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Revised July 1968

JOHN F. KENNEDY SPACE CENTER

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A Selective Bibliography

February 1949 - February 1968

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(Supersedes bibliography issued July 1967.)

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R. A. Lindemann
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PREFACE

This is primarily the bibliography of an organization located in an area which was once inhabited by more beasts and birds than people. The evolution of the Kennedy Space Center can be traced from the Army Ballistic Missile Agency and Marshall Space Flight Center, Huntsville, Alabama. That period is fully covered by Historical Origins of NASA's Launch Operations Center to July 1, 1962. Because of the close working relationship between the Kennedy Space Center and the Air Force Eastern Test Range, articles showing evolution of the range are included.

Entries are arranged chronologically, but no chronology of launches is intended here. Launches are mentioned only incidentally. Information on launches may be found in the Chronology of Major NASA Launchings, October 1, 1958 - September 30, 1962; Astronautical and Aeronautical Events of 1962; Astronautics and Aeronautics, 1963 - 1965; and Historical Origins of NASA's Launch Operations Center to July 1, 1962; (KSC Historical Monograph No. 1).

This bibliography is intended to show, in a limited way, the development of the Air Force Eastern Test Range and more specifically the development of the Kennedy Space Center as evidenced by construction of facilities at Merritt Island. The compilers attempted to adhere to the following criteria in selecting material for inclusion:

1. Articles that have appeared in a newspaper, periodical, house organ, or a Congressional hearing. Book titles were omitted.

2. Articles that deal primarily with the expansion and organizational development of the Air Force Missile Test Center and Kennedy Space Center.

3. Articles that deal with development of launch and support facilities.

4. Articles that do not deal primarily with specific programs such as Gemini or Mercury or the NASA management philosophy.

5. Articles that are cited are available for review in the Kennedy Space Center Library.

Most of the entries listed were found through the Readers' Guide to Periodical Literature, International Aerospace Abstracts (IAA), and Scientific and Technical Aerospace Reports (STAR), although some articles were found in the newspapers and house organs. Since neither newspapers nor house magazines are indexed, material from these sources is not all inclusive. Satisfactory entries could not be located for the year 1955; that year has therefore been omitted.

The compilers look upon this bibliography as a developing entity, subject to changes in scope and content. Therefore, any comments or suggestions that could be included in the revisions would be appreciated.

The compilation of this work has been truly a cooperative affair. Without the understanding and devoted efforts of Miss Tena Crenshaw, former reference librarian, and Mrs. Mary Kihm, assistant librarian, this work could not have been completed. Through three bibliographical reorganizations and through revisions of annotations, they displayed calm patience and resolution. Mr. William Schenck gave valuable assistance for those entries covering the January 1965 through the July 1967 period. The warm words of encouragement given by Mrs. L. B. Russell, Kennedy Space Center Librarian, and Dr. Robert Lindemann were most welcome.

This revision brings the chronology through February 1968.

V. A. Rapetti
V. A. Rapetti
LTV Librarian

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Additional copies may be obtained from the Kennedy Space Center Library.

1949

February 21: DEFENSE CHIEFS ASK GUIDED MISSILE SITE. Aviation Week, p. 11-12.

Provides a brief outline of testimony presented to the Senate Armed Services Committee by Brig. General William Richardson and Dr. Karl Compton, Chairman of the Research and Development Board.

May 5: Sosin, Milt. GUIDED MISSILE BASE BEGUN. Miami Daily News.

Melbourne and Cocoa city leaders begin making plans for the tremendous increase in population which was expected when news was received that the Banana River Naval Air Station had been approved as a guided missile test station.

1950

July 3: GUIDED MISSILE TEST CENTERS REALIGNED. Aviation Week, p. 14-15.

An important change in the range management concept is announced and briefly explained.

July 24: BUMPER MISSILE IN PUBLIC SHOWING. Aviation Week, p. 17.

First public showing of a guided missile to be launched from the Long Range Proving Ground at Banana River, Florida, is discussed. "Bumper's" antecedents and prior accomplishments are outlined.

1951

October 15: WHERE SERVICES TEST MISSILE. Aviation Week, p. 38, 43-44.

A picture of the 1,500-mile Air Force Missile Test Center (AFMTC) Range is given. A clear indication of the "state-of-the-art" is revealed in this comment by a hypothetical engineer, "Now that we've got it, what are we going to do with it?"

1952

April: TRACKING THE "BIRD". Flying, p. 9-11.

The dual purpose mission of AFMTC is to provide a proving ground and inflight performance data for the many guided missile manufacturers and to train military personnel in the handling and launching of missiles.

July: Taylor, Theodore L. THOUSAND-MILE TARGET RANGE. Popular Mechanics, p. 109-112.

A detailed illustrated article on activity and operation of the range.

1953

June-July: ROBOTS IN THE SKY. Monsanto Magazine, p. 3-8.

The Army Corps of Engineers went to Cape Canaveral in 1949 to build a proving ground for the most modern of weapons This story explains what the AFMTC does and traces the activity generated downrange by a missile shot from the Cape.

August 17: MISSILE CENTER EXPANDS FOR LONG RANGE FLIGHTS. Aviation Week, p. 170-184.

An overall picture of range expansion and the organization elements required to launch and track a missile.

August 23: 1,500-MILE RANGE MISSILES AT HAND. The Miami Herald, p. 18A.

The development of AFMTC and the Air Force's decision to negotiate with Pan American World Airways for operation of the missile test range is given.

1954

February 22: Shea, Frank. PAA WINS MISSILE BASE CONTRACT. Aviation Week, p. 17-18.

Announcement of the long-rumored contract between PAA/RCA and ARDC for contractor operation of the range.

March: Arnett, Al. OUR FANTASTIC GUIDED MISSILES. Southern Telephone News, p. 4-9.

Activities at the Cape when Martin Company, Boeing, and Northrop were testing the Bomarc, Matador, and other missiles are discussed.

1955 No entries available through Readers' Guide to Periodical Literature.

1956

August 6: Anderton, David A. PATRICK PREPARES FOR BALLISTIC MISSILES. Aviation Week, p. 106-116.

It took only three years for missile technology to require AFMTC to expand from 1,500 to 5,000 miles. This article details expanded missile test program requirements and attendant problems. An AFMTC organization chart is included.

1957

July 15: LIFE IN MISSILELAND. Time, p. 16.

