

## Reflections 2019

### \*\* ASK AN EXPERT \*\*

Prof. S. BALAKRISHNAN

Professor at Dept. of Earth Sciences, Pondicherry University

Research Interests: Geochemistry, Isotope Geology & Geochronology,  
Archean Crust-Mantle Evolution

### “Magmatic Processes”

Our lives are dependent on the land we live on and water. Has this land always been the same? How did it originate and evolve with time? The history of volcanic rocks prior to eruption, in the mantle and within magma chambers, can be inferred from the composition of the melt and the mineralogy of included crystals and xenoliths (fragments of “foreign”, older rock caught up in lava flows). The magmatic processes they record include melting in the mantle, transport to within the volcano, cooling and crystallization, assimilation of surrounding rocks, magma mixing, and degassing. The xenoliths can be compared with glassy rinds of submarine lava flows, which retain the chemical composition of the melt at the time of eruption because the lava surface cools so rapidly upon contact with cold seawater that it quenches and cannot degas further or form crystals. The chemical compositions among xenoliths and glass rinds will be different because as primitive magma cools during its travel from the mantle, to magma chambers, and to eruption, specific crystal suites will form in equilibrium with particular temperature and pressure conditions, differentiating and leaving behind a more evolved magma. Olivine, rich in magnesium-oxide (MgO) is the first to begin to crystallize as magma cools. Clinopyroxene, plagioclase and others are next.

To know some recent advances in understanding the magmatic processes through time and also some of the outstanding questions in this field, join us in the event “Ask An Expert”.


Find it for yourself from the expert himself!!

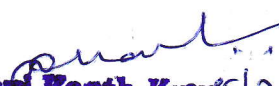
@ Raman Seminar Hall, Department of Physics  
On Friday 1<sup>st</sup> March, 2019 (4:30PM to 6:00 PM)

All are welcome.....!!!

Student Coordinators:

Dinesh Kumar Panda  
Manasa V S  
Suraj Kumar Sahu  
Navajyoth  
Debanjan Roy

  
Dr Alok Sharan  
Faculty Coordinator

  
Dr. V.V. Ravi Ranth Kumar  
Professor & Head  
Department of Physics  
Pondicherry University  
Head of Department

Followed by

**Student's Seminar: Legends of the Skies**

Speaker: Ganga S G.

First year Integrated MSc, Physics

Have you ever thought what prehistoric men thought about the skies? Who made 12 months in a year and 24 hours a day?

Archeoastronomy is the branch of astronomy that studies how people in past have understood the phenomena in the night sky and what roles the sun and the moon played in their cultures. Talk includes various past events and how astronomy evolved in different cultures. On an ending note different ancient monuments and their astronomical importance are portrayed.

**Movie Screening: The Challenger Disaster**

When the Space Shuttle Challenger blew up in 1986, it was the most shocking event in the history of American spaceflight. The deaths of seven astronauts, including the first teacher in space Christa McAuliffe, were watched live on television by millions of viewers. However, what was more shocking was that the cause of the disaster might never be uncovered.

Based On: What Do You Care What Other People Think? Written By Richard Feynman


Date and time: 1<sup>st</sup> March 2019, 6:00 PM

Venue: Raman Seminar Hall, Department of Physics

**All are welcome.....!!!!!!**

Student Coordinators  
Santosh Kumar Barik  
Isha Shailesh  
Arunima S  
Hiba P

  
Dr. Alok Sharan  
Faculty Coordinator

  
27/2/19  
Dr. V. V. Ravikanth Kumar  
Head of Department  
**Dr. V.V. Ravi Kanth Kumar**  
**Professor & Head**  
**Department of Physics**  
**Pondicherry University**  
**Puducherry - 605 014**  
**India.**