

# Generations of STEM:

## Dr. Valerie Thomas

### Illusion Transmitter

Valerie was fascinated by science from an early age, after watching her father tinker with the insides of a television. However, the all-girls school she attended did not encourage her to take courses in science or mathematics. Despite this, she went on to study physics at Morgan State University, as one of only two women in her physics

major. She graduated and began working at NASA managing part of the satellite program. She worked more than 10 years on the Landsat satellite — the first to provide images from outer space.

Intrigued by imaging and reflections in mirrors, she began studying the use of concave mirrors and optical illusion images. As early 3D technology, her “Illusion Transmitter” creates the illusion of an image using concave mirrors. Her work led to a patent and is still used by NASA today. Scientists are currently developing ways for the Illusion Transmitter to be used by surgeons to view inside the body or possibly for video screens.

Dr. Thompson has been involved in many other projects at NASA, including ones related to ozone research, the Voyager spacecraft, and Halley’s Comet.



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