The Cape is Cape Canaveral, home of the AFMTC. The way of life in nearby Cocoa, Cocoa Beach, Melbourne, Rockledge, and Titusville is more affected by the missile age than any other area in the world.

September: Hamilton, C. L. FLORIDA'S MISSILE BOOM. Flying, p. 40+.

The aviation industry is creating Florida's newest boom. The economic effects, resulting from the Department of Defense's decision to locate its guided missile test center at Cape Canaveral, are readily anticipated.

October 7: Clark, Evert. MISSILE WATCHERS PIERCE PATRICK SECRECY. Aviation Week, p. 26-29.

In the Cape Canaveral missile launch area, security is difficult to maintain. Local residents can determine what missile will be fired by being alert to truck movements along the highways and listening to restaurant conversations.

November 25: ON THE FIRING LINE. Newsweek, p. 39-40.

By air, train, and truck a mighty group of missiles and rockets steadily converge on Florida's Cape Canaveral. This is AFMTC, known also as "Missileland" and "U.S. earthstrip number one".

December 22: Bracker, Milton. A SAND DUNE ON INFINITY'S RIM. New York Times Magazine, p. 8-9.

The transformation of Cape Canaveral from a fisherman's paradise into America's beachhead to space is graphically presented.

1958

March 28: SPACE CAPITAL, U.S.A. U.S. News and World Report, p. 40-43.

How the Army, Navy, and the Air Force all fire their rockets and missiles from AFMTC.

June 7: CANAVERAL BOOMS AS U.S. WAYPOINT TO SPACE. Business Week, p. 54-55+.

A new decentralized approach to weapons development brought about by missiles and rockets is discussed.

June 16: CANAVERAL SUPPORTS SPACE EXPLORATION. Aviation Week, p. 187+.

The vital supporting role of the AFMTC in the exploration of outer space and testing of intercontinental ballistic missiles is reviewed.

June 24: STRANGE BOOM AT COCOA BEACH. Look, p. 24-26+.

A description of what it is like to live in the resort adjoining the base where America is shooting its missiles into space.

July: Dempewolff, Richard F. AN EDITOR REPORTS FROM CANAVERAL. Popular Mechanics, p. 63-64+.

The extent and purpose of AFMTC at Cocoa Beach, Florida, is described by an editor visiting the area.

July: Murphy, Charles J. THE COUNTDOWN AT CANAVERAL. Fortune, p. 86-93+.

An account is given of the collaboration of aircraft "primes" and electronics companies joined in an extraordinary partnership.

July-August: Medaris, J. B. TEAMWORK FOR SPACE POWER. Ordnance, p. 53-56.

The story of the historic launching of Explorer I, January 31, 1958, 10:48 p.m. is told by the former Commanding General, Army Ordnance Missile Command.

August: Armagnac, Alden P. INSIDE THE ATLAS BLOCKHOUSE. Popular Science, p. 60-65.

Details of construction and function of blockhouses are discussed.

September 29: Eastman, Ford. NASA TO OPEN DOORS ON OCTOBER 1; LABORATORY NAMES ARE MODIFIED. Aviation Week, p. 27.

The change from National Advisory Committee on Aeronautics to National Aeronautics and Space Administration (NASA) was accomplished about a month ahead of the 90-day deadline set by Congress. NASA organizational structure was not announced; however, NACA laboratories were redesignated NASA Research Centers. Congress directed NASA to "provide . . . widest practicable and appropriate dissemination of information concerning its activities and results thereof."

1959

March: Newman, Al. BOOM ON THE BANANA RIVER. The Reporter, p. 32-33.

A first person account of life in Cocoa and Cocoa Beach is related by an "incurable missile buff".

June: Langewiesche, Wolfgang. CANAVERAL - FROM THE CAPE TO THE STARS. Reader's Digest, p. 114-120.

The author discusses Cape Canaveral's role in conquering space.

August 24: Clark, Evert. SPACE SPURS MISSILE CENTER'S GROWTH. Aviation Week, p. 52-53+.

Plans are being made at AFMTC for space systems to put permanent stations into orbit around the earth and to send men to establish bases on the moon.

August 31: Clark, Evert. CANAVERAL COMPLEX WILL REMAIN TOP U.S. SPACE BASE. Aviation Week, p. 54-57+.

The AFMTC's position as the principal U.S. base for space exploration was assured for the foreseeable future under expansion plans detailed in this article.

October: Fisher, Allan C. CAPE CANAVERAL'S 6,000-MILE SHOOTING GALLERY. The National Geographic Magazine, p. 421-471.

The Atlantic Missile Range spans the Atlantic Ocean from Cape Canaveral via Antigua to Ascension Island. What happens at each tracking station when a missile is launched and how performance data are collected is explained. Color photographs are in keeping with the usual standards of National Geographic.

1959 October 26: Clark, Evert. NASA GAINS ARMY MISSILE TEAM SATURN. Aviation Week, p. 28-29.

Resolution of responsibility for space vehicle and Saturn program development was made by President Eisenhower in his proposed transfer of the Von Braun team to NASA. "The contemplated transfer provides new opportunity for them, (the Von Braun team) to contribute. . .to the expanding civilian space program." The article contains comments from Dr. Von Braun and General Medaris and gives reasons for the President's decision.

October 30: PRESIDENT TRANSFERS ELEMENTS OF ARMY ROCKET CENTER TO SPACE AGENCY. Science, p. 1177.

The President's plan for transfer with comments by Dr. Von Braun, General Medaris, and Senator Johnson are outlined.

November 2: Eastman, Ford. SENATE, HOUSE GROUPS MAY PROBE TRANSFER OF ABMA UNITS TO NASA. Aviation Week, p. 28-29.

Views of leading Democratic members of the House and Senate Space Committees on the President's "contemplated" transfer of ABMA units to NASA. Senator Lyndon Johnson felt the move would preserve the "valuable experience" gained by the Army Ballistic Missile Agency (ABMA) team.

1960

February 18: TRANSFER OF THE VON BRAUN TEAM TO NASA. Hearings before the NASA Authorization Subcommittee of the Committee on Aeronautical and Space Sciences, U.S. Senate, 86th Congress, 2nd Session, H. J. Res. 567, 81 p.

