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

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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:
E. Kolb, M. Turner; The Early Universe (Addison Wesley 1990)