



HEP 2013
Stockholm
18-24 July 2013



Contribution ID: 84

Type: **Talk presentation**

Mass of the b-quark from QCD sum rules for f_B and f_{B_s}

Thursday 18 July 2013 09:15 (15 minutes)

We demonstrate that Borel QCD sum rules for heavy-light currents yield a very strong correlation between the b-quark mass and the resulting decay constant of the B-meson. This opens the possibility of an accurate determination of the b-quark mass from the sum rule using the values of f_B and f_{B_s} as inputs. Combining recent accurate lattice QCD determinations of f_B and f_{B_s} with our sum-rule analysis based on the three-loop heavy-light correlation function leads to an accurate value $\bar{m}_b(\bar{m}_b) = 4.245 \pm 0.025$ GeV.

Authors: Dr MELIKHOV, Dmitri (HEPHY); Dr SIMULA, Silvano (INFN); Dr LUCHA, Wolfgang (HEPHY)

Presenter: MELIKHOV, Dmitri (M. V. Lomonosov State University)

Session Classification: Flavour Physics and fundamental symmetries

Track Classification: Flavour Physics and Fundamental Symmetries