The proposed transfer of the Development Operations Division of ABMA would round out NASA's development capabilities. Within the Department of Defense, serious efforts have been made to cancel the large booster Saturn project because no military requirement existed. Dr. Glennan assured the subcommittee that the "highest national priority" would be given the Saturn program by NASA. This testimony of Dr. Glennan, Senator John F. Sparkman, former Maj. General J. B. Medaris, and Mr. Albert F. Siepert, among others, provides valuable insight into the political aspects of the proposed transfer. Of special interest is the statement of Mr. Siepert, former Director of Business Administration, NASA, now Deputy Director, Kennedy Space Center (KSC). Mr. Siepert's statement provides much detailed information on the organization of NASA, Army Ballistic Missile Agency, and the Army Ordnance Missile Command, as well as personnel, equipment, and facilities including the Cape Canaveral Facility Plan.

February 28: Barrett, George. CANAVERAL AWAITS THE BIG MOMENT. New York Times Magazine, p. 20+.

The author describes the Cape area and captures the "society in transit", frontier spirit of Cape Canaveral.

May 30: Clark, Evert. NASA CENTRALIZES LAUNCH MANAGEMENT. Aviation Week, p. 28-29.

An excellent overview of the organizational structure, responsibility, and facilities of the newly created Launch Operations Directorate is presented. The responsibilities of Dr. Kurt Debus, Director, and those of his staff, Col. Gibbs, Mr. Zeiler, Mr. Sendler, and Mr. Parker are delineated. A chart shows the reorganization and the relationship of the Directorate to other NASA centers and to Headquarters.

July 5: MANAGEMENT AND OPERATION OF THE ATLANTIC MISSILE RANGE. Report of the Committee on Science and Astronautics. U. S. House of Representatives, 86th Congress, 2nd Session. 11 p.

Report of an inquiry made into the operation of the Atlantic Missile Range. Main subjects of the study are the management of the range by Pan American and the general effectiveness of range operations.

1961

February 20: CAPE TEST SCHEDULING IS TRIBUTE TO COOPERATION. Missiles and Rockets, p. 32-33.

The Military Services and NASA arrange firing dates with minimum conflict, a tribute to cooperation at Cape Canaveral.

July 31: Alexander, George. CAPE CANAVERAL TO EXPAND FOR THE LUNAR TASK. Aviation Week, p. 28

The urgency with which the United States views the manned lunar landing program is reflected in the increased acreage and the expansion of facilities at the Cape.

September 2: EXPANDING THE TAKE-OFF FOR SHOTS AT MOON. Business Week, p. 20-21.

NASA's choice of Cape Canaveral for a new launching area gave added impetus to Florida's booming economy.

September 4: CAPE EXPANSION TO COST $500 MILLION. Missiles and Rockets, p. 15.

NASA's plans to spend over 500 million dollars on the expansion of Cape Canaveral for launching moon expeditions are revealed.

November 27: CAPE'S BILLION-DOLLAR LAUNCH COMPLEX. Missiles and Rockets, p. 116-118.

The 500 million dollar 1963 fiscal budget for NASA's Launch Operations Directorate and its impact on the space program are discussed.

December 3: TRIPLE TASK OF CANAVERAL. New York Times Magazine, p. 26-27.

Most of the nation's rocket and missile history has been made at Cape Canaveral and more is in the making. The huge complex was greatly enlarged for two purposes: continued development of military weapons and the peaceful exploration of space. Photographs show the varied activities at the Cape.

1962

January
February: Debus, Kurt H. SATURN LAUNCH COMPLEX. Ordnance, p. 520-524.

An illustrated article by the Director of the Launch Operations Directorate about Launch Complex 34, the "largest known rocket site". Dr. Debus briefly discusses important sections of the complex.

February 12: Kolcum, Edward H. VAST CAPE EXPANSION WILL START IN MARCH. Aviation Week, p. 31-32.

Plans are outlined for the construction of Saturn C-5 pads at Cape Canaveral. Major design and construction problems are discussed.

February 24: Neville, Tove. CRADLE OF THE SPACE AGE. Science News Letter, p. 117+.

A trip around Cape Canaveral is described briefly.

March 16: Greenberg, D. S. DOWN AT THE CAPE: THE SPECTACULAR HAS BECOME COMMONPLACE AT AMERICA'S SPACEPORT. Science, p. 907-908.

The drama of manned space flight arouses public interest even though it seems unmanned launches have become commonplace to local citizens.

March 24: SPACE CRESCENT TRANSFORMS GULF AREA. Business Week, p. 66-68+.

NASA's two centers at Huntsville, Alabama, and Cape Canaveral are creating a new kind of life in the region.

May 24: CAPE CANAVERAL: THE HOPE OF THE FREE WORLD. Report of the Committee on Science and Astronautics. U.S. House of Representatives, 87th Congress, 2nd Session. 20 p.

"This report reviews the management of the Atlantic Missile Range. . . the possibility of making different management arrangements, and the prospects and plans for the further development of the range", from the letter of transmittal from Congressman Victor L. Anfuso to the Chairman, Committee on Science and Astronautics.

June: Bone, Bob. CAMERAS ON CANAVERAL. Popular Photography, p. 46+.

A short article which describes the press photographers' role in covering John Glenn's historic flight.

June: Smith, Richard A. CANAVERAL, INDUSTRY'S TRIAL BY FIRE. Fortune, p. 134-139+.

The role of the Cape as the test laboratory for the aerospace industry and the importance of tests whether they are failures or successes are revealed.

July 2: NEW NASA CENTER EXPANDS CAPE MISSION. Aviation Week, p. 44-46.

How the establishment of the Launch Operations Directorate as a separate center on July 1, 1962, gave it a more vital role in design and use of new launch vehicles.

July 2: NASA BUILDING FLEXIBLE CAPE FACILITIES. Aviation Week, p. 46-48.

The author discusses the facilities for Complexes 34, 37, and 39 and Nova launches, as well as the crawler, rail, and barge canal systems.

July 25 WAYS AND MEANS OF EFFECTING ECONOMIES IN THE NATIONAL SPACE PROGRAM. Statement by Rocco A. Petrone In: Hearing #17. House Committee on Science and Astronautics. U.S. House of Representatives, 87th Congress, 2nd Session, 1962.. p. 42-57.

Major Petrone outlines the concept and development of launch facilities for the Saturn C-5 vehicle at Complex 39. Advantages of mobile launcher concept over fixed position in terms of manpower and dollars are presented. Artists' drawings of Complex 39 are included. At the time of this hearing, Major Petrone was Chief, Heavy Space Vehicles Systems Office, Launch Operations Center, Cape Canaveral, Florida.

December 10: SATURN COMPLEX 37 CONSTRUCTION ADVANCES RAPIDLY. Aviation Week, p. 91.

