Physical Research Laboratory, Ahmedabad

Colloquium 20_04

Speaker: **Dr. Neeraj Srivastava**

Planetary Sciences Division, PRL, Ahmedabad

Title: **"Discovery of Recent Volcanism on the Moon"**

Date and Time: **Wednesday, 07 October 2020, 16:00 – 17:00 hrs**

YouTube Link: https://youtu.be/7ixNjG21C2c

Abstract

Our knowledge about the geology of the Moon, our nearest celestial neighbor, has undergone a paradigm shift during the past decade in the wake of discoveries made from the analysis of data received from a string of remote sensing missions, such as Chandrayaan-1 (ISRO), Kaguya (JAXA), Lunar Reconnaissance Orbiter (NASA), GRAIL (NASA), and Chang'e (CNSA). One such finding relates to the current geological state of the Moon. For long, the Moon was unanimously considered to be geologically dead with no signs of volcanism during the past ~1.2 Ga. We have found tangible shreds of evidence of volcanic activities on the Moon, that occurred ~700 Ma ago in the Grimaldi Basin on the Near Side, and also as recent as 2-10 Ma before present inside the Lowell Crater, Orientale Basin on the Far Side. Besides these, evidence of recent tectonism has also been found in these areas. These findings have significant implications for our understanding of the thermal evolution of the Moon. Excerpts from some of these studies will be presented during the talk.

The Speaker

Dr. Neeraj Srivastava is currently working as Assistant Professor in the Planetary Sciences Division of PRL, Ahmedabad. He obtained his B.Sc from Lucknow University and M.Tech. from IIT, Roorkee. He joined PRL in the year 2002 in the PLANEX Programme of ISRO. Later, he pursued his Ph.D. at the Department of Earth Sciences, IIT Roorkee, Roorkee, on "Geology of Lowell Crater on the Moon." His major research interests include the use of remote sensing data to understand planetary geological processes such as impact cratering and volcanism. He has established a unique laboratory for carrying out reflectance spectroscopy of planetary materials and analogs under simulated conditions. He is the science PI of the joint PRL-VSSC study team on the R&D project, "Planetary Rock Sampling Technology" constituted by DTDI, ISRO under its "MyVision 2030" theme.

ALL ARE WELCOME