

Finding Aid to The HistoryMakers® Video Oral History with Donald Lyons, Sr.

Overview of the Collection

Repository:	The HistoryMakers®1900 S. Michigan Avenue Chicago, Illinois 60616 info@thehistorymakers.com www.thehistorymakers.com
Creator:	Lyons, Donald R., 1954-
Title:	The HistoryMakers® Video Oral History Interview with Donald Lyons, Sr.,
Dates:	May 20, 2013
Bulk Dates:	2013
Physical Description:	9 uncompressed MOV digital video files (4:01:10).
Abstract:	Physicist Donald Lyons, Sr. (1954 -) is the University Endowed Professor of Physics and director of the Research Center for Optical Physics at Hampton University. Lyons was interviewed by The HistoryMakers® on May 20, 2013, in Yorktown, Virginia. This collection is comprised of the original video footage of the interview.
Identification:	A2013_135
Language:	The interview and records are in English.

Biographical Note by The HistoryMakers®

Physicist and physics professor Donald R. Lyons was born in 1954 in Stamps, Arkansas. His father, Patrick Donald Lyons, Jr., was a bricklayer; his mother, a housewife. After attending J.L. Jones Elementary School and J.A. Phillips Jr., High School, Lyons graduated from, Webster High School in 1972. While in high school, Lyons enrolled in the Upward Bound program. With his parents unable to pay for college, the Upward Bound program provided Lyons with the opportunity to earn college credit prior to graduation, gain experience working in a university laboratory, and earn a full academic scholarship to attend Grambling State University. Lyons graduated from Grambling State University in 1976 with his

B.S. degrees in physics and mathematics. He then enrolled in Stanford University where he studied under Nobel Laureates Arthur L. Schawlow and Theodor Hansch and received his M.S. degree in physics in 1978 and his Ph.D. degree in physics in 1982.

From 1975 to 1976, Lyons served as a research fellow at Bell Telephone Laboratories in the Solar Physics Group, and as a researcher at Argonne National Laboratory in the Solid State Physics Department. He then joined Corning, Inc. in 1982 and was appointed as a senior scientist in the Applied Physics Department. Lyons moved to California in 1985 and was hired as a physicist at Lawrence Livermore National Laboratory in the Applied Technology Section until 1990. Lyons continued his career in industry as scientist for Grumman Aerospace Corporation where he directed the Sensor Sciences and Materials Structures Groups at the Grumman Corporate Research Center. In 1993, Lyons joined the faculty of Hampton University and was named the University Endowed Professor of Physics. At Hampton University, Lyons also served as the director of the Research Center for Optical Physics.

Lyons has successfully applied for and received several U.S. Patents and fifteen research grants and contracts related to the use of distributed Bragg reflection sensors for commercial applications. In addition, he has created projects for the Department of Defense, the National Aeronautic and Space Administration, and the National Institutes of Health. Lyons was recognized by the Upward Bound program for directing successful programs that center on mentoring undergraduate and graduate students in STEM (science, technology, engineering, and mathematics) fields. The American Physical Society and the *Virginia Business Observer* have both featured Lyons and recognized his contributions to science and technology.

Donald R. Lyons was interviewed by *The HistoryMakers* on May 20, 2013.

Scope and Content

This life oral history interview with Donald Lyons, Sr. was conducted by Larry Crowe on May 20, 2013, in Yorktown, Virginia, and was recorded on 9 uncompressed MOV digital video files. Physicist Donald Lyons, Sr. (1954 -) is the University Endowed Professor of Physics and director of the Research Center for Optical Physics at Hampton University.

Restrictions

Restrictions on Access

Restrictions may be applied on a case-by-case basis at the discretion of The HistoryMakers®.

Restrictions on Use

All use of materials and use credits must be pre-approved by The HistoryMakers®. Appropriate credit must be given. Copyright is held by The HistoryMakers®.

Related Material

Information about the administrative functions involved in scheduling, researching, and producing the interview, as well as correspondence with the interview subject is stored electronically both on The HistoryMakers® server and in two databases maintained by The HistoryMakers®, though this information is not included in this finding aid.

