

# Finding Aid to The HistoryMakers® Video Oral History with Oliver Baker

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## Overview of the Collection

<b>Repository:</b>	The HistoryMakers®1900 S. Michigan Avenue Chicago, Illinois 60616 info@thehistorymakers.com www.thehistorymakers.com
<b>Creator:</b>	Baker, Oliver Keith
<b>Title:</b>	The HistoryMakers® Video Oral History Interview with Oliver Baker,
<b>Dates:</b>	March 10, 2013
<b>Bulk Dates:</b>	2013
<b>Physical Description:</b>	7 uncompressed MOV digital video files (3:17:08).
<b>Abstract:</b>	Physicist Oliver Baker (1959 - ) is Professor and Director of the A.W. Wright Nuclear Structure Laboratory (WNSL) at Yale University, and a researcher on the ATLAS particle physics experiment at the European Organization for Nuclear Research (CERN) that discovered a novel particle which is currently being examined as a candidate for the Higgs boson. Baker was interviewed by The HistoryMakers® on March 10, 2013, in New Haven, Connecticut. This collection is comprised of the original video footage of the interview.
<b>Identification:</b>	A2013_068
<b>Language:</b>	The interview and records are in English.

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## Biographical Note by The HistoryMakers®

Physicist Oliver Keith Baker was born on July 18, 1959 in McGehee, Arkansas to parents Oliver Walter and Yvonne Brigham Baker. After graduating with his B.S. degree in physics from the Massachusetts Institute of Technology in 1981, Baker enrolled at Stanford University where he received his M.S. degrees in physics and mathematics in 1984 and his Ph.D. degree in physics in 1987. Baker pursued post-doctoral research at the Los Alamos National Laboratory.

Upon graduation, Baker joined the faculty of the physics department at Hampton University as an assistant professor with a concurrent appointment as a staff scientist at the Thomas Jefferson National Accelerator Facility (JLab). He was soon promoted to full professor in the physics department before being named as the University Endowed Professor of Physics. In 2006, Baker was appointed as a professor of physics at Yale University; and, in 2010, he became the Director of Yale University's A.W. Wright Nuclear Structure Laboratory (WNSL), which houses the world's most powerful tandem Van de Graaf particle accelerator. He also worked as a researcher on the ATLAS experimental team at the European Organization for Nuclear Research (CERN) in Geneva, Switzerland where a novel particle was discovered as a candidate for the Higgs boson. An accomplished lecturer and writer, Baker has published in numerous academic and scientific journals. In addition, Baker received a presidential appointment to the board of the National Medal of Science, and serves on several national and international scientific committees.

Baker was the recipient of several teaching awards while teaching at Hampton University, including the E. L. Hamm, Sr. Distinguished Teaching Award and the National Award for Teaching Learning and Technology. The American Physical Society bestowed upon Baker the Edward Bouchet Award for his outstanding contributions to nuclear and particle physics research, and he was honored by the National Conference of Black Physics Students

and the National Society of Black Physicists with the Elmer Imes Award. In addition, Baker was elected to the Arkansas Black Hall of Fame and received a citation from the governor of Arkansas for his mentorship with students pursuing careers in STEM (science, technology, engineering, and mathematics) fields.

Oliver Keith Baker was interviewed by *The HistoryMakers* on March 10, 2013.

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## Scope and Content

This life oral history interview with Oliver Baker was conducted by Larry Crowe on March 10, 2013, in New Haven, Connecticut, and was recorded on 7 uncompressed MOV digital video files. Physicist Oliver Baker (1959 - ) is Professor and Director of the A.W. Wright Nuclear Structure Laboratory (WNSL) at Yale University, and a researcher on the ATLAS particle physics experiment at the European Organization for Nuclear Research (CERN) that discovered a novel particle which is currently being examined as a candidate for the Higgs boson.

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## 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®.

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## 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.

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## Controlled Access Terms

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

### Persons:

Baker, Oliver Keith

Crowe, Larry (Interviewer)

Hickey, Matthew (Videographer)

### Subjects:

African Americans--Interviews

Baker, Oliver Keith--Interviews

## Organizations:

HistoryMakers® (Video oral history collection)

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The HistoryMakers® African American Video Oral History Collection

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Yale University

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## Occupations:

Physicist

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## HistoryMakers® Category:

ScienceMakers

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## 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 Oliver Baker, March 10, 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 6/7/2022 by The HistoryMakers® staff. The finding aid was created adhering to the following standards: DACS, AACR2, and the Oral History Cataloging Manual (Matters 1995).

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## 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.

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## Detailed Description of the Collection

### Series I: Original Interview Footage

Video Oral History Interview with Oliver Baker, Section A2013\_068\_001\_001, TRT: 1:31:20  
2013/03/10

Oliver Keith Baker describes his family background. Baker's mother, Yvonne Brigham, was born in the 1930s in Magnolia, Arkansas. She attended Arkansas AM&N University in Pine Bluff, where she majored in music. Baker's father, Oliver Walter Baker, was also born in the 1930s, and raised on a farm in Tillar, Arkansas. He was the first in his family to receive a college education, and also attended Arkansas AM&N University, where he met Baker's mother. Baker describes his memories of his paternal grandparents' general store in Desha County, Arkansas, and describes his close relationship with his parents. He also talks about the peaceful integration of Tillar High School in the 1970s, when his older sister was attending the school.

African American families--Arkansas.

African Americans--Education--Arkansas.

University of Arkansas at Pine Bluff.

African American business enterprises--General stores.

School integration--Arkansas.

