Guide to the
Robert E. Slye Papers, 1961-2001
PP07.13-RS

NASA Ames History Office
NASA Ames Research Center

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Descriptive Summary

Title:
Robert E. Slye Papers, 1961-2001

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Slye, Robert E.

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Moffett Field, California 94035

Abstract:
This collection, accumulated by NASA Ames Research Center scientist Robert E. Slye, consists of reports, research proposals, memoranda, contracts, conference and workshop proceedings, user guides, administrative announcements, newsletters, secondary publications and other materials related to the NASA Mission Analysis Division, technology applications research and general administrative activities.

Administrative Information

Access:
Collection is open for research.

Publication Rights:
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Acquisition Information:
Transferred by Robert E. Slye in August 2007.

Biographical History

Robert "Buzz" E. Slye was born in 1934 in Burlington, Vermont. He received a B.E. in Mechanical Engineering from Yale University in 1956, where he also served in the Reserve Officers' Training Corps. He earned a M.S. in Aeronautical Engineering from Stanford University in 1957. Slye joined NACA Ames Aeronautical Laboratory in Moffett Field, California, in June 1957 as a summer student, and was subsequently assigned to Air Force duty on the Ames campus in the fall of 1957.

As a summer student, and after conversion to a permanent post as research scientist in 1958, Slye worked with Alfred Eggers and Clarence "Sy" Syverston as a member of the 10 x 14 Inch Wind Tunnel Branch (1957 to 1960) and the 3-1/2 Foot Wind Tunnel Branch (1960 to 1963). Here, he was involved in projects relating to the aerodynamics of lifting bodies, rockets and re-entry capsules. In 1963, Slye became a member of the Mission Analysis Division, Space Applications Branch. The Mission Analysis Division's main function was to conduct studies to determine research areas in which Ames could use its time and funds most effectively. Here, Slye became an expert in trajectory analysis, and was involved in conducting studies on the feasibility of transporting humans to the moon and mars, and in conducting shuttle and launch vehicle studies, including trajectory and payload analysis, costing, planning, design and implementation. Slye was a member of the Mission Analysis Division from 1963 to 1969, the System Studies Division from 1969 to 1971, and the Advanced Concepts and Missions Division from 1971 to 1975.

When the Advanced Concepts and Missions Division dissolved in 1975, Slye moved to the Data Research and Management Branch (1975 to 1976), the Technology Applications Branch under the Airborne Missions and Applications Division (1976 to 1984) and later the Ecosystem Science and Technology (ECOSAT) Branch under the Life Science/Earth System Science/Earth Science Divisions (1984 to present). His research activities under these divisions largely relate to the analysis and display of computer information, including remotely sensed images. As a member of the Ecosystem Science and Technology Branch, Slye worked to develop new understandings of the Earth's ecosystems through remote sensing, airborne imaging and data processing research.

Slye's career at Ames has spanned over a half of a century and is remarkable in that he has made important research contributions in a wide range of disciplines. Slye received the NASA/Ames Special Achievement Award in 1988. At the time of his retirement in December 2007, Slye was the longest continually employed worker at Ames. He became an Ames Associate in 2008, and as of November 2009, Slye is listed as an Ames Associate with the Ecosystem Science and Technology Branch.

Sources Consulted

Bugos, Glenn E. Atmosphere of freedom: sixty years at the NASA Ames Research Center. Washington, D.C.: NASA SP4314, 2000.

Bugos, Glenn E. “NASA’s 50 Year Men and Women: Buzz Slye” in NASA: 50 Years of Exploration and Discovery. NASA, 2008.

NASA Ames History Office, NASA Ames Research Center. Moffett Field, California. AFS1030.39A, Ames Astrogram Collection. 1958-2008.

NASA Ames History Office, NASA Ames Research Center. Moffett Field, California. AFS1070.8A, Archives Reference Collection. Telephone Directories. 1962-2003.

Scope and Content

The collection consists of scientific reports, quarterly and annual reports, research proposals, memoranda, correspondence, contracts, studies, secondary publications, conference proceedings, meeting minutes, agendas, newsletters, bibliographies, indexes, directories, rosters, workshop proceedings, user guides, administrative announcements, clippings, ephemera and a transcript of the 1996 NASA Ames "State of the Center" speech. The materials provide insight into Slye's activities with the Mission Analysis Division and Technology Applications/Ecosystem Science and Technology Applications Branches as well as into the administrative activities of NASA Ames.