Controlled Access Terms

This interview collection is indexed under the following controlled access subject terms.

Persons:

Lyons, Donald R., 1954-

Crowe, Larry (Interviewer)

Hickey, Matthew (Videographer)

Subjects:

African Americans--Interviews

Organizations:

HistoryMakers® (Video oral history collection)

The HistoryMakers® African American Video Oral History Collection

Occupations:

Physicist

HistoryMakers® Category:

ScienceMakers

Administrative Information

Custodial History

Interview footage was recorded by The HistoryMakers®. All rights to the interview have been transferred to The HistoryMakers® by the interview subject through a signed interview release form. Signed interview release forms have been deposited with Jenner & Block, LLP, Chicago.

Preferred Citation

The HistoryMakers® Video Oral History Interview with Donald Lyons, Sr., May 20, 2013. The HistoryMakers® African American Video Oral History Collection, 1900 S. Michigan Avenue, Chicago, Illinois.

Processing Information

This interview collection was processed and encoded on 2/5/2020 by The HistoryMakers® staff. The finding aid was created adhering to the following standards: DACS, AACR2, and the Oral History Cataloging Manual

Other Finding Aid

A Microsoft Access contact database and a FileMaker Pro tracking database, both maintained by The HistoryMakers®, keep track of the administrative functions involved in scheduling, researching, and producing the interview.

Detailed Description of the Collection

Series I: Original Interview Footage

Video Oral History Interview with Donald Lyons, Sr., Section
A2013_135_001_001, TRT: 1:29:26 2013/05/20

Donald Lyons shares his family history. Lyons' mother, Ethel Bell Pearson, was born in Stamps, Arkansas in the 1920s, the same town Lyons was born in 1954. His father, Patrick Donald Lyons Jr., was born in Oklahoma in 1917. His father had a previous wife who left because of his physical abuse, but Lyons' mother chose to endure it until her death when he was seventeen. From this previous marriage Lyons has several half-sisters. Lyons grew up in Minden, Louisiana, where his father bootlegged and operated a club in their house. His father was also a musician and a handyman, able to fix or build nearly anything they needed. Lyons describes his decision to become a physicist at an early age.

Affirmative action programs.

Affirmative action programs.

Affirmative action programs.

Affirmative action programs.

Affirmative action programs.

Video Oral History Interview with Donald Lyons, Sr., Section
A2013_135_001_002, TRT: 2:29:11 2013/05/20

Donald Lyons continues to discuss his father's, Patrick Donald Lyons Jr., skill with building. He describes his parents' personalities and who he takes after. When there

were domestic problems in his household Lyons would be sent to their neighbor, Trilley B. Jones, who became a surrogate grandmother to Lyons. Lyons remembers Jones' Heir Property, the forty acres given to her family after the Civil War, and the sights, sounds, and smells there. Because Jones was religious, church played a large role in Lyons childhood. Lyons shares his experiences with segregation in Minden, Louisiana, and the chaos of his schools. He discusses how he found some peace from the chaos at Jones' house and band in middle and high school.

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Video Oral History Interview with Donald Lyons, Sr., Section
A2013_135_001_003, TRT: 3:30:08 2013/05/20

Donald Lyons talks about his high school experience and his involvement in Upward Bound, which allowed him to take courses at Grambling State University, Grambling, Louisiana. Lyons worked in Dr. Cummings' laboratory during a summer and because of his work ethic received a full scholarship to attend Grambling State University. He describes his approach to learning and his work ethic while at Grambling State University. In 1975 Lyons spent a summer in the Bell Summer Internship Program mapping solar storms for solar physics research. While at Bell Laboratories he was exposed to physics research and prominent African American physicists such as Earl Shaw. He graduated from Grambling State University in 1976 with a B.S. degree in physics and mathematics.

