University of Houston Clear Lake

Archives and Special Collections

HSF-66
Donald J. Incerto Papers

[Human Space Flight Collection]

Collection Number: **HSF-66**

Title: Donald J. Incerto Papers

Dates: 1962-1978, 1984-1987, undated (with gaps)

Creator: Donald J. Incerto

Abstract

The Donald J. Incerto Papers is composed of training manuals, handbooks, workbooks, guides, correspondence, reports, binders, presentations, handwritten scientific calculations and notes, notes, documents, and miscellaneous materials, created, used, and/or kept by Donald J. Incerto while he worked at NASA Johnson Space Center between 1962 and 1987. Incerto would work in a variety of positions from the Apollo Program through the planning for the Space Station. The majority of the collection is composed of Incerto's manuals, information and document binders, training materials, and planning documents for the development of the Space Shuttle Program in the late 1970s to early 1980s, and the planning of the Space Shuttle in 1986 and 1987. There are also a number of NASA contractor materials for programs from Apollo through the Space Shuttle.

The materials for the planning of the Space Station are the most original items in the collection, as these items laid the groundwork for the United States' eventual development of the International Space Station. Perhaps the most unique item in the collection is an original Apollo–Soyuz Test Project (ASTP) photo-map book, produced and used at NASA Johnson Space Center Flight Control (SSR) around 1975. This map book used oversized color satellite photographs of the Earth, which were glued back-to-back to create double-sided photographic map pages of the Earth for use by American and Soviet Union space personnel during the operations of the ASTP project.

Extent: Approximately 4.7 linear feet

Language(s): English, Russian

Repository

University of Houston-Clear Lake Archives and Special Collections, Alfred R. Neumann Library, 2700 Bay Area Blvd., Houston, TX 77058-1002

Restrictions on Access: There are no restrictions on accessing this collection.

Restrictions on Use

A number of materials in this collection was produced for NASA by contractors on work for-hire contracts. Many of the contractors copyrighted or patented the information or designs or content included in the publications in this collection. As such, the University of Houston-Clear Lake Archives and Special Collections does not own the copyright to all the materials in this collection. Materials created by government agencies such as NASA are public use; but materials created by private organizations other than NASA retain their copyright, and the copyright remains with the creator and organization, under Title 17 of the U.S. Copyright Law. Researchers are responsible for obtaining permission from the copyright holder(s) to use materials beyond the "fair use" clause of the U.S. Copyright Law.

Some of the technical and scientific information in this collection may fall under the International Traffic in Arms Regulations (ITAR) of the United States government. As such, it cannot be placed or shared online, digitally, or in hardcopy format with individuals residing in, citizens of, or representatives of the countries deemed as being restricted for U.S. citizens to share such information. Researchers interested in publication of the technical and scientific information are required to consult the appropriate NASA officials prior to doing so; otherwise, researchers who do not receive permission from NASA may face federal prosecution for breaking ITAR regulations.

Preferred Citation

[Item name or title], [Box Numbers], [Folder Numbers], Donald J. Incerto Papers, HSF-66, University of Houston-Clear Lake Archives and Special Collections, Alfred R. Neumann Library, 2700 Bay Area Blvd., Houston, TX 77058-1002

Acquisition

The collection was donated to the University of Houston-Clear Lake Archives and Special Collections by Donald J. Incerto in October 2016.

Separated Material

A large Apollo–Soyuz Test Project Johnson Space Center Flight Control (SSR) photo-map book, as well as loose single and double-sized map photographs, were removed from the rest of the collection to store in an oversized flat archival box and folders. The materials were organized in two oversized numbered folders, and stored in their own box labeled “HSF-66 Donald J. Incerto Papers Oversized Box 10.” The box is stored near the rest of the collection on the Archives’ storage shelves.

Processing Information

There was no particular order to the collection when it was received by UHCL Archives from the donor. Small sets of materials were stored or grouped together, and these groupings were retained when the collection was processed. A number of binders had the contents removed from their bindings or three-ring binders. Where the binders were very thick, the materials in the original binders were divided between two or more folders since the manuals or handbooks were too wide to fit if stored in a single archival folder. The folders were labeled in the folder titles as "Part 1" and "Part 2" in parentheses after the manual or handbook title. The order of materials in the manuals or handbooks were not changed when they were divided to fit in two separate folders for long-term storage. Any covers or spine labels with important information about the binders' contents were photocopied for preservation purposes, and the copies stored at the front of the binders' materials in folders.

