

Finding Aid to The HistoryMakers® Video Oral History with Sekazi Mtingwa

Overview of the Collection

Repository:	The HistoryMakers®1900 S. Michigan Avenue Chicago, Illinois 60616 info@thehistorymakers.com www.thehistorymakers.com
Creator:	Mtingwa, Sekazi
Title:	The HistoryMakers® Video Oral History Interview with Sekazi Mtingwa,
Dates:	May 6, 2013
Bulk Dates:	2013
Physical Description:	7 uncompressed MOV digital video files (3:12:50).
Abstract:	Nuclear physicist Sekazi Mtingwa (1949 -) contributed to the design and construction of the accelerator systems used in the discovery of the top quark at Fermi National Accelerator Laboratory. Mtingwa is a founder of the National Society of Black Physicists and the National Society of Hispanic Physicists, and he has made significant contributions to STEM (science, technology, engineering, and mathematics) education. Mtingwa was interviewed by The HistoryMakers® on May 6, 2013, in Hillsborough, North Carolina. This collection is comprised of the original video footage of the interview.
Identification:	A2013_076
Language:	The interview and records are in English.

Biographical Note by The HistoryMakers®

Research physicist and physics professor Sekazi K. Mtingwa was born on October 20, 1949 in Atlanta, Georgia. After receiving his B.S. degrees in physics and pure mathematics (Phi Beta Kappa) from the Massachusetts Institute of Technology (MIT) in 1971, Mtingwa enrolled at Princeton University and graduated from there with his M.A. and Ph.D. degrees in theoretical high energy physics in 1976.

Mtingwa was awarded doctoral fellowships from the National Fellowships Fund and the Ford Foundation. Upon graduation, he was awarded post-doctoral fellowships and research assistantships at the University of Rochester, the University of Maryland at College Park, and Fermi National Accelerator Laboratory (Fermilab).

In 1981, Mtingwa joined Fermilab as a research physicist where he, along with James Bjorken, developed a theory of particle beam dynamics, “intrabeam scattering,” which standardized the performance limitations on a wide class of modern accelerators. Mtingwa also played an important role in the design and construction of two of the Antiproton Source accelerator systems at Fermilab that were used in the discovery of the top quark and other particles. During 1988-1991, Mtingwa joined the staff of Argonne National Laboratory where he performed research on a futuristic accelerator concept called wakefield acceleration. In 1991, Mtingwa joined the faculty at North Carolina A & T State University as Chair and Professor of physics. Mtingwa was named J. Ernest Wilkins, Jr. Distinguished Professor of Physics at Morgan State University in 1997 and then returned to North Carolina A & T State University in 1999. He served as the Martin Luther King, Jr. Visiting Professor of Physics at MIT from 2001 to 2003. He joined the faculty at Harvard University in 2003, where he served as Visiting Professor of Physics for two years. Returning to MIT in 2006, Mtingwa was named Lead Physics Lecturer in the Concourse Program in the Office of the Dean for Undergraduate Education. He was also appointed as the Faculty Director of Academic Programs in the Office of Minority Education. In 2011, he became Principal Partner of Triangle Science, Education & Economic Development, LLC and he was appointed Senior Physics Consultant at Brookhaven National Laboratory.

In addition to his research activities, Mtingwa is involved in a number of national and international initiatives. He is a founder of the African Laser Centre (ALC) and was the principal author of the *Strategy and Business Plan* upon which the ALC is based. In 1977, Mtingwa was a co-founder of the National Society of Black Physicists (NSBP) and served as NSBP President from 1992 to 1994.

Mtingwa has been recognized by national and international organizations for his contributions to science. In 1996, he received the Outstanding Service Award for Contributions to the African American Physics Community from the National Society of Black Physicists. The National Council of Ghanaian Associations honored Mtingwa with the Science Education Award in 2007 for advancing science education among African peoples. Mtingwa was inducted into the African American Biographies Hall of Fame in 1994, and he was elected as a Fellow of the American Physical Society in 2008.