Photographs of Complex 37 which will be used for a series of Saturn launches are shown.

1963 THE AFMTC STORY. In: Hearings before the Subcommittee on Manned Space Flight of the Committee on Science and Astronautics. U. S. House of Representatives, 87th Congress, 2nd Session, 1962, p. 1080-1171.

"This series of briefs are intended to describe the various Government and contractor agencies located at AFMTC and explain what they do and how they work together in providing the facilities and services of the Atlantic Missile Range."

The AFMTC Story is found in Appendix VIII of the 1963 NASA Authorization.

January 28: NASA TO CONTROL OWN LAUNCH AREA. Aviation Week, p. 33.

The agreement, signed by NASA and the Defense Department, gives NASA exclusive jurisdiction over 87,000 acres acquired next to Cape Canaveral.

March: Debus, Kurt H. LAUNCHING THE MOON ROCKET. Astronautics and Aerospace Engineering, p. 20-32.

The Manned Lunar Landing Program is discussed by Dr. Debus, Director, John F. Kennedy Space Center. Information on Saturn rockets and ground support equipment for Launch Complex 39 is included.

March 3: Debus, Kurt H. LAUNCHING METHOD FOR TOMORROW'S ROCKETS. American Society of Mechanical Engineers, Aviation and Space, Hydraulic and Gas Turbine Conference, and Products Show, Los Angeles, Calif., March 3-7, 1963, Paper 63-AHGT-60. Mechanical Engineering, Sept. 1963, p. 41-45.

"Description of Launch Complex No. 39, which incorporates a new approach to the problems of a launch facility adequate for Saturn C-5. The basic concept is to erect the entire space vehicle in a sheltered environment and check it with all umbilical connections in place so that tests remain valid. The space vehicle is then transported to the launch pad before the essential checked-out connections are separated from the ground-support equipment. It is thus left on the minimum launch pad for the shortest possible time before launch. Discussed are the major units and elements of the mobile concept, the automatic checkout techniques, and the advantages to be derived from the use of Complex No. 39." (IAA-A63-22120)

March 18: Petrone, Rocco A. SATURN V/APOLLO LAUNCH OPERATIONS PLAN. American Institute of Aeronautics and Astronautics, Space Flight Testing Conference, Cocoa Beach, Fla., March 18-20, 1963, Paper 63087, 33 p.

"Description from an operational viewpoint of the new launch complex, Saturn Complex 39, to accommodate the expanded Manned Lunar Landing Program. A new mobile launch operations

concept to cope with the requirements of the new program is outlined. The facilities required to implement the mobile concept include: (1) a vertical assembly building where space vehicles undergo detailed stage preparation and assembly and checkout operations on a launcher umbilical tower platform; (2) a crawler transporter to move the vertically assembled and checked-out vehicle on the launcher umbilical tower to the launch pad; (3) automated checkout facilities incorporated in the space vehicle and the ground support equipment; (4) a digital data system permitting checkout and launch of the space vehicle on the pad from a location remote from the pad." (IAA-A63-15493).

March 18-20: Bidgood, Clarence. SATURN V CHECKOUT FACILITIES AT MERRITT ISLAND LAUNCH AREA. American Institue of Aeronautics and Astronautics, Space Flight Testing Conference, Cocoa Beach, Fla., March 18-20, 1963, Paper 63088, 32 p.

"Description of eight categories of facilities and equipment at Saturn Complex 39, including an outline of attendant operations. It is shown that the new launch complex will provide for complete integration and automatic checkout of the Saturn V in a controlled environment at a distance from the ultimate site of launch. The vehicle will be moved at least three miles, in flight attitude, to the pad to be fueled and fired in a minimum time. Advantages offered by this approach include high launching rate, maximum reliability, minimum cost, and efficient expansion capability." (IAA-A63-15494) Colonel Bidgood was Chief of the Facilities Office at the Launch Operations Center.

April 6: TRANSFORMING THE CAPE INTO A SPACEPORT. Business Week, p. 56-60.

The vast expansion and modernizing of ground facilities mark Cape Canaveral's graduation from a time of experiment to an era when space flights will be routine.

July: Romaine, Octave. 2250-TON TRANSPORTER FOR SATURN V. Space/Aeronautics, p. 105.

"Brief description of the transporter that will carry the assembled Saturn V launch vehicle topped by the three-module Apollo spacecraft to the launching pad. The transporter will have a maximum unloaded speed of 2 mph. All electric generating

machinery and accessory equipment will rise with the framework when it lifts its 6,000-ton load. Generator sets and other large machinery will be installed through the hatches in the top. Routine maintenance and overhaul can be done from the inside. (IAA-A63-18917).

August 4: Jefferson, Rolla R. SATURN V VERTICAL ASSEMBLY BUILDING. Institute of Electrical and Electronics Engineers, International Conference and Exhibit on Aerospace Support, Washington, D. C., August 4-9, 1963 IEEE Transactions on Aerospace, p. 319-325.

"Discussion of the major problems encountered during an evaluation-concept study of a vertical assembly building (VAB) for the Saturn V vehicle. One concept of a vertical assembly building is described, the primary problems encountered are outlined and their solutions are discussed. The VAB described is designed for launch vehicles up to 50-ft diameter and 400-ft height. The final configuration of the VAB is diagramed. It included a fully enclosed low-bay building which occupies an area of approximately 66,000 ft." (IAA-A63-23244).

September: BUILDING FOR THE MOON LAUNCH - A STUDY IN SPEED AND SIZE. Architectural Forum, p. 118-121.

The 50-story Vehicle Assembly Building (VAB), in which four Saturn rockets may be assembled at once, is discussed from an architectural point of view.

October: Debus, Dr. K. H. NASA LAUNCH TECHNOLOGY DETAILED BY LOC DIRECTOR. Data, p. 7-17.

An interview with Dr. Debus concerning Cape expansion, build-up for the Saturn, budget, and instrumentation on the Cape. Back of front cover includes a management chart of Launch Operations Center, Cocoa Beach, Fla.

November 23: PRESIDENT VISITS THE BIG BIRDS. Business Week, p. 36.

Shortly before his assassination, President Kennedy flew over Merritt Island, saw an underwater Polaris firing, and looked over Saturn and Centaur rockets awaiting test firings at Cape Canaveral.

December 5: CANAVERAL'S NAME CHANGED TO KENNEDY. Spaceport News, p. 1.