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Video Oral History Interview with Donald Lyons, Sr., Section
A2013_135_001_004, TRT: 4:28:11 2013/05/20

Donald Lyons describes his time as a student at Grambling State University in Grambling, Louisiana. The summer following his graduation from Grambling State University, in 1976, Lyons worked at Argonne National Laboratory in Lemont, Illinois. Lyons discusses why he chose to attend Stanford University in Stanford, California for graduate school. His first year at Stanford University he was chosen as a Xerox fellow, which paid for his education and living expenses. Lyons shares the history the laser, which was created by his advisor Dr. Arthur Schawlow. His graduate research involved using intermodulation and polarization modulation to diminish Doppler broadening in spectroscopy spectrums. Lyons also talks about his first presentation in front of the American Physical Society in 1980.

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Video Oral History Interview with Donald Lyons, Sr., Section A2013_135_001_005, TRT: 5:34:06 2013/05/20

Donald Lyons discusses the reason he chose to concentrate on optical physics. His adviser, Dr. Arthur Schawlow, focused on optics and was one of the few professors at Stanford University, Stanford, California, who would work with an African American graduate student. Lyons dissertation, 'Doppler-free Radiofrequency Optogalvanic Spectroscopy using Polarization Intermodulated Excitation,' involved using polarization modulation and intermodulation to diminish Doppler broadening and other disruptions in spectroscopy. After graduating from Stanford University in 1982 Lyons obtained a position at Corning. Lyons shares how he designed and built his lab at Corning from scratch. At Corning Lyons learned how to write patents and he describes how he wrote his patent for the Braggs grating wavemeter, one of his inventions. Lyons also discusses his research on nerve fibers, optical fibers that mimic human nerves.

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Video Oral History Interview with Donald Lyons, Sr., Section
A2013_135_001_006, TRT: 6:28:12 2013/05/20

Donald Lyons describes the transition from Corning Incorporated, Corning, New York, to Lawrence Livermore National Laboratory (LLNL), Livermore, California. At LLNL Lyons was involved in top secret government research. Lyons was demoted for originating transverse holographic method for wavelength division multiplexity, despite showing the practical applications of the research. He left LLNL in 1990 to work at Grumman Aerospace Corporation, where he developed a patent for an airplane sensor system. Lyons also discusses his relationship with the National Aeronautics and Space Administration. When Grumman Aerospace Corporation lost its U.S. Navy contract Lyons was laid off, but he was allowed to take his laboratory with him. In 1993 Lyons was hired by Hampton University, Hampton, Virginia to be a professor in the physics department. Lyons talks about the physics department at Hampton University.

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Video Oral History Interview with Donald Lyons, Sr., Section
A2013_135_001_007, TRT: 7:28:59 2013/05/20

Donald Lyons discusses the demographics of professors at historically black colleges and universities (HBCUs) and the disproportionately lower number of grants HBCUs receive. Lyons explains why he chose to become a professor at Hampton University, Hampton, Virginia in 1993 rather than stay in industry. Lyons also talks about the grants and projects he was involved in at Hampton University. Starting in 1986, Lyons has done groundbreaking research on artificial fiber optic nerves,

fiber optic cable designed to mimic human nerves. Lyons holds several patents on the technology, the first patent being obtained in 1989. He describes his trouble, however, receiving funding for this research because he is not part of a large research team.

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Video Oral History Interview with Donald Lyons, Sr., Section A2013_135_001_008, TRT: 8:27:06 2013/05/20

Donald Lyons talks about his mentoring of students at Hampton University, Hampton, Virginia, mentioning the accomplishments of Dr. Erica Thompson, one of his former doctoral students. Lyons teaches both physics and engineering at Hampton University and is researching boron nitride nanotubes for the Air Force Office of Scientific Research. Lyons remembers how he and his wife, Theresa, met in 1979 and married two years later. He describes his children and their education. He also mentions that he grew up with several mother figures. Lyons shares his hopes and concerns for the African American community and reflects on his life, legacy, and how he would like to be remembered.

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Video Oral History Interview with Donald Lyons, Sr., Section A2013_135_001_009, TRT: 9:05:51 2013/05/20

Donald Lyons describes his photographs.

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