Photo Courtesy of Naomi Norwood

Virginia Norwood

Multispectral Scanner

U.S. PATENT NO. 2,746,035: Radar reflector

Inducted in 2025 ***Born: Jan. 8, 1927*** ***Died: March 26, 2023***

Virginia Norwood invented the Multispectral Scanner (MSS), the first in a series of satellite-based instruments that have been imaging our planet for decades. Launched in 1972 aboard Landsat 1, the first satellite designed to study the Earth's surface, the MSS provided invaluable data and sparked a revolution in remote sensing technology.

Full Bio: https://www.invent.org/inductees/virginia-norwood

Primary Connections:

- Hughes Aircraft Co.: Senior Scientist and Laboratory Engineer, Electro-Optics Group; Manager of Earth Resources Requirements NASA Systems Division; Leader of Microwave Group for Hughes Missile Laboratory; 1954-89
- Sylvania Electronic Defense Laboratories: Researcher, Microwave Radar, 1953-54
- U.S. Army Evans Signal Corps Laboratories: Researcher, Antenna Group, 1948-53

Education:

- Massachusetts Institute of Technology: Bachelor's Degree in Mathematical Physics, 1947

Key Memberships/Awards:

- National Academy of Engineering: Member, 2023
- American Geographical Society: O.M. Miller Cartographic Memorial Medal, 2022
- United States Geological Survey: John Wesley Powell Award, 2022
- American Society for Photogrammetry and Remote Sensing: Lifetime Achievement Award, 2021
- U.S. Department of the Interior/NASA: William T. Pecora Award, 1979

Things You Should Know:

- Norwood was born in 1927 in a U.S. Army hospital at Fort Totten in the New York City borough of Queens.
- Her mother was a linguist, and her father was an Army Signal Corps officer with a master's degree in physics.
- Norwood's family moved many times through her early years, from Panama to Oklahoma to Bermuda.
- She had a natural aptitude for mathematics and developed an interest in physics at a young age.
- Norwood enrolled at the Massachusetts Institute of Technology (MIT), where she was one of only a dozen women in her class. Undeterred by challenges including a lack of women's dorms or dining halls, Norwood earned her bachelor's degree from MIT in mathematical physics in 1947.
- In 1954, she joined Hughes Aircraft Co. in California, where she was a senior scientist and laboratory engineer in the Electro-Optics Systems Group until her retirement in 1989.
- Norwood had two U.S. patents.