President Johnson announced in his Thanksgiving address that Cape Canaveral had been renamed Cape Kennedy, and that the facilities of NASA Launch Operations Center and the facilities of Station #1 of the Atlantic Missile Range would be known as the John F. Kennedy Space Center. The text of the Executive Order announcing the change is reprinted.

1964

January 27: Debus, K. H., PRESENTATION TO THE SUBCOMMITTEE ON MANNED SPACE FLIGHT... AT THE JOHN F. KENNEDY SPACE CENTER, NASA, COCOA BEACH, FLORIDA. In: Hearings before the Subcommittee on Manned Space Flight of the Committee on Science and Astronautics. U.S. House of Representatives, 88th Congress, 2nd Session, 1964, Appendix B, p. 936-983. 1965 NASA Authorization.

KSC organizational changes are discussed by Dr. Kurt Debus and KSC budget requirements are presented. Flip charts, graphs, and two organization charts used in the presentation are reproduced.

March: Buchanan, Donald P. SATURN V. LAUNCH ENVIRONMENT AND GSE DESIGN. Astronautics and Aeronautics, p. 30-39.

The important role of Launch Complex 39, with its ground support equipment, is discussed.

April: Gresser, Angela C. HISTORICAL ASPECTS CONCERNING THE REDESIGNATION OF FACILITIES AT CAPE CANAVERAL. 18 p. (KSC Historical Note No. 1).

The name change from Cape Canaveral to Cape Kennedy and redesignation of Launch Operations Center as the John F. Kennedy Space Center, NASA, are documented by this historical note. A chronology of President Kennedy's visits is also included. A series of carefully chosen photographs reveals highlights of the trips.

April 14-15: Bagnulo, Aldo H. CONSTRUCTION OF THE SPACEPORT. Society of Automotive Engineers, Earthmoving Industry Conference, SAE Paper S-381, 12 p.

Colonel Bagnulo, Assistant Director of Engineering and Development at KSC details the construction required to provide the free world with its first operational spaceport. Illustrations and photographs provide evidence of this vast effort.

April 29: Debus, K.H. PEACEFUL USES OF OUTER SPACE. Speech before the Fourth National Conference on the Peaceful Uses of Outer Space. April 29, 1964, 7 p.

A discussion on the development of the "nations first space port." How the site was selected and facilities to be constructed are detailed.

May 4: Debus, K.H. LAUNCH OPERATIONS SUPPORT IN THE SATURN V/APOLLO PROGRAM. American Astronautical Society, Tenth Annual Meeting, New York, May 4-7, 1964, 16 p.

"A new mobile launch concept has been developed for the Saturn V/Apollo program. Instead of the established practice of vehicle assembly, checkout, and launch at a fixed launch site, the Saturn V/Apollo will be assembled and checked-out in a controlled environment, and then transferred to the launch pad . . . .

KSC is responsible for the preparation and launch of the Saturn V/Apollo vehicle, including operational planning and scheduling, preflight preparation and checkout, launch, and refurbishing operations . . . .

After all tests are completed, the vehicle/LUT combination is transferred to the pad. Prior to countdown, all systems are verified and a second simulated flight test is performed. During the countdown, propellants are loaded, the astronauts embark, final systems checks are conducted, and the vehicle is launched." AAS Abstract

June: Debus, K.H. SATURN/APOLLO SPACEPORT GROWS. Astronautics and Aerospace Engineering, p. 34-38.

"Description of the launch base and service facilities being erected to support the Manned Lunar Landing Program. Launch Complex 39, which will provide facilities and equipment required

to receive, assemble, checkout, and launch Saturn V/Apollo space vehicles, is treated in some detail. The Launcher Umbilical Tower, the Vertical Assembly Building, and its Crawler-Transporter are extensively described. The Merritt Island industrial area, some problems of co-ordination and scheduling, and future problems are also discussed." (IAA-A64-20572)

June 25: Debus, Kurt H. SOME DESIGN PROBLEMS ENCOUNTERED IN CONSTRUCTION OF LAUNCH COMPLEX 39. A speech before the Hermann Oberth-Gesellschaft, Darmstadt, West Germany, 36 p.

In this speech Dr. Debus discusses the design and construction problems of Complex 39, launcher umbilical tower, crawler transporter, flame deflector, as well as the many engineering problems encountered in building on the sand and shell soil of Merritt Island.

July 16: "LARGEST LAND VEHICLE" TAKING SHAPE. Spaceport News, KSC, p. 3.

Pictures and information reveal the progress made in the construction of the first crawler transporter, "world's largest land vehicle", which will be used to carry Saturn V rockets from the VAB to the launch area.

September 7: Petrone, Rocco A. GROUND SUPPORT EQUIPMENT AND LAUNCH INSTALLATIONS AT JOHN F. KENNEDY SPACE CENTER, NASA, FOR THE MANNED LUNAR LANDING PROGRAM. Presented at the 5th International Astronautical Congress, Warsaw, September 7-12, 1964, p. 34. (NASA-TM-X-57026)

"Emphasis is placed on major facilities at launch complex 39 where the mobile concept is being implemented. These include: (1) a vertical assembly building, for assembly and checkout of the space vehicle; (2) a launcher-umbilical tower, where the vehicle is erected vertically for checkout, transfer, and launch; (3) a crawler-transporter, to move the space vehicle and launcher-umbilical tower to the launch pad; (4) an arming tower, to provide space vehicle access at the launch pad; and (5) the launch pad area. The modes of operation of these facilities are discussed, and their relative roles in the manned lunar landing program are included." (STAR-N66-13250)

Autumn: CAPE CANAVERAL TO CAPE KENNEDY. Princeton University Library Chronicle, p. 57-62.

The history of Cape Canaveral is traced through four centuries to its extraordinary renaming as a memorial to the late President. This article includes pictures of Florida maps dated 1584 and 1598.

October: Jarrett, Francis E. and Robert A. Lindemann. HISTORICAL ORIGINS OF NASA'S LAUNCH OPERATIONS CENTER TO JULY 1, 1962, 300 p. (KSC Historical Monograph No. 1).

This study traces the development and growth of the Launch Operations Directorate, first under the auspices of the U. S. Army Ordnance Missile Command and then as part of NASA's Marshall Space Flight Center. The account ends with the establishment of the Directorate as an independent center.

December 13: Whalen, Robert G. VISIT TO THE THREE CAPE KENNEDYS. New York Times Magazine, p. 34-35+.

