



30th MID-YEAR MEETING

INDIAN ACADEMY OF SCIENCES

28-29 June 2019

Satish Dhawan Auditorium, CSIC Building,
IISc, Bengaluru

SPECIAL LECTURE

PHYSICS OF THE MONSOON AND ITS VARIABILITY



Sulochana Gadgil, Pune



Saturday, 29 June 2019



1210–1250



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While the surface winds over a large part of the tropical regions (the trade winds) blow in the same direction throughout the year, over some parts known as monsoonal regions, they blow in opposite directions in different seasons. This large seasonal variation of winds is considered to be the distinguishing attribute of the monsoon, but it is the monsoon rainfall, with large impact on agriculture and economy, that governs the pulse of life in our country.

Understanding the physics of the monsoon and its variability, which is a prerequisite for the development of models capable of skilful predictions, has evolved since the seminal paper by the astronomer Halley (1686) who suggested that the monsoon was a planetary scale land-sea breeze. This theory is still found in textbooks and used even in scientific papers, despite scientific evidence being presented against it. The speaker shall talk about the present understanding of the physics of the monsoon, arising from combining the major advances in the knowledge of tropical cloud systems with the availability of satellite imagery adding to the already rich knowledge of the observed monsoon variability, with new theoretical insights into the physics of tropical cloud systems since the 1960s.

Prof. S S Krishnamurthy will chair

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