Theoretical Particle Astrophysics (T) - physics753

Degree - M.Sc. in Physics (PO von 2014)

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

Course	**Theoretical Particle Astrophysics (T)**
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;

baryogenisis,

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)