A number of materials were removed from the collection in keeping with the UHCL Archives' collection policy by the processing archivist while the collection was being arranged and described. Some NASA contractor materials that were still under intellectual rights to the contractor—and determined to have no long-term requirement for historical retention—were removed from the collection since they would be inaccessible to researchers anyway.

Processed by: Matthew M. Peek, January 2023

Arrangement

The collection is arranged in series based on the NASA programs and/or purpose of the materials in folders. The collection is organized into the following series: Series I: Apollo to Apollo-Soyuz Test Project Program Materials; Series II: NASA Space Shuttle Materials; Series III: Space Station Planning Materials; Series IV: NASA Contractor Materials; and Series V: Miscellaneous NASA Materials.

Biographical Note

Donald J. Incerto (who goes by "Don") was born around 1929 to Dominick and Mary Mace Incerto. Donald's father was born in Italy and emigrated to the United States. The family lived in Norwalk, Connecticut. Little is known about his life before college. Incerto attended Fairfield University in Fairfield, Connecticut, from 1949 to 1953, earning a bachelor of science degree in engineering despite having started in mathematics (according to the university's 1953 yearbook). There is no known information on his life prior to working for NASA.

In January 1962, Don Incerto went to work for the new NASA Manned Spacecraft Center (later Johnson Space Center) in coastal Houston, Texas. By May 1962, Incerto was working in the Postflight Trajectory Analysis Section under the Operations Analysis Branch and its chief Carl Huss. He would work on the Mercury Program in the last two years of its operation, and moved on to work on the Gemini Program. By the fall of 1962, Incerto was listed working in the Flight Analysis Branch. By 1963, he would become the acting head of the MSC Postflight Trajectory

Analysis Section in the Flight Analysis Branch, with research on the attitude for spacecraft during flight.

For the Apollo/Saturn 201 mission, Incerto served as a postflight observer in the Real-Time Auxiliary Computing Facility (RTACF) in Flight Dynamics SSR. He worked all through the Apollo Program, including serving as a postflight observer for the Apollo 11 mission. During the Apollo period, it appears he worked on issues related to spacecraft trajectory, and guidance and navigation systems for the Apollo spacecraft. He would work on the Skylab Program and Apollo-Soyuz Test Project between 1972 and 1975. During these programs, Incerto appears to have contributed to Earth Observation programs and the Earth Resources Experiment Package for Skylab.

His earlier work continued into the Space Shuttle era, with Incerto working in the Johnson Space Center Mission Operations Division for Earth observations experiments, attitude and navigation, and other aspects of Shuttle orbiter operations. In the last two years of his time at NASA from 1986 to 1987, Incerto would be part of the JSC Mission Operations Division Space Station Operational Capabilities Working Group. This group started designs, operational planning, development of information systems, and other aspects of the Space Station. This working group formed as a result of two factors: U.S. President Ronald Reagan directed NASA to build the International Space Station on January 25, 1984; and the Russians launch of the Mir Space Station in 1986.

Don Incerto would retire from NASA Johnson Space Center in February 1987. He transitioned into working in the real estate market of great Houston, Texas, as a real estate broker. starting in February 1990. Incerto has worked for several area real estate firms ever since. At the time of this writing, Don Incerto lives in the Clear Lake City area of coastal Houston.

Scope and Content

The collection is composed of training manuals, handbooks, workbooks, guides, correspondence, reports, binders, presentations, handwritten scientific calculations and notes, notes, documents, and miscellaneous materials, created, used, and/or kept by Donald J. Incerto while he worked at NASA Johnson Space Center between 1962 and 1987. Incerto would work in a variety of positions from the Apollo Program through the planning for the Space Station. His roles included working in the Postflight Trajectory Analysis Section, Operations Analysis Branch; Flight Analysis Branch; acting head of the Manned Spacecraft Center Postflight Trajectory Analysis Section; Apollo/Saturn 201 mission postflight observer; work in the Apollo Program on spacecraft trajectory, and guidance and navigation systems; contributor to Earth Observation programs and the Earth Resources Experiment Package for Skylab and Apollo-Soyuz Test Project; and part of the JSC Mission Operations Division Space Station Operational Capabilities Working Group.