The author describes three Cape Kennedys-- the launch area, where the space story up to now has unfolded; the new area, where groundwork for the space story of the future is being laid; and the community where the makers of both stories live.

1965

January: Alexander, W. D., A. Tedesko, and P. C. Ruthledge. APOLLO - A TRIP TO THE MOON. Civil Engineering, ASCE, p. 42-52.

This article devoted to the Vehicle Assembly Building is presented in three sections: VAB Project Description - Organization and Procedure; Design of the VAB and the VAB design of foundations.

January 7: ERECTING THE MOON-ROCKET BUILDING. Engineering News-Record, p. 25-27.

A picture is given of the VAB under construction, with facts relating to the size of the building and techniques used in construction. The VAB was not yet completed when this article was written.

January 24: Young, Dick. GARGANTUAN IS THE WORD FOR THE 'MILE - HIGH' MILA. Orlando Sentinel, 1C.

Color photographs show the VAB and other facilities under construction at Merritt Island.

January-February: Holmes, E. E. VEHICLE ASSEMBLY BUILDING GOING UP! Ordnance, p. 420-422.

This article is devoted largely to the "super" aspects of the Moonport, especially the VAB.

March 26: NEW LOOK AT THE CAPE. Time, p. 86-96.

Six color photographs illustrate this informative article concerning activities at Cape Kennedy. The progress made in construction of the Merritt Island Complex and future plans for the Space Center are outlined. A photograph of Dr. Debus, Center Director, is included.

June 5: OUR FANTASTIC MOONPORT. Business Week, p. 76-86.

Construction problems were the toughest ever faced by the Corps of Engineers. Coordination of various contracts was necessary, and the time factor entered into construction. Article gives a description of Complex 39, the industrial area, and the effect of Cape expansion on Brevard County.

July 7: Rossiter, Al. CAPE KENNEDY STILL BIGGEST, BUSIEST MOONPORT. Orlando Sentinel.

The vast activity of the Air Force at Cape Kennedy and of NASA at KSC continues to make the area America's number one spaceport.

July 22: 15th ANNIVERSARY EDITION, FIRST CAPE KENNEDY MISSILE LAUNCH. The Cocoa Tribune, Volume XLVIX, No. 93.

The Cocoa Tribune traces the history and development of Cape Kennedy from its historic first launch to the present. Many photographs of early launches are included.

August 1: CANAVERAL: A PORT WHERE DREAMS COME TRUE. Orlando Sentinel. Section C p. 1-2.

The Banana and Indian Rivers are finally linked with the open sea by a canal and lock system at Port Canaveral. The color pictures and information in this article tell of the accomplishment.

August 30: AS U.S. MOONPORT TAKES SHAPE: JOHN F. KENNEDY SPACE CENTER, MERRITT ISLAND LAUNCH AREA. U.S. News and World Report, p. 27-30.

The buildup at KSC and Launch Complex 39 in preparation for a lunar landing is described.

September: Franklin, S. A. C., MOONPORT LAUNCH PADS. Engineering Journal, p. 32-34.

"General description of the Complex 39A and B moon launch pads at KSC. The structural and functional groups which are united in the launch pads, each essential to the purpose of the pads, are given attention. The final configuration resembles a large wheel, having the launch structure as its axle. The pad support facilities are located around the rim. Details are presented of the crawlerway which stretches to the VAB, as well as of the propellant facilities and of various subsystems." (IAA-A66-10862)

September: Boysen, J.E. MEDICAL SUPPORT OF SPACE OPERATIONS. Archives of Environmental Health, p. 311-315.

This article was written by the former TWA Director of the KSC Occupational Health Facility. Dr. Boysen relates the development, organizational structure and problems of providing medical support on a contractual basis for government and contractor personnel at the Federal installation. "Not all the problems have been solved and it is reasonable to assume that not all of the problems have arisen." J.E. Boysen

October 11: Petrone, Rocco A., APOLLO LAUNCH OPERATIONS. American Institute of Aeronautics and Astronautics, Manned Space Flight Meeting, 4th, St. Louis, Mo., October 11-13, 1965. Technical Papers. American Institute of Aeronautics and Astronautics, New York, 1965, p. 1-12.

"Study of the scope and magnitude of the preparations for the launch of the Apollo/Saturn V on its journey to the moon, as related to ground support equipment and launch installations. The space vehicle is briefly described. A number of feasibility studies were made to guide the selection of the facilities required to implement the new and improved concept of launch operations. It was decided first, to provide for assembly and checkout of the space vehicle on a mobile launcher within a vehicle assembly building; second, to transfer the assembly and checked out space vehicle to the launch pad with all connections between the vehicle and the mobile launcher intact; third, through the use of digital data transmissions techniques to control and conduct launch operations from a launch control center located more than 3 miles from the launch site." (IAA-A66-11614)

November 17: Allen, A. M. THE MOBILE CONCEPT IN LAUNCH FACILITIES. Space Age Facilities, American Society of Civil Engineers, Aero-Space Transport Division, Specialty Conference, Cocoa Beach, Fla., November 17-19, 1965, Proceedings. New York, American Society of Civil Engineers, 1966, p. 149-162. American Society of Civil Engineers, Aero-Space Transport Division, Journal, November, 1966, p. 3-11.

"Description of the mobile launcher and crawler transporter facilities for the Apollo/Saturn V lunar exploration vehicle. A brief history is given of the preceding Saturn launch complexes. The structure and operations of the facilities are discussed. The conditions which influenced the design of the mobile launcher are investigated, and some dimensions and weights of the launching tower steelwork are given." (IAA-A67-16611)

November 17: Baker, Bradley L. DEVELOPMENT OF SPACE LAUNCH FACILITIES. Space Age Facilities, American Society of Civil Engineers, Aero-Space Transport Division, Specialty Conference, Cocoa Beach, Fla., November 17-19, 1965, Proceedings. New York, American Society of Civil Engineers, 1966, 55-82. American Society of Civil Engineers, Aero-Space Transport Division, Journal, November, 1966, p. 13-27.

