



*Satyendra Nath Bose*

### **Satyendra Nath Bose (1894-1974)**

Satyendra Nath Bose was born on New Years day, 1894 in Goabagan in Kolkata. His father was an accountant in Indian Railways. Satyendra Nath popularly known as Satyen Bose, did his schooling at Hindu School, Kolkata, and then joined Presidency College. He excelled in academics throughout his education – Intermediate, B.Sc. and M.Sc. with applied mathematics. His teacher at the Presidency College was Jagadish Chandra Bose - whose other stellar pupil was Meghnad Saha. Bose took his B.Sc. examination in 1913 and his M.Sc examination in 1915. He stood first in both the examinations, the second place going to Meghnad Saha.

He worked as a lecturer of physics in the Science College of the University of Calcutta (1916-21) and along with Meghnad Saha, introduced postgraduate courses in modern mathematics and physics. He derived with Saha, the Saha-Bose equation of state for a nonideal gas.

In 1921, Bose left Kolkata to become a Reader at the Dakha University. It was during this period that he wrote the famous paper on the statistics of photons. It was named *Bose statistics* after him and is now an integral part of physics. Paul Dirac, the legendary physicist, coined the term *boson* for particles obeying these statistics. Apart from this he did theoretical work on the general theory of relativity and also experimental work on crystallography, fluorescence, and thermoluminescence.

Bose spent about 10 months in Paris in 1924, doing research with Madame Curie and Louis de Broglie. Later he went to Berlin where he met Einstein. He returned to Dhaka in 1926 and became Professor. Shortly before Independence, Bose returned to Kolkata to become the Khaira Professor of Physics, a post he kept till 1956. He was elected Fellow of the Royal Society in 1958, and the Government of India named him a National Professor and awarded him the honor of Padma Vibhushan.