The majority of the collection is composed of Incerto's manuals, information and document binders, training materials, and planning documents for the development of the Space Shuttle Program in the late 1970s to early 1980s, and the planning of the Space Shuttle in 1986 and 1987. There are also a number of NASA contractor materials for programs from Apollo through

the Space Shuttle. The materials for the planning of the Space Station are the most original items in the collection, as these items laid the groundwork for the United States' eventual development of the International Space Station. Perhaps the most unique item in the collection is an original Apollo–Soyuz Test Project (ASTP) photo-map book, produced and used at NASA Johnson Space Center Flight Control (SSR) around 1975. This map book used oversized color satellite photographs of the Earth, which were glued back-to-back to create double-sided photographic map pages of the Earth for use by American and Soviet Union space personnel during the operations of the ASTP project.

The collection is organized into the following series: Series I: Apollo to Apollo-Soyuz Test Project Program Materials; Series II: NASA Space Shuttle Materials; Series III: Space Station Planning Materials; Series IV: NASA Contractor Materials; and Series V: Miscellaneous NASA Materials.

Subject Terms

Personal/Family Name

Incerto, Donald J.

Corporate Names

Lyndon B. Johnson Space Center
North American Aviation
Rockwell International. Space Division
TRW Systems Group
United States. National Aeronautics and Space Administration

Geographic Name

Houston (Tex.)

Topical Term

Manned space flight--History
Project Apollo (U.S.)
Space--Social aspects--History
United States. National Aeronautics and Space Administration--History

Genre/Physical Characteristic

Handbooks
Memorandums
Notes
Publications
Technical manuals

Technical reports

Collection Inventory

Series I: Apollo to Apollo-Soyuz Test Project Program Materials

Series I is composed of training manuals, reports, notes, documents, and miscellaneous materials, produced by NASA and various NASA contractors on various NASA programs from the Apollo Program through the Apollo-Soyuz Test Project. Most of these materials were owned and used by Don Incerto during his time at NASA Johnson Space Center, specifically while working on spacecraft flight and trajectory analysis between 1966 and 1971. Some of the more unique items include North American Aviation's two Apollo training manuals for guidance, navigation, and spacecraft systems in 1966 and 1967, respectively. There is a Skylab Earth Resources Experiment Package (EREP) folder of materials used by Incerto on that particular project that studied ocean, land and atmospheric phenomena.

Several unique NASA contractor manuals exist in this series. AC Electronics Division has an Apollo guidance and navigation system study guide for the Apollo Command Module from February 1967. Delco Electronics has a Apollo 16 Guidance and Navigation Summary document as well.

Box/Folder	Description	Date
1/1	NASA General Working Paper: Directory of Standard Geodetic and Geophysical Constants for Gemini and Apollo	April 6, 1966
1/2	North American Aviation Apollo Training: Guidance and Navigation Subsystem Manual	August 1, 1966
1/3	Apollo Logistics Training Manual: Apollo Spacecraft and Systems Familiarization	January 16, 1967
1/4	AC Electronics Division Apollo Guidance and Navigation System: Apollo CM Primary Guidance, Navigation and Control System Study Guide (Revision A)	February 15, 1967
1/5	Apollo Spacecraft Collision Probability with Earth-Orbit Objects Documents	March-April 1967
1/6	NASA Apollo 9 Mission Report	May 1969
2/1	MASA Mission Operation Report: Apollo Supplement (Revision 2)	July 1969
2/2	TRW Systems Note: Apollo Mission 9, Trajectory	October 13, 1969

	Reconstruction and Postflight Analysis, Volume 1	
2/3	NASA Apollo 15 Mission: Mission Operation Report	July 1971
2/4	North American Rockwell: Apollo CSM "J" Series Mission Experiments Training Handout	November 15, 1971
2/5	Delco Electronics Apollo 16 Guidance and Navigation Summary	Undated
2/6	Skylab Earth Resources Experiment Package (EREP) Materials Folder	1970
2/7	NASA Skylab Digital Command System/Time Reference System Video Taped Briefing	March 13, 1972
2/8	Apollo-Soyuz Test Project Earth Observations Book	1975, undated

