



HISTORY NEWSLETTER

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Since the January edition of this Newsletter attempted a full catalog of on-going NASA historical projects, new items or changes of interest to historians of science and technology will mainly be recounted here. The January edition henceforth will attempt a full inventory annually of the work of historians in aerospace science and technology. Any unevenness in this progress report mid-year issue may thus be understood.

Some rise has been noted in interest among the academic community in the history of NASA, its associate and precursor institutions, and people in the history of aeronautics and astronautics. At least mounting requests for past Newsletters and pre-publication requests for the "guide" to the history of NASA (in preparation for release in the fall) have been one measure. It is difficult to discern, however, how much the over-supply of professional historians in the educational world and the cutbacks in government have to do with this interest from our vantage on the shores of the Potomac. The threatened abolishment of the historical office in the headquarters of the Federal Aviation Agency was one Washington news item, and the political drive to declassify all Federal records was another area of general interest.

The entire spectrum of the work of historians, from documentary collection, preliminary chronologies and historical reports, to the publication of full-fledged histories has continued to preoccupy the modest NASA effort. The agency-wide reduction in personnel, including the retirement of many leading engineers and staff personnel, has caused special problems. The NASA Records Management Program has continued to expedite the placement of official NASA records in the Federal Records system. Special efforts have also been initiated to collect and make accessible all possible documents. NASA Historical Archivist Lee Saegesser has not only been busy supporting our researchers but also in screening many special collections and miscellaneous documents which come our way.

One of the friends of NASA historians, Dr. Wernher von Braun, transferred to industry, which appears symbolic of passage of numerous prominent NASA historical figures into private life. Occasionally, the passing of persons like the late John Stack makes memoir papers or oral history interviews of increased historical value in our archives. The NASA Historical Office will

particularly miss retirees Ivan Ertel of the MSC History Office; George Edwards, our Historical Monitor at Ames Research Center; and John Sloop and Milton Ames, both of OAST, for their many contributions helpful to history in years past.

A milestone programwise was the issuance of a renewed charter for the NASA Historical Program, signed by Administrator James C. Fletcher on January 11, 1972 (NMI 2700.2A). This reflected existent practices in the NASA History Program, and assigned agency-wide responsibilities to the NASA Historian. The NASA Historical Advisory Committee, consisting of five leading American academic historians, will probably hold their annual review of the NASA history program later this year. Professor Melvin Kranzberg, a member of the Committee, is now Calloway Professor of the History of Technology at Georgia Tech.

While a major thrust of the NASA Historical Program remains the preliminary research and writing phase of the Apollo program, the problem of any contemporary history program remains phasing its efforts to continued challenging new endeavors and, at the same time, initiating and continuing attention to the early history. Among the new items of historical interest were President Nixon's announcement of approval for the Space Shuttle program in March, which will produce the recoverable space transports for the "skytrains" of the 1980's, and the U.S.-U.S.S.R. agreement of May 1972, providing for rendezvous and docking of an American Apollo spacecraft with a Russian Soyuz spacecraft in 1975.

PUBLICATIONS

In the first six months of 1972 the NASA Historical Office had at the printers Astronautics and Aeronautics, 1970 (SP-4015) and The Apollo Spacecraft: A Chronology, Vol. II, November 8, 1962-September 30, 1964 (SP-4013), by Mary Louise Morse and Jean Kernahan Bays. Beyond the review cycle and in preparation for the printer were Astronautics and Aeronautics, 1971 (SP-4016), The NASA Historical Data Book, 1958-68, Vol. I (SP-4012), by Jane Van Nimmen and Leonard Bruno, and Origins of NASA Names (SP-4402) by Helen T. Anderson and Susan Whiteley.

SUMMER SEMINAR in Tenth Year

The NASA Historical Office initiated its tenth summer seminar on "History and Space" this June. The Civil Service Commission program for bringing college, graduate students, and professors into the Government during the summer has enabled a small but select group of historians to tackle historical projects using the Historical Archives and interviewing key participants. This has been a valuable adjunct to the Historical Program. Members of the Summer Seminar for 1972 are: Drs. Norriss Hetherington (Professor at the University of Kansas), Lawrence Ziglar (Professor at Eastern Baptist College, Pa.), and Donald Rotunda (recent doctorate from the University of London); graduate students Julie Furman (University of California, Berkeley), William Heimdahl (George Washington

University), Katherine Oser (Baylor University), and Jerry Van Voorhis (Johns Hopkins University). Miss Mary McDonough, CSC four-year Fellow (University of Delaware), and Miss Cynthia Swailes (Howard University) have also joined the staff for the summer.

