

Module:	Elective Advanced Lectures: Theoretical Physics
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Module No.: physics70c

Course:	 Theoretical Particle Astrophysics (T)
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Course No.: physics753

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	3+2	7	ST

Requirements for Participation:

Preparation:

General Relativity and Cosmology (physics754)
 Quantum Field Theory (physics755)
 Theoretical Particle Physics (physics615)

Form of Testing and Examination:

Requirements for the examination (written): successful work with the exercises

Length of Course:

1 semester

Aims of the Course:

Introduction to the current status at the interface of particle physics and cosmology

Contents of the Course:

Topics on the interface of cosmology and particle physics:
 Inflation and the cosmic microwave background;
 baryogenesis,
 Dark Matter,
 nucleosynthesis
 the cosmology and astrophysics of neutrinos

Recommended Literature:

J. Peacock, Cosmological Physics (Cambridge University Press 1998)
 E. Kolb, M. Turner; The Early Universe (Addison Wesley 1990)