

# Carl David Anderson

[Physicists](#)

Physicist

[American](#) [Famous American Men](#)

03 September 1905 AD [Famous 3rd September Birthdays](#)

Virgo [Virgo Men](#)

New York City, New York, USA

11 January 1991 AD

San Marino, California, USA

Carl David Anderson

Emma Adolfina Ajaxson

Lorraine Bergman

Marshall and David

Discovery Of The Positron, Discovery Of The Muon

Nobel Prize in Physics (1936)

Elliott Cresson Medal (1937)

LISTED IN

FAMOUS AS

NATIONALITY

BORN ON

ZODIAC SIGN

BORN IN

DIED ON

PLACE OF DEATH

FATHER

MOTHER

SPOUSE:

CHILDREN

DISCOVERIES / INVENTIONS

AWARDS:

Carl David Anderson was a renowned American physicists, who is best remembered for the discovery of positron in 1932. Born to Swedish immigrant parents, Anderson showed a knack for science from an early age. After completing his preliminary education, he enrolled at the California Institute of Technology for higher studies. His association with the institution remained life-long as first he earned his academic degrees from the same and later continued his research work at it. It was during his academic and research career at Caltech that he began his cosmic ray studies which eventually led to the discovery of positron. The discovery was important for the advancement of physics as positron became the first antimatter to be discovered. Later on, he carried out further research that led to the discovery of muon, a subatomic particle. For his discovery of positron, he was conferred with the Nobel Prize in Physics in 1936. Additionally, he was honoured with several other scientific awards as well.

## Career

Completing his doctoral studies, he started working as a research fellow at the California Institute of Technology which he continued for three years from 1930 to 1933

Meanwhile it was in 1930 that together with Professor Robert Millikan he began the cosmic ray studies. It was during his study that he discovered unexpected particle tracks in his cloud chamber by taking photographs. He correctly interpreted them as having been created by a particle with the same mass as the electron, but with opposite electrical charge

In 1932, this discovery was finally validated by the theories of Paul Dirac and led to the discovery of the existence of positron. The discovery of positron was an important advancement in physics, as the positron was the first particle of antimatter to be discovered

Following year, together with Dr. Neddermeyer, he obtained the first direct proof that gamma rays from ThC” generate positrons in their passage through material substances. He shot gamma rays into other materials, which resulted in the creation of positron electron pairs

In 1933, he took up the position of Assistant Professorship in Physics, which he served for six years after which he was promoted to the position of Professor of Physics

In 1936, he and Neddermeyer discovered the muon, a subatomic particle which was 207 times more massive than electron, but with the same negative electric charge and spin  $1/2$  as the electron, again in cosmic rays. The muon was amongst the first subatomic particles discovered

During World War II, he conducted research for an artillery rocket project for the U.S. Navy. For the same, he visited France to observe how the rockets fared in a real combat situation

Till the end of his life, he continued his research work on radiation and fundamental particles. Most of his discoveries have been published in ‘Physical Review’ and ‘Science’

## Awards & Achievements

- In 1936, he was awarded Nobel Prize for his discovery of positron. He shared the same with Victor Franz Hess, who too had made an important discovery in cosmic radiation

In 1945, he was conferred with the prestigious Presidential Certificate of Merit. He was elected as a Fellow of the American Academy of Arts and Sciences in 1950

In 1976, he was named Professor Emeritus at Caltech

LL.D. Temple University and John Ericsson Medal of the American Society

- Other highly esteemed and prolific scientific awards and honors won by him include Gold Medal of the American Institute of City of New York, Sc.D. of Colgate University, Elliott Cresson Medal of the Franklin Institute, LL.D. Temple University and John Ericsson Medal of the American Society of Swedish Engineers