

Journey of an experimental cosmic ray physicist

Prof. Sunil K. Gupta

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I would describe my journey as an experimental cosmic ray physicist in TIFR starting from summer of 1976. I have been fortunate that I always was able to work on experiment from the start, and got to develop state-of-the-art detectors, electronics and write programs for data analysis. This journey became a real adventure as we had to solve every problem in-house with little or no infrastructural backup. Along the way we developed civil, mechanical and electrical infrastructure for the laboratory. The members of Cosmic Ray Laboratory in Ooty acquired a wide range of advanced skills through sheer hard work and dedication. This culminated in the development of world-class plastic scintillators, and large sealed proportional counters and a host of other devices. The DAE/DST 2020 Vision document in 2006 accorded the highest priority of the GRAPES-3 in astroparticle physics. Our work was also appreciated by an International Panel of eminent scientist that reviewed the DHEP in 2008 in the following quote, "The work is based on the application of meticulous state-of-the-art methods, and is performed with great enthusiasm by the participating staff members, with excellent guidance provided by the faculty responsible for the activity."



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Hybrid mode: AG-66, TIFR Mumbai

YouTube Live: <https://tinyurl.com/ASETonOct27>



Prof. Sunil Gupta joined Tata Institute of Fundamental Research, Mumbai in August 1976 and retired as Senior Professor in 2020. He carried out research in international centres including the University of Maryland, Fermi-Lab near Chicago, Los Alamos Lab, and NASA/GSFC in USA. Also worked at CERN, Geneva Switzerland, RWTH Aachen Germany, INFN Pisa Italy, Osaka City University, Chubu University, Nagoya University and Tokyo University in Japan in high energy physics and astrophysics. Over the last three decades, Prof. Gupta led the setting up of GRAPES-3 experiment at Ooty the largest astroparticle facility in India and developed many new instruments with applications in atomic energy and space sciences. GRAPES-3 is a large collaboration with more than 30 Indian and Japanese scientists. Prof. Gupta was honoured with memberships, Chairpersonships and Professorships of many national and international bodies, including Astronomical Society of India, International Astronomical Union (IAU), Paris, National Academy of Sciences of India, Allahabad, Commission C4 on Astroparticle Physics of IUPAP, International Emulsion Chamber Committee, VIIT, Pune, Chubu University, Japan. Recently, he was awarded the prestigious O'Ceallaigh medal in recognition of his significant contributions to the field of Astroparticle Physics over an extended career and for his leadership of the GRAPES-3 experiment at the Cosmic Ray Laboratory in Ooty.