Video Oral History Interview with Oliver Baker, Section A2013\_068\_001\_002, TRT: 2:30:36  
2013/03/10

Oliver Keith Baker was raised in a large family of nine children. His family lived in the farming community of Tillar, Arkansas, where Baker attended Tillar High School and B.C. Pruitt Elementary School. When he was in the sixth grade, Baker's family moved to Memphis, Tennessee, where he attended Volentine Elementary School. He then graduated from Messick High School. Baker describes his childhood in Tillar and Memphis and talks about his interest in science and his family's encyclopedic collections. He also talks about his involvement in the Worldwide Church of God, now called Grace Communion International, and his parents' influence on shaping his perception of race relations in the United States.

Childhood--Southern States.

African American parents--Attitudes.

Agricultural communities--Arkansas.

African Americans--Education--Southern States.

Children--Religious life.

Video Oral History Interview with Oliver Baker, Section A2013\_068\_001\_003, TRT: 3:33:37  
2013/03/10

Oliver Keith Baker attended Lanier Junior High School, Westwood High School and Messick High School in Memphis, Tennessee, where he performed well academically. Baker describes his early interest in science, particularly physics, which developed from reading his family's encyclopedic collection. After graduating from Messick High School in 1977, Baker enrolled at Massachusetts Institute of Technology (MIT), and majored in physics. While at MIT, Baker was mentored by James West and William Donnelly, the latter of whom served as his advisor for his undergraduate thesis on neutrino nuclear scattering. After receiving his B.S. degree in physics, Baker attended Stanford University to pursue his Ph.D. degree in physics. During this time, he worked on the nuclear resonance effect in atomic electron capture under the tutelage of Walter Meyerhof. Baker describes his pre-college experience at summer programs at Louisiana Tech, the University and MIT, and his extracurricular activities as an undergraduate at MIT.

African Americans--Education--Tennessee.  
Physics--Study and teaching.  
Massachusetts Institute of Technology--Curricula.  
Mentoring in science--Massachusetts--Cambridge.  
College preparation programs.

Video Oral History Interview with Oliver Baker, Section A2013\_068\_001\_004, TRT: 4:30:30  
2013/03/10

Oliver Keith Baker received his Ph.D. degree in physics at Stanford University, where he studied the nuclear resonance effect in atomic electron capture, under the tutelage of Walter Meyerhof. Baker describes the lessons learned from his mentor, Dr. Meyerhof, and the strong foundation that he received in the physical sciences. Baker also talks about the funding that he received to support his doctoral studies, and his life as a graduate student. In 1986, shortly after marrying his wife, Baker began postdoctoral research on muon-catalyzed fusion at Los Alamos National Laboratory. After completing his postdoctoral training, Baker accepted a joint appointment at Hampton University and Thomas Jefferson National Laboratory in Virginia, where he pursued his research at the Continuous Electron Beam Accelerator Facility (CEBAF), and worked to improve minority education in physics.

Stanford University. Department of Physics--Doctoral students.

Meyerhof, Walter E. (Walter Ernst), 1922-

African American graduate students--Scholarships, fellowships, etc.

Los Alamos National Laboratory--Research.

African American physicists--Intellectual life--20th century.

Video Oral History Interview with Oliver Baker, Section A2013\_068\_001\_005, TRT: 5:29:16  
2013/03/10

Oliver Keith Baker served for seventeen years, from 1989 to 2006, as part of a joint appointment at Hampton University's physics department and the Continuous Electron Beam Accelerator Facility (CEBAF) at Thomas Jefferson National Laboratory (JLab) in Virginia. Baker explains his research at JLab on measuring the properties of the kaon or K meson particle. In the early 1990s, Baker worked on the ATLAS particle detector experiment at the Large Hadron Collider (LHC) in Geneva, Switzerland. Baker's research group built the detectors, commissioned the particle detector experiment, and performed analyses leading to the discovery of the Higgs boson candidate in 2012. He explains the significance of the Higgs boson in the standard model of particle physics, and the implications of its discovery. He also talks about the collaborative efforts that led to this groundbreaking discovery and his own pride in being associated with it.

Hampton University (Va.)--Department of Physics--Faculty.

Thomas Jefferson National Accelerator Facility (U.S.).

Particles (Nuclear physics)--Research.

Higgs bosons.

Physics--Research--International cooperation.

Video Oral History Interview with Oliver Baker, Section A2013\_068\_001\_006, TRT: 6:30:13  
2013/03/10

In 2006, Oliver Keith Baker joined the faculty at Yale University as a professor of physics, where he continues his research in nuclear particle physics. Baker describes his experience in the physics department at Yale, and the high caliber

of research opportunities that he is afforded there. In 2010, Baker was appointed the director of Yale University's A. W. Wright Nuclear Structure Laboratory, and he describes his efforts at re-structuring the laboratory's research capacities. Baker also reflects upon his career's trajectory, his family life, and his hopes for the African American community. He also acknowledges receiving the Edward A. Bouchet Award from the American Physical Society (APS), and talks about the legacy of physicist Edward Bouchet, who was the first African American to receive a Ph.D. degree, also in physics, from Yale University in 1876.

Yale University. Physics Department--Faculty.

Yale University--Facilities.

Work and family.

Bouchet, Edward A. (Edward Alexander), 1852-1918

American Physical Society--Awards.

Video Oral History Interview with Oliver Baker, Section A2013\_068\_001\_007, TRT: 7:11:36  
2013/03/10

Oliver Keith Baker describes the lessons learned from his mentors and colleagues in the physical sciences. He also gives advice to African American students who want to pursue a career in the physical sciences. Baker goes on to talk about his wife and their two daughters, and how he would like to be remembered.

Mentors--Physics.

African American families.

Physics--Vocational guidance.