



DIPARTIMENTO DI FISICA "E.Fermi"
UNIVERSITÀ DI PISA
CORSO DI DOTTORATO IN FISICA
Largo B.Pontecorvo, 3 - Edificio B-C
56127 PISA - ITALY

Ciclo di lezioni per il CORSO DI DOTTORATO IN FISICA E FISICA APPLICATA

Prof. Pierre Pillet

Laboratoire Aimé Cotton, Université Paris Sud, Orsay

"Lectures on Rydberg atoms and cold Rydberg atoms"

Topics of the lectures:

- I – Introduction to the physics of Rydberg atoms: main properties and experimental approaches
- II – Hydrogen atom and other atoms: quantum defect approach
- III – Stark effect and electric field ionization
- IV – Doubly excited states
- V – Interaction with electromagnetic field: black body radiation, microwave ionization
- VI – Collisions and interactions: dipole-dipole interaction, resonant collisions, radiative collisions
- VII – Cold Rydberg gases: Frozen Rydberg gases and ultracold plasmas
- VIII – Rydberg engineering: dipole blockade, Stark-Rydberg decelerator

Time schedule:

Wed June 9, 10-12, room 248 (building C)
Thu June 10, 10-12, room 248 (building C)
Thu June 10, 15-17, room 248 (building C)
Fri June 11, 10-12, room 248 (building C)

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