

Experiments on the Structure of Hadrons (E) - physics715

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

<i>Module</i>	Elective Advanced Lectures: Experimental Physics
<i>Module No.</i>	physics70a

<i>Course</i>	Experiments on the Structure of Hadrons (E)
<i>Course No.</i>	physics715

Category	Type	Teaching			Semester
		Language	hours	CP	
Elective	Lecture with exercises	English	2+1	4	WT

Requirements for Participation:

Preparation: Completed B.Sc. in Physics, with experience in quantum mechanics, atomic- and nuclear physics

Form of Testing and Examination: Requirements for the examination (written or oral): successful work with the exercises

Length of Course: 1 semester

Aims of the Course: Understanding the structure of the nucleon, understanding experiments on baryon-spectroscopy, methods of identifying resonance contributions, introduction into current issues in meson-photoproduction

Contents of the Course: Discoveries in hadron physics, quarks, asymptotic freedom and confinement; multiplets, symmetries, mass generation; quark models, baryon spectroscopy, formation and decay of resonances, meson photoproduction; hadronic molecules and exotic states

Recommended Literature:

Perkins, Introduction to High Energy Physics (Cambridge University Press 4. Aufl. 2000)

K. Gottfried, F. Weisskopf; Concepts of Particle Physics (Oxford University Press 1986)

A. Thomas, W. Weise, The Structure of the Nucleon (Wiley-VCH, Weinheim, 2001)