, Stennis Space Center
<b>David A. King</b>	Center Director, Marshall Space Flight Center
<b>William W. Parsons</b>	Center Director, Kennedy Space Center

<i>Kevin Petersen</i>	Center Director, Dryden Flight Research Center
<i>Lesla Roe</i>	Center Director, Langley Research Center
<i>Edward J. Weiler</i>	Center Director, Goddard Space Flight Center
<i>Woodrow Whitlow</i>	Center Director, Glenn Research Center
<i>Pete Worden</i>	Center Director, Ames Research Center

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

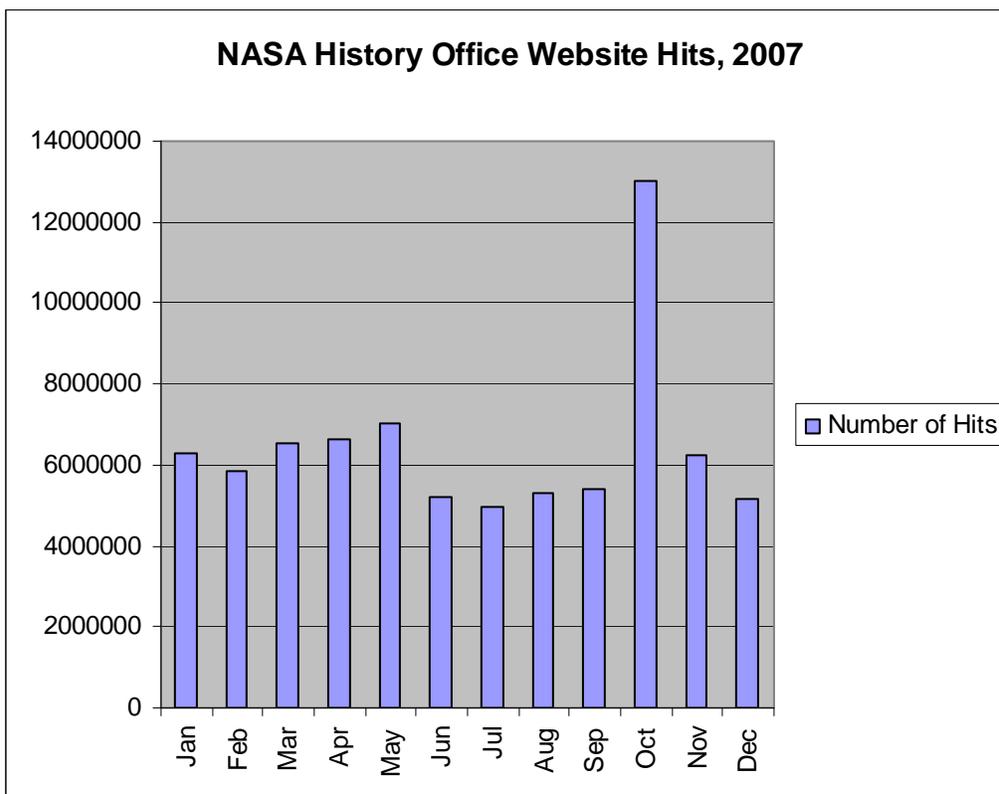
The Johnson Space Center is in its 11th year of sponsoring an oral history project. Almost 1,200 hours of history have been recorded from more than 570 people. A minimum of 30 hours are added each year. Updated on a quarterly basis, the transcripts from the interviews are placed on the NASA Johnson Space Center History Portal website with the current count of 515 available for readers. Also located on the website 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 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.

Career oral histories conducted in FY07 by the Johnson Space Center History Office included interviews with Maureen Bowen, Warren Brasher, Al Crews, Jeanne Crews, Richard Covey, Larry Davis, Ron Dittmore, Walt Guy, James Jaax, Paul LaChance, Leonard Nicholson, Bill Parsons, Granville Paules, Emil Schiesser, Kathy Sullivan, Randy Stone, and Charles Walker.