HISTORICAL PROGRAM NOTES

With the retirement of Josephine Dibella, formerly the secretary of Dr. Hugh L. Dryden, the personal NACA and NASA files of Dr. Dryden were received by the Historical Archives. All will ultimately be transferred to the Dryden Papers project at the Johns Hopkins University Library under Dr. Richard Smith. Microfilms of Dryden papers at the U.S. Bureau of Standards (1919-47) have been added to the personal and other papers already in Baltimore.

R. Cargill Hall (Historian, Jet Propulsion Laboratory) continues drafting chapters of the Ranger history. He was elected Corresponding Member of the International Academy of Astronautics, and completed compilation of the "Chronology of International Astronautical Events, 1970" which will be published in Astronautica Acta (edited by Martin Summerfield, Princeton University). Also at JPL, James H. Wilson continued his dissertation at UCLA on the early history of JPL and received a second award for his Two Over Mars: Mariner VI and Mariner VII (NASA EP-90, 1971) this time from the Federal Editors Association. Thomas Carroll will be instructing at the University of Pennsylvania this fall, and has been attempting to locate the specific site near JPL for the rocket work of Robert H. Goddard in 1918, while working in the JPL History Office.

In NASA Headquarters, Richard D. Balderston, Maxwell School, University of Syracuse, has undertaken a history of the NASA Technological Utilization Program, 1961-67.

Probably the climax in the NASA translation of historical works made possible by counterpart funding was achieved by the appearance of the classic space encyclopedia of N. A. Rynin, originally published in Leningrad, 1928-32. NASA Historical Office was able to distribute only review copies, and several of the volumes are in very short supply. Only two complete copies of the original are known to exist in the United States, so their availability now in English should prove valuable indeed. Negatives of the illustrations have been provided the National Air and Space Museum, Smithsonian Institution, to facilitate obtaining glossy prints at nominal cost by any interested party.

The Rynin volumes, as listed below, are available at \$3.00 each from existing stock (\$6.00 for reproduction) from the National Technical Information Service (NTIS, Springfield, VA 22151).

N. A. Rynin, Interplanetary Flight and Communication, translated from Russian, Jerusalem: Israel Program for Scientific Translations, 1970-71.

- . Volume I, No. 1, Dreams, Legends, and Early Fantasies, (Leningrad: 1928), NASA TT F-640
- . Volume I, No. 2, Spacecraft in Science Fiction (Leningrad: 1928), NASA TT F-641

- . Volume I, No. 3, Radiant Energy: Science Fiction and Scientific Projects (Leningrad: 1931), NASA TT F-642
- . Volume II, No. 4, Rockets (Leningrad: 1929), NASA TT F-643
- . Volume II, No. 5, Theory of Rocket Propulsion (Leningrad: 1929), NASA TT F-644
- . Volume II, No. 6, Superaviation and Superartillery (Leningrad: 1929), NASA TT F-645
- . Volume III, No. 7, K. E. Tsiolkovskii: Life, Writings, and Rockets (Leningrad: 1931), NASA TT F-646
- . Volume III, No. 8, Theory of Space Flight (Leningrad: 1932), NASA TT F-647
- . Volume III, No. 9, Astronavigation: Theory, Annals, Bibliography, Index (Leningrad: 1932), NASA TT F-648.

Professor Loyd S. Swenson of the University of Houston, active in the Apollo Lunar Spacecraft history underway at the Manned Spacecraft Center, had a volume based on earlier research recently published: The Ethereal Aether: A History of the Michelson-Morley-Miller Aether-Drift Experiments, 1880-1930, with a foreword by Gerald Holton (Austin: University of Texas Press, 1972, \$10). It was reviewed in Scientific American, April 1972, pp. 114-15.

