

# The ALICE Muon Spectrometer and related Physics

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The LHC heavy ion physics program aims at investigating the properties of strongly interacting matter at extreme energy density where the formation of the Quark Gluon Plasma is expected. Among the most promising observables, open heavy flavours and heavy quarkonium states are especially relevant since, on the one hand, they are copiously produced and, on the other hand, they provide sensitive information on the collision at both short timescale (production mechanisms) and long timescale (medium effects). In ALICE, they will be measured through the hadronic channel as well as from (di)electrons and (di)muons. Particular emphasis will be put in this talk on their measurement in the (di)muon decay channel. The ALICE muon spectrometer will be described as well as its construction and installation status. A few selected topics concerning muon physics in heavy ion collisions at LHC will be addressed and the expected performances of the ALICE muon spectrometer will be shown.