## **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 2007, 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.

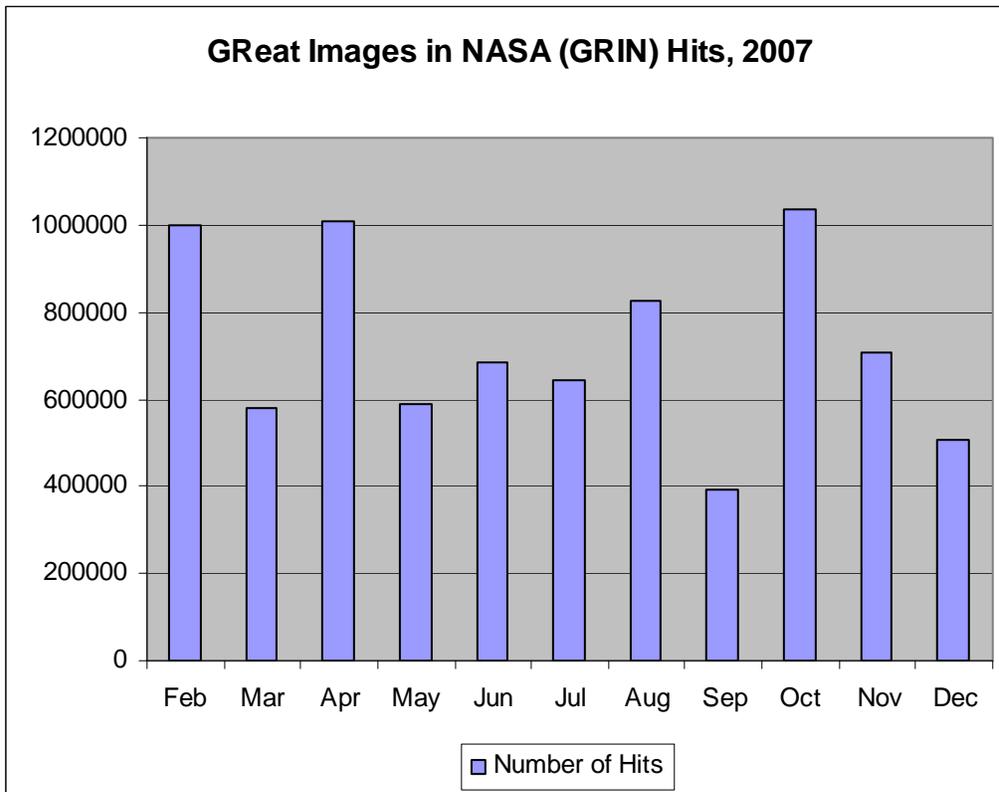
**TABLE 2**



Throughout the year there were 77,574,617 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 over 7,966,850 this year. Please note that a total for the month of January 2007 was not available. Table 3 illustrates the monthly GRIN hit breakdown for 2007.

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>.

*The Difficult Road to Mars: A Brief History of Mars Exploration in the Soviet Union* by V.G. Perminov (Monograph in Aerospace History, No. 15, 1999) is now available in a single ~8MB pdf file at <http://history.nasa.gov/monograph15.pdf> on-line.

*"We Freeze to Please:" A History of NASA's Icing Research Tunnel and the Quest for Safety* (NASA SP-2002-4226), by William M. Leary. The formation of ice on wings and other control surfaces of airplanes is one of the oldest and most vexing problems that aircraft engineers and scientists continue to face. "We Freeze to Please" brings forward the pioneering work of NASA's Icing Research Tunnel (IRT), which made

flight safer for experimental, commercial, and military customers. This book is now available at <http://history.nasa.gov/sp4226.pdf> on the Web.

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

The History Division continued its studies of the societal impact of spaceflight, in accordance with section 102c of the National Aeronautics and Space Act 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)].

*Societal Impact of Spaceflight*, published in 2007 in the NASA History series, provides a broad overview of the effect of space exploration on the social fabric. Six major areas are 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 highlights tangible and intangible returns on our national investment in space and adds a beneficial, thought-provoking chapter to American history.

The NASA History Division has also sponsored a variety of more in-depth 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 comprise volume 2 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 many levels in professional activities germane to aerospace history during 2007.