NASA Historian Emme has served as organizing co-chairman of the 6th History Symposium of the International Academy of Astronautics. It will meet in Vienna, Austria, on October 13, and includes the following memoir and other papers, which will subsequently be published in proceedings: I. G. Nagy (Hungary), "Hungarian Rocketry in the 19th Century"; Alfred Waldis and Josef Stemmer (Switzerland), "Origins of Astronautics in Switzerland"; M. Subotowicz (Poland), "Development of Rocket Technique and Space Research"; T. M. Mel'Kumov (U.S.S.R.), "On the Principal New Sources of Rocket Energy in the Early Works of Cosmonautic Pioneers"; Ernst Steinhoff (U.S.), "Development of the German A-4 Guidance and Control Modes, 1939-45"; L. S. Dushkin and Ye. K. Moshkin (U.S.S.R.), "Analysis of Liquid Rocket Engines Built by F. A. Tsander"; Milton W. Rosen (U.S.), "The Viking Rocket Program, 1945-54"; William H. Pickering (U.S.), "Countdown to Space Exploration, 1944-57"; I. A. Merkulov (U.S.S.R.), "Basic Stages of the Development of the Theory of Ram-jet Engines"; and Robert R. Gilruth (U.S.), "From Wallops Island to Project Mercury, 1944-58."

PROFESSIONAL NOTES

Winner of the Robert H. Goddard Historical Essay Prize for 1971 was Albert B. Christman of the Naval Weapons Center, China Lake, California. Mr. Christman's essay was on "Robert H. Goddard and the Military," and he received his \$500 prize and plaque at the Goddard Memorial Dinner, Washington, D.C., in March. The National Space Club, sponsor since 1962 of this first literary historical competition on rocketry and astronautics, should receive entries for the 1972 competition by November 1, 1972. Rules are available from the Space Club, 1629 K Street N.W., Washington, D.C., 20006. The NSC History Committee, who serve as judges, are NASA Historian Emme, Chairman;

USAF Historian Thomas Belden; Smithsonian Air and Space Museum Assistant Director Frederick C. Durant, III; Curator Emeritus Paul A. Garber; Professor Melvin Kranzberg of Georgia Tech; and Dr. Charles S. Sheldon, II, of the Library of Congress.

The New York Times (7/9/72) reported that the library of the late Harry F. Guggenheim has been donated to the U.S. Naval Academy at Annapolis. It includes 5,000 books and papers, some related to the work of Robert H. Goddard. Harry Guggenheim, a naval officer in both World Wars, was consistently dedicated to the advancement of aeronautics and rocketry.

The U.S. Congress has passed the appropriation of \$40 million for the authorized and long-awaited building for the National Air and Space Museum on the Mall. The building will be completed opposite the NASA Headquarters by 1975 and opened for the Bi-Centennial Year. Aerospace historians salute Director Mike Collins and staff for their great accomplishment.

Friends of the late Dr. Hugh L. Dryden, first Deputy Administrator of NASA (1958-65), will be interested to know that a plaque has recently been placed near his bust outside the new auditorium of the National Academy of Sciences on Constitution Avenue. It reads: "The National Academy of Science Auditorium is dedicated to all individuals who through the Academy have devoted their talents and knowledge to the service of the Nation and mankind. It perpetuates the memory of Hugh L. Dryden whose friends, by establishing the Dryden Memorial Fund, helped to make this auditorium possible." The plaque was "posted" April 21, 1972. It is on the wall in the gallery, to the right of the entrance.

The Air and Space Wing of the Swiss Museum of Transportation and Communication in Lucerne was dedicated on July 1, 1972. Attending notables from many nations included NASA Administrator James C. Fletcher, Professor Neil Armstrong of the University of Cincinnati, and Colonel John Glenn. Alfred Waldis is to be congratulated for this accomplishment, which in conjunction with the planetarium makes this one of the outstanding aerospace museums.

The American Institute of Aeronautics and Astronautics (AIAA), sponsors of the History Award for the best book-length manuscript, requests entries by September 30, 1972. They should be sent to Mr. Max Rosenberg, Office of Air Force History (AFCHO), Headquarters USAF, Washington, D.C., 20374. Other members of the judging committee are Professor I. B. Holley of Duke University and Davis W. H. Godfrey of Ryerson Polytechnic Institute in Toronto.

Readings of Note:

