

# Vijay Kumar Kapahi



**JAN 21, 1944 – MAR 16, 1999**

Few scientists have expanded India's view of the universe like Dr. Vijay Kumar Kapahi. One of the country's leading astrophysicists, he was known for his pioneering work in radio astronomy, quasars, and cosmology. As Director of the National Centre for Radio Astrophysics (NCRA), he helped India listen to the cosmos and was honoured with the Shanti Swarup Bhatnagar Prize (1987), one of India's highest scientific awards.

## Early Life and Education

Born in Quetta (then British India) on 21 January 1944, Kapahi completed his schooling and earned a B.Sc. from St. Joseph's College, Bangalore under Mysore University. He later joined the BARC Training School in Mumbai and began working with the Radio Astronomy Group at TIFR in 1963, mentored by the legendary Govind Swarup. His Ph.D. from Bombay University (1975) focused on the structure of radio sources in the universe.

## Scientific Contributions

Kapahi's research reshaped how we understand radio galaxies and quasars.

Using the Ooty Radio Telescope, he discovered that galaxies appeared smaller in earlier cosmic times, offering vital clues about how the universe evolved.

He was among the first to study Compact Steep-Spectrum (CSS) radio sources, leading to the influential "unifying scheme" for radio galaxies and quasars, showing that how we see them depends on the angle from which we observe. His expertise extended to imaging solar radio bursts and exploring distant objects through Very-Long-Baseline Interferometry (VLBI).

## Major Projects and Collaborations

Kapahi helped build two of India's most important scientific instruments:

- Ooty Radio Telescope (ORT) – one of India's earliest and most innovative radio telescopes.
- Giant Metrewave Radio Telescope (GMRT) – near Pune, still among the world's largest low-frequency radio observatories.

He collaborated globally with the Carnegie Institution, Jet Propulsion Laboratory (USA) and Dwingeloo Radio Observatory (Netherlands). His research appeared in top journals and is cited by astronomers worldwide.

## Mentorship and Legacy

A passionate mentor, Kapahi guided young astronomers including Prajval Shastri, Dhruva Jyoti Saikia and Ramana Athreya. He co-founded the Joint Astronomy Programme at IISc and served as President of the Astronomical Society of India (1997–1999).