Sekazi Mtingwa is married to W. Estella Johnson; they have two daughters.

Research physicist and physics professor Sekazi K. Mtingwa was interviewed by *The HistoryMakers* on May 6, 2013.

Scope and Content

This life oral history interview with Sekazi Mtingwa was conducted by Larry Crowe on May 6, 2013, in Hillsborough, North Carolina, and was recorded on 7 uncompressed MOV digital video files. Nuclear physicist Sekazi Mtingwa (1949 -) contributed to the design and construction of the accelerator systems used in the discovery of the top quark at Fermi National Accelerator Laboratory. Mtingwa is a founder of the National Society of Black Physicists and the National Society of Hispanic Physicists, and he has made significant contributions to STEM (science, technology, engineering, and mathematics) education.

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:

Mtingwa, Sekazi

Crowe, Larry (Interviewer)

Hickey, Matthew (Videographer)

Subjects:

African Americans--Interviews

Mtingwa, Sekazi--Interviews

Organizations:

HistoryMakers® (Video oral history collection)

The HistoryMakers® African American Video Oral History Collection

Occupations:

Nuclear 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 Sekazi Mtingwa, May 6, 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 (Matters 1995).

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 Sekazi Mtingwa, Section
A2013_076_001_001, TRT: 1:29:05 2013/05/06

Sekazi Mtingwa discusses his name. He was born Michael Vern Sawyer in 1949 but changed his name to Sekazi Kuaze Mtingwa in 1973 during graduate school because he wanted to teach at the University of Dar es Salaam in Dar es Salaam, Tanzania. His mother, Dorothy Elizabeth Green Graves, and father, Frank Mackoroyal Sawyer, met while his mother was at Spelman College and his father

was at Morehouse College in Atlanta, Georgia. Mtingwa's mother was a nurse and his father was a professional musician. After his parents divorced he lived in the same house as his grandparents, Luther Green and Ollie Mae Green, until his mother married David Graves, who was a plumber. His mother died at the age of fifty-six of breast cancer while in school to become a registered nurse. Mtingwa describes his parents' personalities, mentions his shyness growing up, and recalls his earliest memory.

Affirmative action programs.

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Video Oral History Interview with Sekazi Mtingwa, Section
A2013_076_001_002, TRT: 2:29:10 2013/05/06

Sekazi Mtingwa talks about his neighborhood in Atlanta, Georgia, and the influential African Americans who came from that community. He remembers the sights, sounds, and smells of his childhood, which include the sound of traffic and the smell of Southern cooking. Mtingwa won the first integrated Georgia State Science fair with a biology project. One of the prizes was a book explaining Albert Einstein's theory of relativity, which solidified his desire to become a physicist. Mtingwa describes Ms. Jackson, his high school mentor who encouraged him to attend the Massachusetts Institute of Technology in Cambridge, Massachusetts. He talks about his transition from high school to the Massachusetts Institute of Technology and the formation of the black student union at the university.

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Video Oral History Interview with Sekazi Mtingwa, Section
A2013_076_001_003, TRT: 3:30:02 2013/05/06

Sekazi Mtingwa describes beginnings of the black student union at the Massachusetts Institute of Technology in Cambridge, Massachusetts. The black student union effectively petitioned the Massachusetts Institute of Technology to admit more African American students. Mtingwa describes why he chose to enter the field of physics as opposed to mathematics or engineering. He mentions other African American physicists, both professors and graduate students, who gave him support. Mtingwa talks about his three years of Russian language at the Massachusetts Institute of Technology and Alexander Pushkin, the father of Russian literature. In 1971 Mtingwa entered Princeton University, Princeton, New Jersey and obtained his Ph.D. degree in 1976. For his doctoral dissertation Mtingwa examined data from proton-proton collisions.

