

Production ratio f_s/f_u and its relation with $B_{stomumu}$.

Abstract

The fragmentation process, in which a primary b quark forms $b\bar{q}$ meson, can not be reliably predicted because it is driven by strong dynamics in the nonperturbative regime. Thus fragmentation functions for the various hadron species must be determined experimentally. The production rate of B_s and B^+ mesons is a product of the $b\bar{b}$ cross section, the instantaneous luminosity and the probability that the b quark is bound to an s or u quark. The latter is denoted as the fragmentation fraction f_s or f_u . Precise knowledge of the fragmentation fractions is essential for measuring b-hadron cross sections and branching fractions at the LHC. In particular, for rare decays, such as the branching fraction of the $B_s \rightarrow \mu\mu$. In this talk we will show the preliminar result for the ratio of fragmentation fractions f_s/f_u from CMS experiment.

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