



Astronomy & Astrophysics : An Introductory Survey

A lecture series by Prof. G. Srinivasan

A 'Golden Jubilee Celebration' Event of the Astronomical Society of India



Lecture 0 : The Present Revolution in Astronomy - An overview

Freeman Dyson once said - there are two kinds of scientific revolution, those driven by new concepts and those driven by new tools. Of all the major scientific revolutions of the last five hundred years, Astronomy has been in the forefront of concept-driven, as well as tool-driven revolutions - some of which were ushered in by giants like Copernicus, Galileo, Newton and Einstein. In this introductory lecture of the series, Prof. Srinivasan sets up the stage by taking the students on a accelerated journey through these revolutions that have shaped modern Astronomy.

Suggested Readings

1. Basic

- (a) *What are the stars?*, G. Srinivasan, 2011
- (b) *Can stars find peace?*, G. Srinivasan, 2011
- (c) *The Physical Universe: An Introduction to Astronomy*, F. Shu, 1981

2. Advanced

- (a) *Stellar Structure and Evolution*, R. Kippenhahn & A. Weigert, 1994
- (b) *Stellar Remnants*, S. D. Kawaler, I. Novikov, G. Srinivasan, 1997
- (c) *Astrophysics for Physicists*, A. R. Choudhuri, 2010

Note : The books listed above are general references for the entire course. Specific reference for a particular lecture, as and when required, would be made available in that lecture's supplementary material. We may also add other general references from time to time.

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