- . Gloria Atkinson and L. J. Paszek, U.S. Air Force History: A Guide to Personal Collections in Public and Private Depositories, Montgomery, Alabama: Air University Historical Research Division, 1972, 87 p.
A useful work for the serious aerospace historian.
- . Jerry E. Bishop, "Updating Genesis," Wall Street Journal, April 17, 20, 26, 1972. Series of three excellent articles on the scientific answers and new questions resulting from 15 years of the space venture.
- . Seymour L. Chapin, "Patent Interference and the History of Technology: A High-Flying Example," Technology and Culture, Vol. 12 (July 1971), pp. 414-46. Reviews case of Lockheed XC-35 pressurized cabin of 1935-37.
- . Albert B. Christman, Sailors, Scientists, and Rockets (History of the Naval Weapons Center, China Lake, Calif.), Vol. I, Origins of the Navy Rocket Program and of the Naval Ordnance Test Station, Inyoken, Washington: Naval History Division, GPO, 1971, 303 p.
A valuable history, with data on the work of R. H. Goddard, OSRD, CalTech, and the founding of NOTS. The author is also the author of the National Space Club's Goddard Historical Prize Essay for 1971-- "Robert H. Goddard and the Military."
- . Henry S. F. Cooper, Moon Rocks, New York: Dial Press, 1970. Informal account of the first investigating team examining the lunar samples at Houston.
- . Nicholas Daniloff, The Kremlin and the Cosmos, New York: A. Knopf, 1972. Former UPI correspondent in Moscow analyzes the Soviet space program, past and present.
- . James Dewar, "Britain and the Skybolt Affair," Aerospace Historian, Vol. 18 (September 1971), pp. 23-24. Interesting review of international policy and technology.
- . Sebastian De Ferranti, "Instruments and Electronics in Aviation," Aeronautical Journal, Vol. 74 (September 1970), pp. 718-23. Traces some of the history.
- . Robert A. Divine (ed.), The Cuban Missile Crisis, Chicago: Quadrangle Books, 1971, 245 p.
- . Arlene Elliot, "The Rise of Aeronautics in California, 1849-1940," Southern California Quarterly, Vol. 52 (1970), pp. 1-32. Chronology with illustrations.

- . EXAMETNET (Experimental Inter-American Meteorological Rocket Network):
The First Five Years, 1966-1970 (NASA SP-293), Washington, D.C.: NASA, GPO, 1972, available from NTIS, Springfield, VA 27151, \$3.00.
 Reviews joint Argentine-Brazil-United States program (Spain became an adjunct member in October 1970), and data obtained to fill out gap in knowledge of the stratosphere in the Southern Hemisphere (30-60 km.). A technical report, not a history.

- . James C. Fletcher, "Where is America Headed in Space?," Christian Science Monitor, January 22, 1972, pp. 6-8. Interview of NASA Administrator by Robert C. Cowen.

- . James C. Fletcher, "Team Up with the Soviets? 'The Chances are Quite Good'," U.S. News and World Report, May 8, 1972. Interview of NASA Administrator, pp. 27-29.

- . Joe B. Frantz and D. G. McComb, Houston: A Student's Guide to Localized History, New York: Columbia University Teacher's College, 1971, 30 p.

- . Herbert Friedman, "Recent Progress and Future Prospects in High-Energy Astronomy," Astronautics and Aeronautics (AIAA) (January 1972), pp. 24-28. End of first decade of x-ray astronomy discussed by member of PSAC.

- . Jack Goodwin, "Current Bibliography in the History of Technology (1970)," Technology and Culture, Vol. 13 (April 1972), pp. 226-294. Ninth annual edition of this useful bibliography.

- . Roger Hahn, The Anatomy of a Scientific Institution: The Paris Academy of Sciences, 1803-1966, Berkeley: University of California Press, 1971, 448 p., \$12.00.

- . Thomas A. Harris, Documentation of the 300-mile-per-hour 7-by-10-foot Wind Tunnel, Hampton, VA: NASA Langley Research Center, March 1972, 14 p. plus 79 pp. of illustrations and bibliography.
 This NACA-NASA wind tunnel functioned for 25 years (1945-70), and was used for jet fighters, seaplane hulls, flexible wings, and air-cushioned, variable-sweep, and re-entry research.

- . Houston G. Jones, The Records of a Nation: Their Management, Preservation, and Use, New York: Atheneum, 1969, 309 p.
 A history of the recordkeeping activities of the Federal Government and a report on the status of the National Archives and Records Service, established in 1937.

- . Robert Jastrow and Homer E. Newell, "The Space Program and the National Interest," Foreign Affairs, Vol. 50 (April 1972), pp. 532-44. Thoughtful essay by two prominent NASA authors.

- . Meyers Jacobsen, "Design Development of the XB-36," American Aviation Historical Society Journal, Vol. 15 (1970), pp. 224-35.