Series I, Mission Analysis Division Records, 1965-1974, contains reports, proposals, memoranda, secondary publications and other material related to the design, costing, selection and analysis of shuttles and launch vehicles. Series II, Technology Applications Records, 1974-1998, includes reports, memoranda, newsletters, rosters, plans and other materials related to the activities of the NASA Ames Airborne Missions and Applications and Life Science/Earth System Science/Earth Science Divisions. A number of records relate to the Landsat Remote Sensing Technology Program and the Western Regional Applications Program (WRAP). Series III, NASA Ames Administrative Records, 1971-2001, consists of clippings, publications, memoranda and administrative announcements related to topics such as staff honors, organizational restructuring and policies. Series IV, General/Reference Publications, 1961-1999, largely consists of newsletters (generated both by Ames and outside publishers) and secondary publications on topics related to Slye's fields of interest, including aeronautics, remote sensing and computing.

System of Arrangement

The papers are arranged into four series:

Series I. Mission Analysis Division Records, 1965-1974
Series II. Technology Applications Records, 1974-1998
Series III. NASA Ames Administrative Records, 1971-2001
Series IV. General/Reference Publications, 1961-1999

Materials within each series are arranged chronologically.

Series Descriptions

Series I: Mission Analysis Division Records, 1965-1974, 56 folders.

The materials in Series I reflect the activities of the Mission Analysis Division, System Studies Division, and the Advanced Concepts and Missions Division from 1965 to 1974. Many records relate to Lockheed contract NAS 2-5202, in which methodologies and computer models were constructed for optimal launch vehicle assignment for advanced space missions in light of strict budgetary constraints. According to one of the reports associated with this contract, "a primary objective [of the study] is provision of an analytical tool to help the advance planner to maximize, under restrictive budget constraints, the accomplishment of a future space program." Materials related to the Burner II, Titan/Centaur, Solid/Agena and Saturn family of launch vehicles are included in this series.

Series II: Technology Applications Records, 1974-1998, 44 folders.

Series II consists of records related to the activities of the NASA Ames Data Research and Management Branch, Technology Applications Branch and Ecosystem Science and Technology (ECOSAT) Branch from 1974 to 1998. Here, Slye was involved in performing research in ecosystem science, remote sensing, and computational image analysis. Many materials relate to the Landsat Remote Sensing Technology Program and the Western Regional Applications Program (WRAP). Slye was particularly involved in remote sensing, airborne imaging, and data processing research. Research subjects include coastal-zone, forestry, geography, geology, hydrology, meteorology, oceanography, agricultural and fire studies.

Series III: NASA Ames Administrative Records, 1971-2001, 11 folders.

Series III consists of records on topics such as exhibits, personnel appointments, policies, Ames events and activities, length of service honors, branch/division restructuring and other organizational changes, and a transcript of the 1996 "State of the Center" address by Director Ken K. Munechika.

Series IV: General/Reference Publications, 1961-1999, 40 folders.

Series IV consists of secondary publications on topics such as missiles, aeronautics, lunar and planetary sciences, extraterrestrial life, remote sensing, meteor orbits/dust and astrophysics, symposium proceedings, materials related to computing (including the Illiac IV, Cray I, Cray-IS and VAX computers and ARPANET), newsletters (both published by NASA and by outside entities) and other general materials.

Indexing Terms
The following terms may be used to index this collection.

Corporate Name
Ames Research Center
United States. National Aeronautics and Space Administration

Geographic Name
Moffett Field (Calif.)

Personal Name
Slye, Robert E.

Subjects
Launch vehicles (Astronautics)
Trajectory optimization
Payloads (Aerospace engineering)
Computer engineering--Data processing
Remote-sensing images
Landsat satellites.
Image analysis.
Image processing.
Ecosystem management--Research.
Cost analysis
Feasibility studies

Related Collections

Larry A. Manning Papers, 1967-1988 (PP05.04)
Donald E. Wilson Earth Resources Survey Program Papers, 1972-1983 (PP07.13-DW)

