

Dayalbagh Educational Institute

Introduction to Astroparticle Physics

01 Detection

1.1 Basic

1.3 Detecting signals of the big and small

1.5 Techniques of detection

1.7 Study of Solar Neutrino problem

1.9 Concepts

1.2 Radiation

1.4 Detecting Sensors

1.6 Uncertainty and errors

1.8 Dark Energy Experiment

1.10 Interactive Quiz

02 Stars

2.1 Stars are coming from

2.3 Massive Stars, and Supernovae

2.5 A Galactic Bubble Bath

2.7 Black holes

2.2 The Low Mass Stars - An Overview

2.4 Supernova and Cosmic Rays

2.6 Neutron Stars

2.8 Concepts

2.9 Interactive Quiz

03 Cosmic Rays

3.1 Cosmic Rays

3.3 A cosmic ray perspective

3.5 Composition of Galactic Cosmic Rays on Earth

3.7 Origin of Cosmic Rays

3.9 Interactive Quiz

3.2 How can we see Cosmic Rays

3.4 Acceleration Mechanism of Cosmic Rays

3.6 Dark Matter

3.8 Concepts

04 Gamma Ray Astronomy

4.1 The Search Begins

4.3 The Puzzle of Gamma-Ray Pulsars

4.5 Gamma Rays: Vivid Forms

4.7 Residues of a Violent Past

4.2 When Stars Explode

4.4 Milky Way: Our Galaxy

4.6 The Gamma-Ray Burst Hunters

4.8 A Glimpse of the Future

4.9 Concepts

4.10 Interactive Quiz

05 Universe and Cosmology

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5.2 The Theoretical discovery of a Dynamic U

5.3 The Cosmological Redshift

5.4 Modeling the Universe

5.5 The Standard Models

5.6 Models with a Cosmological Constant

5.7 Concepts

5.8 Interactive Quiz

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