

# An Analysis of Bottom Mesons Decaying into Axial-Vector and Pseudoscalar Mesons

*Friday 6 July 2018 20:15 (15 minutes)*

Two body nonleptonic weak decays of bottom mesons to a pseudoscalar meson & an axial-vector meson states have been studied within the overall non-relativistic quark model. For decays involving charmed mesons, these decays have been studied by employing factorization hypothesis in heavy quark symmetry approach. A thorough analysis of charmed meson decays of B-mesons using ISGW model and lattice QCD-extracted form factors has been carried out. The B to D1 form factors have been extracted from lattice QCD based predictions of  $\Gamma_{1/2}$  and  $\Gamma_{3/2}$  at zero recoil.

We have calculated various branching ratios and also compared them with existing theoretical analysis. It has been found that the calculated results are in fair agreement with the available experimental data.

PACS Numbers : 13.25.Ft, 14.40.cs, 14.40.Ev

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**Session Classification:** POSTER

**Track Classification:** Strong Interactions and Hadron Physics