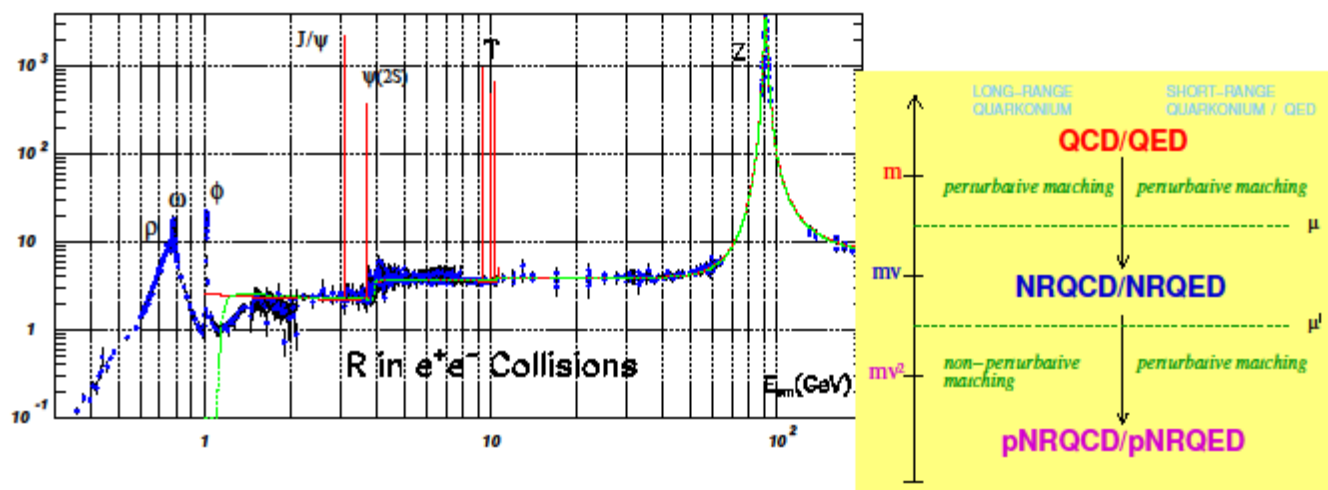


Quarkonium with Effective Field Theories.

Nora Brambilla (TU Munich)

Tuesday, 30 October 2012, 16:45 h
DESY Auditorium



Quantum Chromodynamics (QCD) is the sector of the Standard Model of particle physics that describes the strong interaction, deceptively simple to formulate but notoriously difficult to solve.

Heavy quarkonium is a multiscale quark-antiquark system that probes the different energy regimes of QCD, from the high-energy region, where an expansion in the coupling constant is possible and precision studies may be done, to the low-energy region, dominated by confinement and the many manifestations of the nonperturbative strong dynamics. Properties of production and absorption of quarkonium in a nuclear medium are also crucial for the study of QCD at high density and temperature. On the theoretical side, the construction of new nonrelativistic effective field theories for quarkonium has recently revolutionized the field providing both a conceptual framework and a powerful calculational tool.

I will discuss these theoretical advancements together with experimental recent measurements from tau-charm and B-factories, Fermilab and LHC experiments and their implications for our understanding of strong interactions.

- **Coffee, tea and cookies will be served at 16:30h**
- **After the seminar there is a chance for private discussions with the speaker over wine and pretzels**

