

A Moment in Black History

Sources: <https://webuyblack.com/blog/daily-dose-history-dr-walter-mcafee-scientist/>



Dr. Walter McAfee (September 2, 1914- February 18, 1995) was an African American scientist and astronomer, notable for participating in the world's first lunar radar echo experiments with Project Diana. He was born in Ore City, Texas. His father, Luther McAfee, was a mechanic and carpenter, while his mother, Susie, was an educator. McAfee's career later in life was influenced by his parents' lines of work.

After graduating from high school, McAfee went on to receive a bachelor's degree in mathematics in 1934 from Wiley College, a Historically Black College and University (HBCU) in Marshall, Texas, and a Master of Science degree from Ohio State University in 1937. He later taught mathematics and biological sciences at a junior high school in Columbus, Ohio.

In 1942, McAfee joined the United States Army Signal Corps Engineering Laboratories at Fort Monmouth in Belmar, New Jersey. His expertise in mathematics helped advanced him into the Project Diana team. Project Diana was a scientific collaboration in which engineers, including mathematical physicist McAfee, studied the Earth's relationship to the moon via radar signal echoing. He contributed the necessary theoretical calculations including a radar cross-section of the moon, radar coverage pattern, and the distance to the moon, all of which were crucial to the project's success.

The team successfully received the echoing signals between the Earth and the moon in January of 1946. McAfee's role in Project Diana contributed to its success. His contribution in the Project Diana was not recognized until several months later when he received the Rosenwald Fellowship. He then entered a doctoral program at Cornell University and later obtained his Ph.D. in Physics in 1949. His interest was on nuclear collisions. While in school, he worked under the advisement of Hans Bethe who was known for his work with nuclear physics.

Upon completion of his doctoral studies, McAfee returned to the Army Signal Corps Engineering Laboratories at Fort Monmouth as a scientist. He made significant contributions to the study of nuclear weapon systems and was honored with the Secretary of the Army Research and Study Fellowship in 1956 by President Dwight D. Eisenhower, which gave him an opportunity to accept a post-doctoral appointment at Harvard University in Cambridge, Massachusetts. It is during this time (1959-1960), that McAfee and his colleagues discovered that high altitude nuclear explosions can cause communications blackouts. He served as a

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scientist for 42 years at the Fort Monmouth Laboratory. He was inducted into the Science Hall of Fame by Wiley College.

Dr. Walter McAfee died on February 18, 1995 and posthumously honored when the U.S. government established the McAfee Center at Fort Monmouth, a facility which contains the Information and Intelligence Warfare Electronic Directorate.

References:

1. DAILY DOSE OF HISTORY: Dr. Walter McAfee – Scientist: <https://webuyblack.com/blog/daily-dose-history-dr-walter-mcafee-scientist/>
2. WALTER SAMUEL MCAFEE (1914-1995): <https://www.blackpast.org/african-american-history/mcafee-walter-samuel-1914-1995/>