Chief Historian Steven Dick worked on a variety of activities for the 50<sup>th</sup> anniversaries of the Space Age and of NASA. Among these activities were 1) coordination of the Conference "Remembering the Space Age," held in Washington, DC October 22-23, sponsored by the NASA History Division; 2) along with colleagues from the Office of

Public Affairs, served as co-editor of *America in Space: NASA's First Fifty Years*, a large-format book of NASA images published by Abrams, for which Neil Armstrong wrote the Introduction; 3) wrote the NASA contribution for the volume *50 Years of Space: A Global Perspective*, published on the occasion of the IAC held in Hyderabad, India; 4) wrote "50 Years of NASA History" for the NASA's 50<sup>th</sup> anniversary magazine "NASA: 50 Years of Exploration and Discovery," edited by Ed Goldstein; 5) coordinated plans for a conference "NASA's First Fifty Years," to be held in Washington, DC October 28-29, 2008; and 6) worked with the JSC oral history team on a volume of oral histories to be entitled "NASA at 50: Interviews with NASA Senior Leadership." In addition Dick continued work on a large number of book projects. He served as co-editor (with Roger Launius) of *The Societal Impact of Spaceflight* volume (described in section VI). In order to fill one of the large gaps in NASA history, working with the Science Mission Directorate he moved forward on a large project on the History of the Scientific Exploration of Earth and Space (HSEES). Peer reviews were held in June, and twelve awards were made in early 2008. In the area of annual fellowships and grants, working with History Division staff, he inaugurated the NASA-Society for the History of Technology grant for the history of aerospace technology. This becomes the third annual NASA history award, in addition to the AHA grant in aerospace history, and the NASA-History of Science Society grant for the History of Space Science. In another area, he presented results of the Chief Historian's NASA Culture Survey at the February meeting of the Senior Management Council. The survey is an update to the one that originally appeared in Howard McCurdy's book *Inside NASA*. The Chief Historian's presentations at professional meetings included the Bioastronomy meeting in Puerto Rico; the International Union of Geodesy and Geophysics meeting in Perugia, Italy; the Notre Dame History of Astronomy Workshop; and the 50<sup>th</sup> anniversary of the International Geophysical Year, sponsored by the Smithsonian Institution and held in Washington, DC. He gave the keynote lecture at the First International Meeting on the Discovery and Exploration of Phobos and Deimos, held at Ames Research Center. In addition he attended the History of Science Society and Society for the History of Technology meetings. Finally, he continued his series of essays on "Why We Explore" at [http://www.nasa.gov/mission\\_pages/exploration/whyweexplore/](http://www.nasa.gov/mission_pages/exploration/whyweexplore/).

Nadine Andreassen provided administrative support for the "Remembering the Space Age," conference held October 22-23, 2007 at the AAAS Auditorium in Washington, DC., and for the History Division Annual Meeting and Training at Dryden Flight Research Center in April. She coordinated book displays at the HSS and SHOT Meetings, prepared for the History Division move to the 2nd floor of NASA Headquarters, and worked on logistics for the upcoming conference on the 50th anniversary of NASA, to be held in Washington, D.C., 28-29 October 2008. She also worked on contracts, grants, budget, personnel, and improving the History Division's marketing and outreach efforts.

Glen Asner was detailed to the Space Operations Division of the Office of External Relations.

Steve Garber and his coauthor Glen Asner wrote drafts of most of the chapters of their study on the Decadal Planning Team and the policy development of the Vision for Space Exploration. Steve also gave several presentations on NASA history for NASA's Academy for Program, Project, and Engineering Leadership (APPEL) and in other contexts. Steve also worked on a Source Evaluation team to select a new printing and design contractor at NASA Headquarters and is pleased to be working very closely with Gail Carter-Kane, a manager of the new Media Fusion/SAIC team. 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 late August in Chicago. She attended sessions on conducting oral histories, evaluating archival user tools such as finding aids and web sites, the impact of minimal processing on reference services and also when applied broadly across an institution, the views of three early SAA feminist leaders on the profession's past and present challenges, and the roles of women leaders in archival institutions. She also attended the Government Records and Acquisitions and Appraisal section meetings at SAA.

