



Roaming on the Moon by **Prof. Santosh Vadawale (PRL, Ahmedabad)**



October 19, 2023 at 4 p.m.

AG-66, TIFR Mumbai ■ YouTube Live Link: <https://tinyurl.com/ASETon19Oct>

The soft landing of the Chandrayaan-3 Vikram lander on 23rd August 2023 was a historic moment for India. The entire country was excited and jubilant that evening. However, every evening for the next 12 days was equally exciting for the group involved in charting the Pragyaan rover's path and conducting experiments with all scientific payloads of the Vikram lander and the Pragyaan rover. In this talk, the speaker will try to share some of these exciting, as well as a few nervous, moments during the payload operations, with a particular focus on their payload, namely the Alpha Particle X-ray Spectrometer (APXS). Beginning with a brief historical account of Chandrayaan missions his association with them, he will proceed with the challenges faced in realizing the APXS payload and will end with describing the scientific operation of APXS on the lunar surface.

Dr. Santosh Vadawale completed his Ph.D. from TIFR in X-ray astronomy. Subsequently, he joined the Physical Research Laboratory after completing a post-doctoral fellowship at Harvard University. He is closely involved in the AstroSat-CZTI experiment and has played a key role in establishing the new hard X-ray polarimetric capability of CZTI. He is also closely involved in all three Chandrayaan missions, with a lead role in Chandrayaan-2 as the PI of the XSM experiment and in Chandrayaan-3 as the PI of the APXS experiment. He is also a co-PI of the ASPEX experiment onboard the Aditya-L1 mission. Currently, he is pursuing the development of new generation X-ray instruments, including X-ray telescopes, for the future astronomy, solar, as well as planetary science missions of India.