

Kalpathi Ramakrishna Ramanathan

Padma Bhushan (1965) and Padma Vibhushan (1976)



28 February 1893 – 31 December 1984

Introduction

Kalpathi Ramakrishna Ramanathan was an Indian physicist and meteorologist known for his contributions to atmospheric sciences and radio astronomy. He was the first director of the Physical Research Laboratory (PRL), Ahmedabad, and played a key role in India's space and meteorological research.

Career and Achievements

One of his most well-known contributions is the **Ramanathan Effect**. Have you ever noticed how the sky looks blue during the day and turns red during sunset? This is because of how sunlight scatters when it passes through air. Ramanathan studied this phenomenon and discovered how particles like water vapour and dust affect radiation. This helped scientists understand how Earth heats and cools, which is very important in predicting the monsoon and climate change

Ramanathan was also called "Mr. Ozone" because of his pioneering research on the ozone layer. He used balloons to study the ozone layer. He used balloons to study ozone and ultraviolet (UV) radiation in the upper atmosphere, long before satellites existed. His findings showed how ozone protects us from harmful UV rays and how its behaviour affects weather patterns

He worked on solar and terrestrial radiation, created the first rainfall map of Travancore, and improved our understanding of monsoon systems. As Director of the India Meteorological Department, he trained Air Force officers and helped modernise weather forecasting in India.

Contributions in Space Research

He helped develop the Thumba Equatorial Rocket Launch Station and worked closely with scientists like Homi Bhabha and Vikram Sarabhai. As the founding director of the Physical Research Laboratory (PRL) in Ahmedabad, he laid the foundation for India's journey into space science.

Ramanathan's life shows that science is not just about labs and formulas. It's about curiosity, asking questions about what we see in the world, and using that knowledge to improve lives. Whether it's a school weather project or a question about space, students like you can be the next big innovator, just like him.