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Video Oral History Interview with Sekazi Mtingwa, Section
A2013_076_001_004, TRT: 4:29:26 2013/05/06

Sekazi Mtingwa discusses the reasons he chose his current name over his given name. In 2009 Mtingwa visited Tanzania to assist in the development of new universities. While he was in Tanzania he met the son of Julius Nyerere, Tanzania's first president. Mtingwa describes how he met his wife, Estella Johnson, and talks about his post-doctoral positions at the University of Rochester in Rochester, New York, the University of Maryland in College Park, Maryland, and the Center for Theoretical Physics in Washington, D.C. Mtingwa helped engineer the accelerator at Fermi National Accelerator Laboratory in Batavia, Illinois that discovered the top quark. He explains the physics behind the Higgs boson particle, dark matter, and dark energy. Mtingwa was also involved in the 1980 mayoral campaign of Harold Washington, Chicago, Illinois' first African American mayor. In 1988, Mtingwa moved to the Argonne National Laboratory in Lemont,

Illinois and worked on plasma wakefield accelerators, an extremely compact accelerator.

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Video Oral History Interview with Sekazi Mtingwa, Section A2013_076_001_005, TRT: 5:28:30 2013/05/06

Sekazi Mtingwa talks about his features in publications such as 'Ebony Magazine' in 1985 and 'Jet Magazine' in 1988. In 1991 Mtingwa visited Ghana as part of the W.E.B. DuBois Centre's DuBois-Padmore-Nkrumah Pan-African Lectureship. Mtingwa was the cofounder of the Edward Buchet-Abdus Salam Institute [EBASI] in 1998 and the African Laser Centre in 2001. From 1988 to 1989 Mtingwa researched wakefield accelerators as an exchange scholar in the Soviet Union. Mtingwa recalls his acceptance there and reflects on the racial discrimination in the field of physics in the United States. He became Chair of the Physics Department of North Carolina Agricultural and Technological University in Greensboro, North Carolina, where he helped build their graduate programs and research capabilities. From 1997 to 1999 he served as the J. Ernest Wilkins Distinguished Professor of Physics at Morgan State University in Baltimore, Maryland. Mtingwa also serves on the Department of Energy's Nuclear Energy Research Advisory Committee.

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Video Oral History Interview with Sekazi Mtingwa, Section A2013_076_001_006, TRT: 6:30:31 2013/05/06

Sekazi Mtingwa talks about his involvement with the African Laser Centre, an organization he cofounded in 2003 to provide access to laser equipment for African

universities and researchers. He describes his involvement in other organizations that are focused on access to scientific instruments. Mtingwa reflects on his time teaching at the Massachusetts Institute of Technology in Cambridge, Massachusetts, noting how the university had changed since he attended as a student. He worked at the Massachusetts Institute of Technology and Harvard University, Cambridge, Massachusetts until he and his wife retired. In 2003 Mtingwa visited Russia to assess the suitability of Krasnokomensk, a town in Siberia, as a nuclear waste disposal site. He also discusses the issues of nuclear waste. He describes studies he has led on the state of nuclear research in the United States. Mtingwa reflects on his recognitions, which include being an American Physical Society Fellow.

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Video Oral History Interview with Sekazi Mtingwa, Section A2013_076_001_007, TRT: 7:16:06 2013/05/06

Sekazi Mtingwa describes his involvement in the African Physical Society, of which he is a member. Mtingwa retired from teaching so that he could focus on writing textbooks, which he plans on publishing electronically through his own company. He shares his hopes and concerns about the African American community. Mtingwa talks about his desire to make a Ganibbal-Pushkin Saturday Academy to bring educational access to children. He reflects on his life, legacy, and how he would like to be remembered. Mtingwa talks about his wife, Estella Johnson, who was Director of Economic Development for Cambridge, Massachusetts before she retired, and his two daughters, Makazi and Sharifa.

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