Series II: NASA Space Shuttle Materials

Series II consists of manuals, binders, handbooks, training materials, documents, and miscellaneous materials, documenting the development and operation of NASA Space Shuttle payload operations and Equipment Replacement and Refurbishment Plan (ERRP) for the STS orbiter from 1976 to 1986. The materials were kept and used by Don Incerto while he worked in the Johnson Space Center Mission Operations Division for Earth observations experiments, attitude and navigation, and other aspects of Shuttle orbiter operations. Interesting items in this series include the flight control operations handbook for STS-2; Incerto's system design review binder for the Equipment Replacement and Refurbishment Plan; and general Space Shuttle orbiter flight operations materials in the infancy of the Shuttle Program.

Box/Folder	**Description**	**Date**
3/1	NASA OFT Payload Planning Status Manual	November 1, 1976
3/2	Orbital Flight Test Program Flight Operations Baseline Operations Plan Binder	1977
3/3	Johnson Space Center Space Transportation System Security Plan	August 1981
3/4	STS-2 Orbital Flight Test: Flight Control Operations Handbook (Final)	September 4, 1981
3/5	NASA Mission Operations Division Shuttle Flight Data Files Management and Development Materials	1984

3/6	Incerto's STS Equipment Replacement and Refurbishment Plan (ERRP) System Design Review Binder (Part 1)	1985
4/1	Incerto's STS Equipment Replacement and Refurbishment Plan (ERRP) System Design Review Binder (Part 2)	1985
4/2	NASA Flight Control Operations Handbook Shuttle OPS STS (Final, PCN-2)	April 29, 1985
4/3	NASA MOD Payload Dictionary: STS Operations	June 1986
4/4	Space Shuttle Attitude and Pointing Training Binder	1985-1986
4/5	Incerto's Shuttle Earth Observations Technical Plan and Experiment Documents	Undated

Series III: Space Station Planning Materials

Series III consists of information and plan binders of documents created, used, or kept by Don Incerto related to his work from 1986 to 1987 on the Johnson Space Center Mission Operations Division Space Station Operational Capabilities Working Group. This group started designs, operational planning, development of information systems, and other aspects of the Space Station. The materials here date to before the time of the idea of the Space Station Freedom (announced in 1988 by President Reagan). These materials contain the planning stages for a future United States space station, with documents on a station operations plan, an information system, and operational concepts needed to have the station functional. The materials in this series were removed from titled three-ring binders of documents used by Incerto as part of this Working Group.

Box/Folder	**Description**	**Date**
4/6	NASA MOD Space Station Retreat Presentations and Information Binder (Part 1)	1986
4/7	NASA MOD Space Station Retreat Presentations and Information Binder (Part 2)	1986
5/1	Space Station Operational Capabilities Working Group Binder	1986
5/2	Space Station Information System Binder (Part 1)	1986-1987
5/3	Space Station Information System Binder (Part 2)	1986
5/4	Space Station Operations Plan Binder (Part 1)	1986-1987

5/5	Space Station Operations Plan Binder (Part 2)	1986-1987
5/6	Mission Operations Division Space Station Operations Plan Binder (Part 1)	1986-1987
6/1	Mission Operations Division Space Station Operations Plan Binder (Part 2)	1986-1987
6/2	Mission Operations Division Space Station Systems Operations Concept Binder (Part 1)	1987
6/3	Mission Operations Division Space Station Systems Operations Concept Binder (Part 2)	1987
6/4	Space Station Operations Programming Binder (Part 1)	1987
6/5	Space Station Operations Programming Binder (Part 2)	1987

Series IV: NASA Contractor Materials

Series IV consists of manuals, binders, reports, handbooks, correspondence, presentations, documents, and miscellaneous materials, produced or created by NASA contractors from the mid-1960s through the mid-1980s. This series includes items from contractors that did not fit within another collection series. The materials are organized in order first alphabetically by the first word of the name of the contractor or NASA partner, then in chronological order within a particular contractor's group of materials. Perhaps the most unique items in the series belong to those from TRW Systems Group, which includes TRW Space interoffice correspondence: on the Gemini and Apollo guidance and navigation systems between 1965 and 1966. There are also a TRW study for the Space Shuttle orbiter payloads mission control from 1975, years before the first Shuttle orbiter launch.

