Program name Physics Course name QUANTUM MECHANICS II Course ID Semester Course status ECTS credits L+E PTH6711 VI MANDATORY 6 3+2 Lecturer Prof. dr. Dejan Milošević The objective of the course is to introduce students to the applications quantum mechanics, as well as to enable them to independently solve the tas from this fundamental field of theoretical physics. Formalism developed with the scope of the course Quantum Mechanics I will be applied to variou problems of atomic and molecular physics, scattering theory, etc. Aims and intended learning outcomes Course content Approximative methods in quantum mechanics: stationary perturbation theory, variational methor quasiclassical (WKB) approximation, time-dependent perturbation theory. Semiclassical theory radiation. Spin: Key experiments. Mathematical description of the spin. Pauli's equation. Quantum mechanics of many particle systems: Identical particles. Pauli's principle. Slater's determinar Theory of atoms and molecules: Methods of calculation of atomic systems. Self-consistent file method (Hartree-Fock method). Thomas-Fermi method. The theory of molecules in adiaba	Program	Level of studies		First cycle		
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