



## Father of Indian Nuclear Programme

### Dr.Homi Jehangir Bhabha

(30 October 1909 – 24 January 1966)

#### Introduction:

Dr. Homi Bhabha was a great Indian nuclear physicist, born on 30 October 1909, in [Mumbai](#). His full name is Homi Jehangir Bhabha. He was the founding director at the Tata Institute of Fundamental Research and also, he served as the professor of Physics over there. He died at [Mont Blanc](#) on 24 January 1966.

#### Early Life:

Since childhood, Dr. Homi Jehangir Bhabha was an intelligent and hard working student. His parents dreamt of him becoming a mechanical engineer. However, young Bhabha was more interested in studying physics and not in becoming an engineer. Yet he honored his parents' dreams and completed his degree in mechanical engineering. Also, the parents respected their son's true interest and supported him in his pursuit of scientific research.

#### Personal Life:

Dr. Homi Bhabha remained a bachelor throughout life. He devoted his entire life to scientific research. He loved painting, he was a painter. Also, he loved classical music as well as opera.

#### HIGHER EDUCATION:

Dr. Bhabha studied in Europe where he became well informed about many great physicists of those times. Also, he got in touch with many physicists of his time as he was determined to contribute to India's scientific research.

#### CAREER & MAJOR WORK:

1. Dr. Homi Bhabha had plans about making improvements in scientific research and he implemented those after returning back to his motherland, India; speaking of

which, the Tata Institute of Fundamental Research was founded by him in 1945, which then became a major centre for cosmic ray research.

2. After publishing his first scientific paper, 'The Absorption of Cosmic radiation', he received his doctorate in nuclear physics in January 1933.

3. In addition to his research work at Cambridge, he worked alongside Neil Bohr in Copenhagen. In the year 1935, Dr. Bhabha published a paper in which he performed the first calculation in order to determine the cross section of electron-positron scattering.

4. In 1936, a paper was published by him, 'The Passage of Fast Electrons and the Theory of Cosmic Showers'. The paper gives information about how primary cosmic rays from outer space interact with the upper atmosphere.

5. In order to conduct research in nuclear science, Bhabha felt that India needed laboratories and facilities to conduct research in nuclear science. Thus, in 1944 he decided to take support of the futuristic, industrialist, Sir Dorabji Jamsetji Tata, the founder of Tata Group. His proposal was accepted and with support from J.R.D. Tata, who was then the chairman of the Tata Group, the 'Tata Institute of Fundamental Research' (TIFR) was founded on 1 June 1945. Dr. Homi Bhabha was appointed its first director. TIFR had the facilities for conducting large scale research in physics, chemistry, electronics and mathematics.

7. Dr. Homi Bhabha played a key role in the formation of Atomic Energy Commission in 1948 and the Department of Atomic Energy in 1954.

#### **Awards and achievements**

- 1) Senior Studentship, 1937
- 2) 1954, Padma bhushan (India's Third Highest citizenship award)
- 3) 1942, Adam prize
- 4) Nomination for Noble Prize in 1951, 1953, 1956 for Research in Physics.



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