Box/Folder	**Description**	**Date**
6/6	Air Force Systems Command Project Report: ESPOD Functional Description	June 24, 1964
6/7	Air Force Space Command Shuttle Operations and Planning Complex (SOPC) System Binder (Part 1)	1986-1987
7/1	Air Force Space Command Shuttle Operations and Planning Complex (SOPC) System Binder (Part 2)	1986-1987
7/2	General Electronics Preliminary Report: Missile and Satellite Systems Program for the IBM 7090	February 1962
7/3	IBM Space Shuttle Programs: STS SDPC Application	November 7, 1978

	Software OPS System Design Review Introduction Manual	
7/4	Philco-Ford Corporation Physics of Earth Observation Lecture Presentation (Part 1)	February 17, 1972
7/5	Philco-Ford Corporation Physics of Earth Observation Lecture Presentation (Part 2)	February 17, 1972
7/6	Rockwell International: Space Shuttle System Summary Document	January 1978
7/7	Rockwell STSOC: Shuttle Operations Support Task Technical Report Binder (Part 1)	1986
8/1	Rockwell STSOC: Shuttle Operations Support Task Technical Report Binder (Part 2)	1986
8/2	TRW Space Interoffice Correspondence: Gemini and Apollo Guidance and Navigation	1965-1966
8/3	TRW Systems Note: Project Apollo Houston Operations Predictor/Estimator (HOPE) Engineering Manual	January 15, 1970
8/4	TRW Systems STS Payloads Mission Control Study: Executive Summary Briefing	December 1975
8/5	Incerto's Spacecraft Attitude for Apollo and Skylab Programs Materials Folder (TRW)	1967, 1970, 1972

Series V: Miscellaneous NASA Materials

Series V consists of handwritten scientific calculations and notes, binders, handbooks and workbooks, guides, training manuals, and miscellaneous materials, that did not fit within the other series within this collection. Some of the binders contain materials and notes produced by Don Incerto for graduate-level classes he was attending or college courses he helped teach in the realms of space navigation and physics in the 1960s. The rest of the materials were used or kept by Incerto in his various roles at Johnson Space Center.

Perhaps the most important items in this series are an original Apollo–Soyuz Test Project (ASTP) photo-map book, produced and used at NASA Johnson Space Center Flight Control (SSR) around 1975. This map book used oversized color satellite photographs of the Earth, which were glued back-to-back to create double-sided photographic map pages of the Earth for use by American and Soviet Union space personnel during the operations of the ASTP project. There are also several loose single-sided and double-sided photographs that appear to be additional pages, duplicate photographs for the creation of additional pages, or miscellaneous

content used in conjunction with the map book. The notation on the front cover of this map book indicates it was one of a number of the books actually used in JSC Mission Control Center during the ASTP project.

Box/Folder	Description	Date
8/6	Handwritten Manned Spacecraft Center Newtonian Mechanics Training (Photocopy) Binder	1963
8/7	Unidentified Physics Class (Photocopy) Handwritten Notes and Incerto's Calculations	1964, undated
9/1	NASA Intro to Space Navigation Course Texts Binder (Part 1)	1968-1969
9/2	NASA Intro to Space Navigation Course Texts Binder (Part 2)	1969
9/3	Johnson Space Center Skybet Parameter Formulation Documents	1973-1974
9/4	NASA Communications/Instrumentation Workbook	February 1985
9/5	MOD Flight Activity Branch Training Guide	August 30, 1985
9/6	NASA Data Processing System (Hardware and Systems Software) Training Manual	April 1986
9/7	Mission Operations Division FAO Console Handbook (Final, Revision B)	December 1, 1986
9/8	NASA Johnson Space Center Promotional Booklet: Space Shuttle EVA Opportunities	Undated
Oversized Box 10	Apollo–Soyuz Test Project NASA Johnson Space Center Flight Control (SSR) Photo-map Book Materials	circa 1975
	Oversized Folder 1: Apollo–Soyuz Test Project NASA Johnson Space Flight Control (SSR) Photo-map Book	circa 1975
	Oversized Folder 2: Apollo–Soyuz Test Project NASA Johnson Space Loose Map Photographs	circa 1975