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Remembering Homi Bhabha - Father of Indian Nuclear Program

Homi Jehangir Bhabha is the man who led the Indian Nuclear Research Program. He was a nuclear physicist who laid the foundation of nuclear research in India. He is often known as the **Father of the Indian Nuclear Program**. He was born on 30th October 1909. We celebrate the birth anniversary of this legendary man every year on **30th October**. Read this article to know all about the great physicist Homi Bhabha.

Quick Facts

Full Name	Homi Jehangir Bhabha
Nationality	Indian
Birthday	30th October 1909
Died at the Age of	56
Known as	Father of Indian Nuclear Program
Died On	24th January 1966
Cause of Death	Plane Crash

Major Contributions of Homi Bhabha

Creation of Premier Institutions

- With the support of the visionary and industrialist, Dorabji Jamsetji Tata, the **Tata Institute of Fundamental Research** was established in 1945 in Bombay with the facilities for conducting large-scale research in Physics, Chemistry, Electronics, and Mathematics.
- To intensify the effort to exploit nuclear energy for the benefit of the nation, Dr. Homi Bhabha established the Atomic Energy Establishment, Trombay





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(AEET) in January 1954 for multidisciplinary research program essential for the nuclear program of India.

- After the sad demise of Bhabha in 1966, AEET was renamed **Bhabha Atomic Research Centre (BARC)**.

Atomic Energy Commission

- He played a key role in the creation of the Atomic Energy Commission in 1948 and the Department of Atomic Energy in 1954.
- He envisaged a three-stage nuclear program consisting of utilization of natural uranium, thorium and plutonium in advanced nuclear reactors with a closed full circle.
- Because of this, he was called the father of India's nuclear power program.

Worked with Niels Bohr

- Homi J. Bhabha was one of the scientists to ignite the revolution in India in the fields of Atomic Energy and Cosmic Rays.
- While he was a student, he worked with Niels Bohr in Copenhagen at Cambridge.
- He published a paper in which he gave the calculations to determine the cross section of electron-positron scattering.
- Niels Bohr won the Nobel Prize in Physics in 1922 for his outstanding contributions in understanding the atomic structure and quantum theory.

Nuclear Program

Homi Bhabha formulated a **3 stage Nuclear Program** in 1954 to secure India's long term energy independence, with the use of uranium and thorium reserves found in the coastal regions of South India. The main aim was to capitalize on India's vast thorium reserves while accounting for its low uranium reserves. The 3 stages of this nuclear program are:

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Major Achievements

- In 1954, he was honored with the **Padma Bhushan**, the third highest civilian award in India, for his invaluable contributions to science and engineering.
- He was the first **Chairman of the first United Nations Conference** on the Peaceful Uses of Atomic Energy, held in Geneva in 1955.
- Under his guidance, Indian scientists worked on the development of atomic energy, and the first atomic reactor in Asia went into operation at Trombay, near Bombay, in 1956.
- Homi Jehangir Bhabha also worked with Walter Heitler on the cascade theory of electron showers, which was of great importance for the understanding of cosmic radiation.
- Homi Bhabha received many honorary degrees from Indian and foreign universities and was a member of numerous scientific societies, including the National Academy of Sciences in the United States. He also authored many articles on quantum theory and cosmic rays.

Death of Homi Bhabha

- Tragedy struck in his life when he died in a plane crash near Mont Blanc while heading to Vienna, Austria in 1966.



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- He was on his way to attend a meeting of the International Atomic Energy Agency.
- The misunderstanding between Geneva Airport and the pilot about the aircraft position near the mountain is the official reason of the crash.
- Many possible theories have been advanced for the air crash, including a conspiracy theory in which the Central Intelligence Agency (CIA) is involved in order to paralyze India's nuclear program.

We hope you found this article on Homi J Bhabha Birth Anniversary helpful. Take a look at more such articles to uplift your General Knowledge.

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