Times of India, Pune, July 5, 2012.

HIGGS & BOSE IN HIGGS BOSON

PETER HIGGS

Higgs is best known for his 1960s proposal of broken symmetry in electroweak theory, explaining the origin of mass of elementary particles in general and of the W and Z bosons in particular. This Higgs mechanism predicts the existence of a new particle, the Higgs boson — which derives its first name from him. Higgs was born in Wallsend, North Tyneside, England. His father worked as a sound engineer for the BBC. Higgs was a professor at the University of Edinburgh.

Higgs paper about his theory was initially rejected. But this was a blessing in disguise, since it led Higgs to add a paragraph introducing the now-famous Higgs particle. In 1964, Higgs wrote two papers on what is now known as the Higgs field. The journal *Physics Letters* accepted the first but sent the second back. After adding a paragraph predicting the new particle, he submitted the paper to competing journal *Physical Review Letters*, which published it.

SATYENDRA NATH BOSE

The sub-atomic particle "boson" is named after Bengali physicist Satyendra Nath Bose whose pioneering work in the field in the early 1920s changed the way particle physics has been studied. The work done by Bose and Albert Einstein laid the foundation for the discovery of the God particle. While paying tribute to Bose's work, Paolo Giubellino, a CERN spokesperson, had said back in October last year, that "India is like a historic father of the project". Bose specialised in mathematical physics. A Fellow of the Royal Society, he was awarded the Padma Vibhushan in 1954. Bose was born in Calcutta, the eldest of seven children. His father, Surendranath Bose, worked in the Engineering Department of the East Indian Railway Company. Bose never received a doctorate, nor was he awarded a Nobel Prize, though the Nobel committee recognised other scientists for research related to concepts he developed.