Jane and Colin Fries also participated in the Annual History Program Review at Dryden Flight Research Center in April 2007, and gave papers on pertinent topics. Additionally, Colin attended a two-day NARA-sponsored workshop on Disaster Preparedness and Response in June 2007.

## **VIII. NASA History Program Review, 2007**

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 2007 NASA History Program Review took place from 24 to 26 April and was hosted by Dryden Flight Research Center's history office. This year, NASA's historians and archivists were joined by independent scholars and a corporate archivist; the combination provided a nice blend of perspectives and experiences. Events were split between NASA's Aero Institute in Palmdale, California, and the Dryden Center itself, on Edwards Air Force Base.

Events began with a year-in-review address by Chief Historian Steve Dick, which included news of volume three of Boris Chertok's remarkable memoirs, the publication of the proceedings of the "Critical Issues in the History of Spaceflight" conference the

previous year, and notes on the upcoming Agency-wide celebration of NASA's 50th anniversary in 2008.

The NASA History Division at Headquarters remains a pivotal archival resource with its continually growing collection, supervised by Jane Odom. Her work is complemented by the constantly expanding list of publications, which the History Division itself edits, supervises, commissions, and writes. The release of Michael Meltzer's *Mission to Jupiter* is but one example. The list of forthcoming titles includes Thor Hogan's *Mars Wars: The Rise and Fall of the Space Exploration Initiative* and John Logsdon's seventh volume of *Exploring the Unknown: Selected Documents in the U.S. Civil Space Program*.

Papers from the conference included Joe Bassi's "The Sun Earth Connection," Douglas Mudgway's evolving biography of William Pickering (which is much anticipated in Pickering's—and Mudgway's—home town in New Zealand), and Jennifer Ross-Nazzal's intriguing and delightful "Skylab and the Women's Christian Temperance Union." Colin Fries presented a paper on space-related music over the last century; Bonnie Smith talked about producing history and developing the archives for the Aerospace Corporation; and Bob Arrighi's "Documenting NASA's Historic Facilities" shed light on current historic preservation efforts at NASA's Glenn Research Center. NASA Dryden historians spoke about various projects under way or recently completed. Curtis Peebles's recent X-43 manuscript highlighted the troubles inherent in writing about projects recent enough to fall under export control, while Peter Merlin recounted the evolution of the Dryden history program itself. Christian Gelzer talked about the truck fairing research done at the Center in the 1970s and its influence on commercial vehicles.

Lunches on two of the three days featured speakers: Al Bowers, a senior engineer at Dryden, talked about the Wright brothers, and Dill Hunley, former Chief Historian at Dryden, talked about a passel of books he has authored on American rocket development, books to be published by the University of Florida Press.

Updates from each Center continue to reveal the diversity of activities undertaken by NASA archivists and historians, and they run the gamut from unusual public inquiries to university press publications. Steve Dick's closing remarks included general discussion about what various Centers plan to do in recognition of the Agency's 50th anniversary, along with an enlightening and revealing account of the recent NASA Culture Survey, which echoed one done by Howard McCurdy in 1988.

Next year's meeting is slated to be hosted by Langley Research Center.

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 2007 NASA History Award was presented to Sallie Bilbo, Rebecca Strecker, and Shelia Reed of Stennis Space Center. These three deserving individuals are to be commended for their efforts to document the impact of Hurricane Katrina on SSC and the surrounding community. In the aftermath of one of the greatest natural disasters in this country's history in August 2005, the SSC

team focused on capturing the significant events that took place during and after the hurricane. The center was used as a shelter for thousands in the community and was also used as the staging ground for recovery efforts by the Federal Emergency Management Agency (FEMA) and rescue agencies from 15 states.

