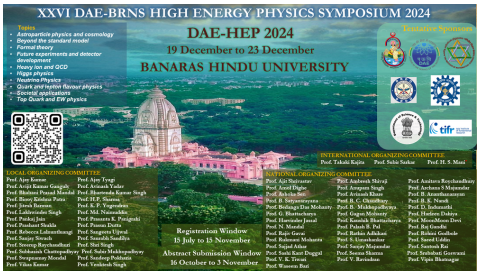


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# New Physics effects in the semileptonic $B_c^+ \to B_d \mu^+ \nu_\mu$ decay

The analysis of the $B_c^+ \to B_d \mu^+ \nu_\mu$ transitions in mesonic decays for the search of new physics in the presence of right-handed neutrinos would be an interesting aspect of the phenomenological study. We have followed the effective field theory approach for the low-energy effective Hamiltonian comprising the dimension-six operators. The new physics operators are constrained by using the available measurements of mesonic charm decay transitions, and the Wilson coefficients are determined through a $\chi^2$ fit using the Miniut package. We make the predictions of differential branching fraction and angular asymmetries for the mode to explore the effect of the new physics on the mesonic decay through right-handed neutrinos to motivate future measurements.

## Field of contribution

Phenomenology

**Authors:** Ms BOORA, Priyanka (Malaviya National Institute of Technology Jaipur); Dr KUMAR, Dinesh (University of Rajasthan, Jaipur); Dr LALWANI, Kavita (Malaviya National Institute of Technology Jaipur)

**Presenter:** Ms BOORA, Priyanka (Malaviya National Institute of Technology Jaipur)

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