"Discussion of the selection, general site plan, zoning, and development of KSC at Merritt Island. The history of the center is briefly reviewed, and the selection criteria are examined. The blast, acoustic, toxic vapor, and radiation hazards influencing zoning are considered. The Launch Complex 39 facilities are

discussed. The Instrumentation and utilities systems of the space center are described. Facilities have been developed and located so as to perform their mission with maximum safety, reliability, and flexibility. They will accommodate not only the Apollo/Saturn V but also more powerful versions of the Saturn as well as future launch vehicles." (IAA-A67-11838)

November 17: Cunningham, James M. DESIGN ON THE SATURN V MOBILE-LAUNCHER. Space Age Facilities, American Society of Civil Engineers, Aero-Space Transport Division, Specialty Conference, Cocoa Beach, Fla., November 17-19, 1965, Proceedings. New York, American Society of Civil Engineers, 1966, p. 267-298. American Society of Civil Engineers, Aero-Space Transport Division, Journal, November, 1966, p. 39-57.

"Description of the geometry, design, and testing of the Saturn V Mobile Launcher. The mobile concept has four basic features: (1) vertical assembly of the space vehicle on its launch platform in a protected, industrial environment; (2) transfer of the assembled and checked-out vehicle mounted on its launcher platform to the pad; (3) automatic checkout and (4) remote control of the actual launch operation from a distant launch control center. The design, fabrication, and erection of three mobile-launchers have been completed structurally. The mechanical and electrical installation as well as the installation of the ground-support equipment continue. Design checks are still being made as new criteria and modifications are presented. Every loading and operational problem known to designers has been investigated, but the design and check procedure will continue right up until T minus zero to ensure that the mobile launcher performs as planned." (IAA-A67-11840)

November 17: Eppert, Donald E. CONSTRUCTION OF CRAWLERWAY FOR THE LUNAR LAUNCH COMPLEX. Space Age Facilities, American Society of Civil Engineers, Aero-Space Transport Division, Specialty Conference, Cocoa Beach, Fla., November 17-19, 1965, Proceedings. New York, American Society of Civil Engineers, 1966, p. 255-266.

"Discussion of the requirements and design criteria of the crawlerway for the Apollo/Saturn V moon project. Preliminary test runs of the crawler indicated that the completed crawlerway

pavement as constructed was too rigid, and the turning coefficient of friction between the crawler tracks and the crawlerway surface was too high for satisfactory operation. Based on test sections, a contract has been awarded to cover the crawlerway surface with loose gravel to eliminate the two problems." (IAA-A67-16615)

Winter: MOONPORT. The Lamp. (Standard Oil of New Jersey), p. 21-23.

A capsulated review of missile activity of both Air Force and NASA at Cape Kennedy. Four color photographs illustrate the article.

December 1: LE PROGRAMME LUNAIRE AMERICAIN (The American Moon Program). Aviation Magazine International, p. 17-44.

The Apollo/Saturn V moon landing is described in French, including background on Mercury, Gemini, and NASA installations taking part in the Apollo development. The article has excellent color photographs and drawings.

December 12: Funk, Ben. THE WORLD'S LARGEST BUILDING FOR THE GREATEST ADVENTURE EVER. Orlando Sentinel Florida Magazine, p. 4F-6F.

Everything about the VAB is so titanic that it challenges the imagination. In this article, the author describes the interior and exterior of the building, and the dramatic purpose it is to fulfill.

1966

January: Porcher, Arthur G. SITING OF MANNED LUNAR LANDING FACILITIES. American Society of Civil Engineers, Aero-Space Transport Division, Journal, January, 1966, p. 145-156.

"The criteria used to select Merritt Island, Fla., as the launch area for the manned lunar landing program, the launch operations concept, criteria, and considerations used for siting individual facilities at the launch complex are presented. Conclusions are based on the best data available at the time of launch area selection and launch complex layout." (IAA-A66-20699)

February: MEANWHILE, NASA BUILDS A MOONPORT. Fortune, p. 144-149.

An illustrated article on the construction of the VAB and Launch Complex 39 is presented, including pictures of the VAB, Mobile Launch Platform, and Launch Pad 39.

February 21: Alexander, George. IMPROVED CRAWLER UNDERGOES FIRST TRIAL. Aviation Week, p. 51-55.

NASA believes that it has remedied the problems encountered last year with the Apollo/Saturn V crawler. The article tells of problems encountered in checking out the crawler, and modifications which were necessary.

February 24: Debus, Kurt H. STATUS OF ACTIVITIES AT THE JOHN F. KENNEDY SPACE CENTER. In: Hearings before the Subcommittee on Manned Space Flight of the Committee on Science and Astronautics. U.S. House of Representatives, 89th Congress, 2nd Session, Appendix B, p. 613-657.

Overall review of KSC launch facilities and programs, organizational changes, and future plans presented by Dr. Kurt H. Debus, Center Director. Illustrated with charts, pictures, and drawings.

April: MCDONNELL, SEVEN-YEAR CAPE VETERAN. Q.E.D., Canaveral Section Report of AIAA, p. 10, 22.

A short summary of McDonnell operations at the Cape, centering around Project Gemini.

April: Lowther, John. APOLLO EGRESS, A REASSURING ALTERNATIVE. Q.E.D., Canaveral Section Report of AIAA, p. 12, 13.

The escape system for Launch Complex 39 with pictures of the rubber room under the pad itself.

April: WIRING OUR MOONPORT, a special report. Electrical Construction and Maintenance, p. 95-125.

Detailed article covering Launch Complex 39. Articles on VAB, Launch Control Center, and launch pads with emphasis on the electrical systems; ie., lighting, power, which go into each area. Illustrated with electrical diagrams.

May: Leabu, V. F. LUNAR LAUNCH COMPLEX 39. Civil Engineering, p. 37-42.

The engineering aspects of Launch Complex 39, winner of the 1966 American Society of Civil Engineers' Outstanding Civil Engineering Achievement are explained. Illustrated with diagrams of crawler and Launch Complex 39. Good for specifications and technical references.

June 20: KENNEDY SPACE CENTER, SPRINGBOARD TO THE MOON. Aviation Week, Special reprint.

A special report on the Space Center as it prepares to become operational with the VAB and Saturn V. The author includes articles on the VAB, Launch Complex 39, and the crawler, also provides a look at work involved in assembly of the Saturn V. This is an excellent issue for general information.

July 24: Young, Dick, FIRST CAPE ROCKET FIRING RECALLED. Orlando Sentinel, p. 1C.

Author Martin Caiden tells of the first missile shot at Cape Canaveral and of the early facilities.

August: ENVIRONMENTAL CONTROL SYSTEMS AT THE VAB, KENNEDY SPACE CENTER. Air Engineering, p. 26-31.

The author emphasizes the ventilating, air conditioning, environmental control, and special equipment cooling systems of the VAB.

