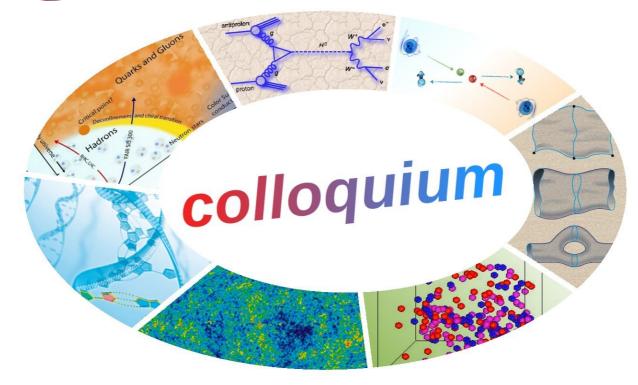


Dipartimento di Fisica e Sezione INFN di Torino





Lunedì 12 Giugno 2017, ore 14:30, Sala Wataghin Elisa Guido (Università di Torino e INFN)

Overview of bottomonium spectroscopy and prospects for the Belle2 experiment

Bottomonium physics has been a major success for the first generation of B-factories. Among the main achievements obtained, there are the discovery of several bottomonium states, such as eta_b(1S) and h_b(1P,2P), and the observation of exotic resonances, namely Z_b(10610) and Z_b(10650). Moreover, important informations on bottomonium are given not only by new resonances, but also by the study of the transitions occurring between its states. In particular, the study of hadronic transitions among bottomonia, and their relative magnitude, can be used as a test bench for non-perturbative approaches to QCD. For instance, transitions through an eta meson, despite involving a heavy quark spin-symmetry violation, have been measured to have an unexpectedly enhanced branching fraction with respect to those through a dipion system. We summarise the heritage left to this field by the first generation of B-factories, enlightening also the open issues that are expected to be more extensively understood with the data collected by the Belle2 experiment.