- . William E. Kepner and John H. Scrivner, "The Saga of Explorer I: Man's Pioneer Attempts to Reach Space," Aerospace Historian, Vol. 18 (September 1971), pp. 123-28.
Memoir article on the National Geographic-Army Air Corps stratospheric balloon flight of 1934, which reached 60,613 feet.
- . John M. Logsdon and J. Hanessian, Jr., "Earth-Resource Surveys--An International Framework Request to Develop," Astronautics and Aeronautics, Vol. 9 (September 1971), pp. 30-35.
- . Robert W. Lovett, American Economic and Business History Information Sources, Detroit: Gale Research Company, 1971, 323 p., \$14.50.
Prepared by the Curator of Manuscripts of Archives of the Baker Library, Harvard University, this volume is an annotated bibliography of recent works pertaining to economic, business, agricultural, and labor history, and the history of science and technology. (Aircraft Industry, pp. 119-20).
- . Robert B. Meyer, Jr. (ed.), Langley's Aero Engine of 1903 (Smithsonian Annals of Flight No. 6), Washington, D.C.: Smithsonian Institute Press, 1971, 193 p., \$1.25.
- . Ronald Miller and David Sawers, The Technical Development of Modern Aviation, New York: Praeger, 1970, 315 p. Reviewed by John B. Rae in Technology and Culture, Vol. 12 (April 1970), pp. 358-60.
- . Richard Montague, "How Not To Fly the Atlantic," American Heritage (April 1971). Account of Clarence Chamberlain and C. A. Levine's attempt.
- . Arthur E. Morgan, Dams and Other Disasters: A Century of the Army Corps of Engineers in Civil Works, Boston: Porter Sargent, 1971, 422 p., \$7.50. Not a full history, but critical.
- . Walter T. Olsen, "New Technology is Founded by the Space Age," Consulting Engineer (March 1971). Pages are unnumbered.
Article by Lewis Research Center Associate Director in a special issue devoted to "Environment in Crisis: The Engineer's Stake in Survival."
- . John B. Rae, The Road and the Car in American Life, Cambridge, Mass.: MIT Press, 1971, pp. 390, \$12.00.
Thorough historical account of the social importance of the automobile in American life.
- . Robert Schlaifer and S. D. Heron, Development of Aircraft Engines and Fuels, Elmsford, New York: Maxwell, 1970, 754 p. Separately published by Harvard's Graduate School of Business Administration in 1950, this valuable reprint has a combined index.

- . "Igor I. Sikorsky: Prime Mover in the History of Aviation," Aerospace Historian, Vol. 18 (September 1971), pp. 143-50.
- . Robert Sherrod, "'Let's Go to the Moon Together'," New York Times, June 17, 1972, 29 p. Comparison of 1972 U.S.-U.S.S.R. space agreement with President Kennedy's effort in 1961-63.
- . Hubertus Strughold, Your Body Clock, New York: C. Scribner's Sons, 1972. USAF "father" of space medicine writes again for the "jet set."
- . United Nations, International Space Bibliography, New York: U.N. Publications 66.I.21, 1966, 166 p., \$4.00. Useful general bibliography.
- . Leonid Vladimirov and Anatol Fedoseyev, The Russian Space Bluff, London: Tom Stacey Ltd., 1971, 192 p. Controversial thesis on the politico-technical aspects.
- . Wernher von Braun, "NASA's New Mach 1 Airliner," Popular Science (April 1972), pp. 68-70, 132. Review of future Advanced Technology Transport (ATT) utilizing NASA-developed supercritical wing.
- . Wernher von Braun, "Earth Benefits From Space Technology," Congressional Record, Senate, March 22, 1972, pp. S-4366-68. Reporting of his address to the Goddard Memorial Symposium of the AAS-NSC, Washington, D.C.
- . Wernher von Braun, "How the Space Program is Helping You," Parade, December 5, 1971, p. 18.
- . Barbara Ward and Rene Dubos, Only One Earth: The Care and Maintenance of a Small Planet, New York: W. W. Norton, 1972, \$6.00. Problems of the human environment treated from a global perspective.
- . Frank H. Winter and M. R. Sharpe, "The California Whaling Rocket and the Men Behind it," California Historical Quarterly, Vol. 50 (December 1971), pp. 349-62.

Late Entries:

- . Garrett Hardin, Exploring New Ethics for Survival: The Voyage of the Spaceship "Beagle." New York: Viking Press, 1972. Biologist examines problem of population control.
- . General Sir James Marshall-Cornwall, "Early Rockets," Proceedings of the Royal Artillery Historical Society, Vol. III (January 1972), pp. 36-61. Record of session at Woolwich on April 15, 1971, Sir James spans the "war-rocket" from 3000 B.C. in China.