SSC History Office employees worked to record this event in a number of ways: through the use of a blog for all employees to input their personal stories and images; by conducting oral history interviews with key individuals who were at SSC during and after the storm; by creating video and photo documentation of the site and SSC Volunteers working in the surrounding communities; and by offering in conjunction with the Records Management Office a special briefing on the proper documentation of significant materials to better ensure that important information was accounted for during and after the storm. Additionally, they researched the Hurricane Camille recovery efforts to assist management in benchmarking the extent of relief and recovery activities in which Center personnel were involved for Hurricane Katrina; and collected and provided significant information to the Katrina Report, a historical record produced by SSC of the impact that both Stennis and the Michoud Assembly Facility in Louisiana received from Hurricane Katrina.

## **IX. Personnel**

### **Interns**

Abraham Gibson joined our staff as a summer intern. A master's student in history at Virginia Tech, Abe helped with a variety of publishing and Web-related projects, including creating a guide for authors explaining how to prepare a book index.

Nicole Herrmann, a junior at the University of Maryland – College Park, joined our staff in the fall and continued work here in 2008. A history major and astronomy minor, Nicole has been a great help on a wide variety of projects including assembling the major historical content for NASA's 50<sup>th</sup> anniversary Web site (<http://www.nasa.gov/50th/home/index.html>), submitting Cataloging-in-Publication data requests for upcoming books to the Library of Congress, and carefully reviewing final printers' proofs of several NASA History publications.

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.

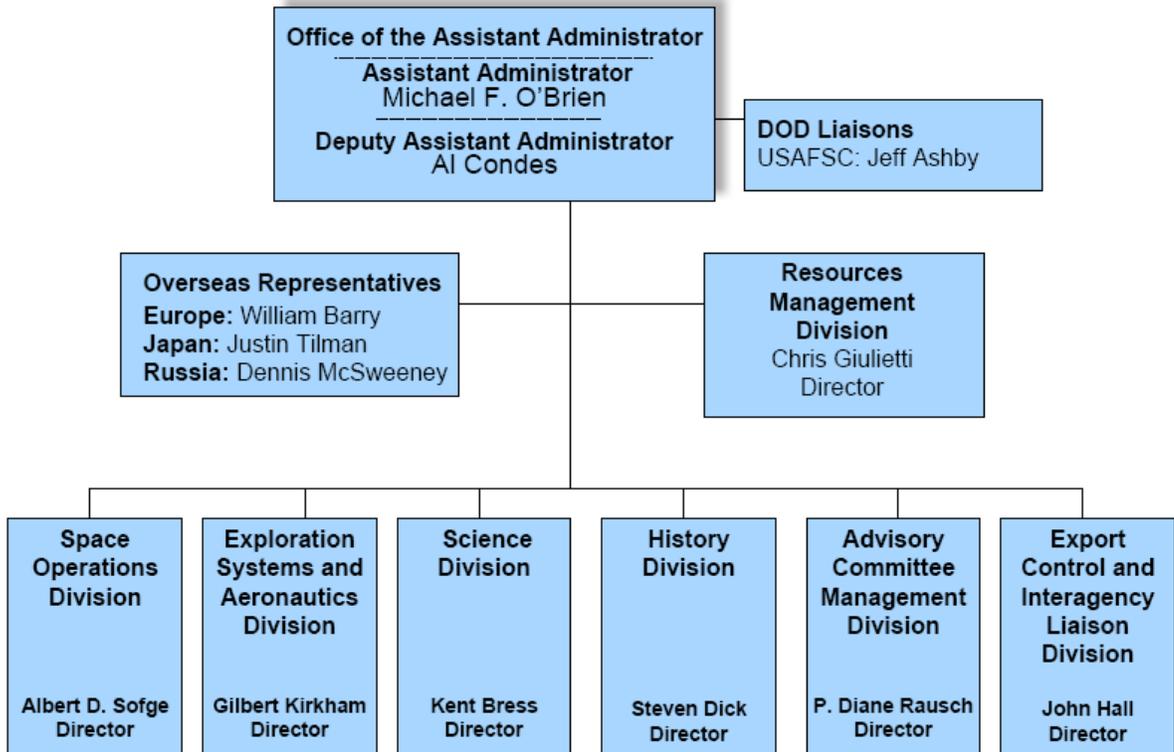
Objective 8.5

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—March 2008

## Office of External Relations

