Hendrik Lorentz

1853-1928



Annie Fischer

Personal Life

- Born 18 July 1853 in Arnhem, Netherlands
- Son of Gerrit Frederik Lorentz and Geertruida van Ginkel
- Studied physics and mathematics at the University of Leiden
- Married Aletta Catharina Kaiser in 1881
- Died 4 February 1928 in Haarlem

Education

- B.Sc. degree in mathematics and physics in 1871 from University of Leyden
- In 1875 (age of 22) received doctor's degree
- Doctoral thesis on the reflection and refraction of light

Career

- In 1878 he was appointed to the Chair of Theoretical Physics at Leyden
- 1912 worked at Haarlem as Curator of Teyler's Physical Cabinet and Secretary of the "Hollandsche Maatschappij der Wetenschappen"
- Stayed at Leyden for the remainder of his life as Extraordinary Professor

Albert Einstein and Hendrik Lorentz

Lorenz-Lorentz formula

- Original goal to extend James Clerk Maxwell's theory of electricity and light
- 1878 published an essay on the relation between the velocity of light in a medium and the density and composition thereof; became known as the Lorenz-Lorentz formula

Phenomena of Moving Bodies

- Followed A.J. Fresnel's hypothesis of the existence of an immovable ether
- Formed the basis of a general theory of the electrical and optical phenomena of moving bodies

Electron

- Credited for stemming the conception of the electron
- Theorized that the tiny particle plays a role during electromagnetic phenomena in ponderable matter
- Made it possible to apply the molecular theory to the theory of electricity and to explain the behavior of light passing through moving, transparent bodies

Hydraulics

- 1919 appointed Chairman of the Committee whose task was to study the movements of sea water
- His theoretical calculations (which required 8 years of work) have been confirmed in actual practice
- Permanent value to the science of hydraulics

Awards

- Nobel Prize for Physics (1902)
- Rumford Medal (1908)
- Franklin Medal (1917)
- Copley Medal (1918)