August 15: PERT AIDS SATURN/APOLLO SITE SCHEDULE. Technology Week, p. 40.

PERT (Program Evaluation Review Technique) has made it possible to meet every major milestone in activation plans for Launch Complex 39. PERT allows for complete integration of a multilevel scheduling program.

Fall: GATEWAY TO SPACE, Signal, Collins Radio Co., p. 16-21.

Launch Complex 39 and the communication equipment which went into it is described. Emphasis is on equipment made by Collins Radio.

November: LAUNCH COMPLEX 39 FACILITIES. Fact sheet 03, NASA, KSC.

Nontechnical information concerning the various parts of Launch Complex 39, ie., transporter, crawler, and launch pads.

November 24: KENNEDY SPACE CENTER. Orlando Sentinel, Section G.

This special section was published with the cooperation of the Chief of Public Affairs, NASA, KSC. It gives a short description of NASA, KSC, Brevard County, The Eastern Test Range, and Dr. Debus. Good color photos are included.

November 28: Voss, Kurt, LAUNCH VEHICLE CHANGES TRIGGER EXPANSION. Technology Week, p. 62-63.

The 6th annual NASA issue of Technology Week provides an overall review of NASA projects and future plans, and their effect on the KSC operation. An abbreviated management chart is included.

November 29: Petrone, Rocco A. APOLLO/SATURN V LAUNCH OPERATIONS Presented at the AIAA meeting, Boston, Mass., November 29-December 2, 1966.

Information on Apollo/Saturn V and the launch area at KSC is included in this step-by-step explanation of Saturn V integration and launch preparations presented by the Director of Launch Operations, KSC. Illustrated.

1967

1st Quarter: Lord, N.A. PAVING THE ROAD TO THE MOON. Sperryscope, p. 7-9.

"Early in the nation's program to send astronauts to the moon, James Webb, Administrator of the National Aeronautics and Space Administration, said, 'The road to the moon is paved with bricks, steel, and concrete here on earth.' Since then, the road has been paved and the moon lies just ahead. How it was paved is the story of the U.S. Army Corps of Engineers at the nation's spaceport." Colonal Lord is Canaveral District Engineer.

January-February — Blake, Peter. CAPE KENNEDY. . . Architectual Forum, p. 50-59.

A short, illustrated article on Launch Complex 39 and how "the techniques developed by NASA for its particular mission may also be applicable to the sort of planning that is needed to deal with urgent problems here on earth."

January 2: — LESSONS FROM FIRST PAD ALTER KSC PAD B. Technology Week, p. 20.

Testing on Pad 39A caused some changes in the design of Pad 39B. Pad B was orginally to have been a copy of Pad A.

January 19: — DEBUS RECALLS EARLY LAUNCH DAYS. Spaceport News, KSC. p.8.

Highlights of a speech by Dr. Debus to the Air Force Wives Club highlighting his experiences in the early years of Cape Canaveral is presented.

February 6: — Bagnulo, Aldo H. DESIGN AND CONSTRUCTION OF GROUND SUPPORT EQUIPMENT FOR THE APOLLO/SATURN V LUNAR LANDING MISSION. American Institute of Aeronautics and Astronautics, Flight Test Simulation and Support Conference, Cocoa Beach, Fla., February 6-8, 1967, Paper 67-247, 10 p.

"Discussion of the proven feasibility of the mobile launch concept for the Apollo/Saturn V lunar landing mission. Facilities checkout tests using the 500-F version of the Apollo/Saturn V space vehicle testify to the spaceport's readiness to launch the lunar mission. Although design of the spaceport had to be accomplished using existing capabilities, considerable effort was required in terms of expanding the current state of development. The project is not yet completed, but the majority of the remaining work consists of completing additional capabilities to match those already proven successful." (IAA-A67-20065)

April 25: — PROGRESS EDITION, Today. This Cape Kennedy, Section F.

Section F is devoted to the Cape, Air Force, and NASA activities at the Cape and KSC.

May 22: Voss, Kurt. FIVE YEAR GOALS SET FOR EASTERN TEST RANGE. Technology Week, p. 24-33.

Five major goals have been set in a 5-year program of uprating the Air Force Eastern Test Range. Tracking facilities will be enlarged and updated during the period.

July 2: LaMont, Sanders. THE UNSEEN CAPE. Today, Sunrise Magazine, p. 12-13.

Highlights of Cape history from its discovery by Europeans until the turn of the century.

1968

January: A FLYING VISIT TO CAPE KENNEDY. Interavia, p. 81-83.

The occasion for the article in this English language edition of a Swiss publication was the first launch of Saturn V, November 9, 1967. The author clearly distinguishes between Cape Kennedy Air Force Station and the Kennedy Space Center, in spite of the title. The article is not technical, but unexpected information such as names of roadways, NASA contractors, and the fact that "The sound waves (of the Saturn V) were recorded by sensitive instruments as far away as New York" are included. The author describes the Cape Kennedy -Kennedy Space Center Complex "as a giant reception center for most of the technical knowledge and achievements of our time." Seven pictures and a 9"x13" map of the Cape and Space Center illustrate this interesting article. A brief, general press interview with Dr. Debus is included.

January 15: THE APOLLO PROGRAM MANAGEMENT SYSTEM AT KSC. Volume 4 p. 108. 130-12-0001 Prepared by Program Control Office Apollo Program Office.

"The evolution of the Kennedy Space Center as the launch organization for Apollo/Saturn V involved the concurrent solution of numerous complex problems. A significant increase in manpower was involved. Large and complex checkout and launch facilities were to be designed and constructed. Expansion of operational capabilities required the establishment and integration of a Government-Contractor operational team . . . . The management

techniques, organizational concepts, and continuing efforts utilized to meet the Apollo goals and challenges are discussed in this document." Kurt H. Debus, Director, John F. Kennedy Space Center.

February: LAUNCH WINDOW OPENING: KENNDEY SPACE CENTER PREPARES THE SITE, IGNITES THE ENGINES, THEN MANNED SPACECRAFT CENTER GUIDES APOLLO 4 THROUGH MISSION. Space World, p. 24-28.

This article presents information on the mobile launch concept, the flight director's problems and new aids for recovery. The article is illustrated with pictures of Complex 39, the journey of Saturn V to Pad 39A, and informal pictures of Dr. Debus, Center Director, and Glenn Lunney, Apollo 4 flight director. The article appeared originally in North American's "Skyline", Volume 25, Number 3, 1967.