

Samuel Langley Biography

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Biography

Samuel Langley was born in Roxbury, Massachusetts, in 1834. As a child, Langley became interested in studying the stars and, despite that fact that he never attended college, went on to become a professor of astronomy and physics. Langley made many contributions to the field of astronomy, one of the most significant being the invention of the *bolometer*. Invented in 1878 while Langley was on faculty at the University of Pittsburgh, the bolometer was able to detect and measure electromagnetic radiation, thus allowing scientists to determine the energy output of the sun and stars.

While serving as secretary of the Smithsonian Institute, Langley developed an interest in aeronautics and obtained a \$50,000 grant from the United States War Department to study the possibility of manned flight. He began building large, steam-powered models of an aircraft he named *Aerodrome*, without taking the time to first test his theories on gliders. By 1891 he had begun building *Aerodrome* models which were to be catapulted off the roof of a houseboat. The first five models failed, but his 1896 model flew more than half a mile. Later that year one remained airborne for nearly two minutes.

Finally, on 7 October 1903, Langley was ready to fly his first full-scale *Aerodrome* from a houseboat in the Potomac River. With the press in attendance, the machine was launched and promptly fell into the river. Langley contended that the launching mechanism was at fault, but further attempts produced the same results, and his funding was soon depleted. Just a few months later, Orville and Wilbur Wright achieved the first powered flight at Kitty Hawk, North Carolina. Throughout his life Langley maintained that if accidents had not depleted his funds, he would have achieved the fame accorded to the Wright brothers. A few years after Langley's death, experimenters did succeed in flying his *Aerodrome* after attaching a more powerful engine to it. Today, Langley Air Force Base in Virginia is named for this aviation pioneer.