Container List

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1	4	Analytical Cost/Performance Model for the Analysis of the Long Duration Manned Space Missions, Final Report, 1967
1	5	Final Report, Service Module Upper Stage, 1967
1	6	Planetary Programs, Analysis of Titan III F Family Capability for the Mars 1973 Type 1 Mission, 1967
1	7	S-5 Study, 1967
1	8	SLV, General Dynamics, 1967
1	9	1 Centaur Sizing Study for Titan IIID and IIIB, 1968
1	10	Proposal for Systems Modeling and Cost/Performance Methodologies for Optimization of Vehicle Assignment Study, 1968
1	11	Systems Modeling and Cost/Performance Methodologies for Optimization of Vehicle Assignment, Contracts, 1968-1970
1	12	Systems Modeling and Cost/Performance Methodologies for Optimization of Vehicle Assignment, Proposal Documents, 1968-1970
1	13	Study of Systems and Cost/Performance Methodologies for Optimization of Vehicle Assignment, Technical Reports, 1968-1970
1	14	NASA Space Shuttle Task Group Report, 1969
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1	17	Titan III, 1969
1	18	The UA1207 First Stage Solid Rocket Motor Technical Report, 1969
1	19	AIAA Paper, The Nuclear Shuttle for Interorbital and Transplanetary Applications, 1970
1	20	Impact of the Space Shuttle on Satellite Payloads, Technical Memorandum, 1970
1	21	Saturn IB, 1970
1	22	Space Shuttle Engineering Memoranda, Lockheed Missiles and Space Company, 1970
1	23	Study of Methodology and Model Development for Minimizing Space Program Costs, 1970
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1	31	Comparative Evolution of Space Transportation Concepts, 1971
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2	2	Methodologies for Optimal Resource Allocation to the National Space Program and New Space Utilization, Final Report, 1971 (1 of 3)
2	3	Methodologies for Optimal Resource Allocation to the National Space Program and New Space Utilization, Final Report, 1971 (2 of 3)
2	4	Methodologies for Optimal Resource Allocation to the National Space Program and New Space Utilization, Final Report, 1971 (3 of 3)
2	5	Payload Effects Analysis Study, 1971
2	6	Probabilistic Systems Modeling and Cost/Performance Methodologies for Optimization of Vehicle Assignment, Final Report, Volume 1, 1971
2	7	Probabilistic Systems Modeling and Cost/Performance Methodologies for Optimization of Vehicle Assignment, Final Report, Volume 2, 1971 (1 of 2)
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2	11	Task Report, Study of Systems and Cost/Performance Methodologies for Optimization of Vehicle Assignment, 1971
2	12	The Utilization of Halo Orbits in Advance Lunar Operations, 1971-1972
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2	14	The Space Applications Program, Appendices, 1974
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3	7	CZCS Coastal Zone Color Scanner Investigations Correspondence, 1978
3	8	Institute for Advanced Computation, Landsat Imaging Program

		Descriptions and User Guides, 1978
3	9	Institute for Advanced Computation, Landsat Image Processing, Final Report, 1978
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3	14	Newsletter: Plain Brown Wrapper, 1978-1981
3	15	Western Regional Remote Sensing Conference Proceedings, 1979
3	16	Western Regional Applications Program (WRAP) Publications, 1980
3	17	1982 Report: Renewable Resources Remote Sensing Research Program
3	18	Earth Resources Bibliography, 1983
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3	23	Life Science Division Roster, 1985
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3	25	ECOSAT Branch, Annual Report, 1986
3	26	NASA Earth Systems Science Overview, 1986
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3	29	Newsletter: What on Earth, 1989-1995 (1 of 2)
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3	32	Earth Systems Science Division, Annual Reports, 1990
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4	19	Inventories of Irrigated Lands in Southern Idaho Using Various Remote Sensing Techniques, R.C. Heller and K.A. Johnson, September 30, 1977
4	20	Newsletter: Institute for Advanced Computing, 1977
4	21	Institute for Advanced Computation, Magnetic Tape (I4) Facility Descriptions, 1977-1978
4	22	Institute for Advanced Computation, Unicon File System, 1978
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4	24	Newsletter: NASA Newsline, 1979
4	25	CRAY-IS, Coding Techniques for Vectorization, 1982
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4	39	Newsletter: NFFE, April-May 1996
4	40	Y2K Desktop Readiness Initiative, 1999
4	41	The Eros Data Center, undated
4	42	Hydrology and Geology of the Chicxulub Structure: A Possible Buried K/T Impact Crater in Yukatan, Mexico, Draft, undated