



# Physical Research Laboratory, Ahmedabad

## Announcement of Dr. Vikram Sarabhai Public Lecture-2019

**Speaker:** Dr. Anil Bhardwaj  
Director, Physical Research Laboratory, Ahmedabad

**Title:** "Indian Planetary and Space Missions "

**Time:** Tuesday, 24 September 2019, 18.00 hrs.

**Venue:** K.R. Ramanathan Auditorium, PRL

### Abstract

India embarked on planetary exploration starting with the Chandrayaan-1 orbiter mission in 2008. This was followed by a mission to Mars, the Mars Orbiter Mission (MOM), launched in November 2013 and arrival on Mars in September 2014. The ongoing Indian planetary mission is Chandrayaan-2. India also has a planned a mission to study the Sun called Aditya-L1. This lecture will briefly highlight the challenges and science of Indian planetary missions.

### The Speaker

Dr. Anil Bhardwaj received his M.Sc. from Lucknow University (1987) and Ph.D. from the Indian Institute of Technology, Banaras Hindu University (BHU) in 1992. He joined the Indian Space Research Organisation (ISRO) in 1993 at the Space Physics Laboratory (SPL) of the Vikram Sarabhai Space Centre (VSSC) in Trivandrum and was subsequently the Director of SPL from 2014 – 2017. He has worked at the NASA Marshall Space Flight Centre, USA, for about 2 years as National Academy of Science (NRC) Senior Research Associate during 2004-2005. Dr. Bhardwaj initiated research in planetary sciences at SPL and contributed to the development of planetary science activities in ISRO/ Department of Space (DOS), and planning of planetary missions of India. He was the Principal Investigator (PI) of the Sub-KeV Atomic Reflecting Analyser (SARA) experiment on the first Indian Lunar mission Chandrayaan-1, which has revolutionized our understanding on the interaction of solar wind with the Moon through several new findings. He is the PI of Mars Exospheric Neutral Composition Analyser (MENCA) experiment on the Indian Mars Orbiter Mission (MOM).

His primary research field is planetary and space sciences. He has made outstanding contributions in the field of solar system X-ray astronomy, including discovery of X-rays from the rings of Saturn, X-ray flares from Jupiter and Saturn, theoretical modelling of aurora and airglow emissions and photochemistry in planetary upper atmospheres and ionospheres and comets.

Dr. Bhardwaj has over 130 publications and several chapters in books, including a chapter in the "Encyclopedia of the Solar System". He is a member of several ISRO, national and international committees on planetary and space sciences. He is also a member of Governing/Research Council of many research institutes in India. Dr. Bhardwaj has received many awards and honours, including the most coveted Shanti Swarup Bhatnagar Prize (2007) and the Infosys Prize in Physical Sciences (2016). ISRO honoured him with the Outstanding Achievement Award in 2017 and IIT-BHU conferred their distinguished Alumnus Award on him in 2015. Dr. Bhardwaj is an elected Fellow of Indian National Science Academy (2010), Indian Academy of Sciences (2009), National Academy of Sciences India (2014). He is also an elected member of the International Academy of Astronautics and International Astronomical Union. He was elected President of Asia Oceania Geosciences Society Planetary Science for 2006-2010 and is currently the Vice-Chair of COSPAR Commission B.

**Tea at 17:30 hrs  
ALL ARE WELCOME**

<https://www.prl.res.in/publec/vikramlecture/>

**Link for Registration (Mandatory) to attend  
(PRL/ISRO/SAC Members Need not to Register)  
Registration by 23.09.2019, 17.00 hrs ,on first come first serve basis**

