

**Institute of Atomic Physics, Institute of Physics and Nuclear Engineering,  
Theoretical Physics, Apoma Laboratory**



## **SEMINAR**

**Extensive Light Investigations, Seminar Series, I**

**Fast Charge Ejection in Strong Laser Fields**

**M. Apostol**

Electrons in atoms, molecules, atomic clusters are ejected from their bound states by electric fields, static or oscillating; decay rate of protons and alpha particles are affected.

All this happens in low fields by tunneling from and to stationary states.

What happens in strong fields, where the stationary states, the energy levels do not exist, and the adiabatic hypothesis, the perturbation theory do not hold anymore?

This Seminar shows how we may have Quantum Mechanics without energy levels and stationary states.

It is shown that strong fields, particularly high-intensity laser radiation, enhance appreciably the ionization rate, including spontaneous proton or alpha-particle emission.

**Thursday, January 25<sup>th</sup>, 2018, 12am,  
Seminar Room, Department of Theoretical Physics**