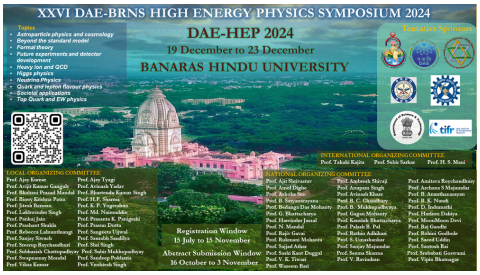

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New physics search via angular distribution of $B \to D^* \ell \nu_\ell$ decay in the light of the new lattice data

In this article, we investigate the potential of the angular distribution of the $B \to D^* \ell \nu_\ell$ process to search for new physics signals. The Belle collaboration has analysed it to constraint V_{cb} and the $B \to D^*$ form factors, under the assumption of the Standard Model. With the newly released lattice QCD data, we can perform a simultaneous fit of the form factors, V_{cb} as well as new physics parameters. We use the Belle data and the lattice data to constrain right-handed new physics. In addition, we also generate unbinned pseudo-dataset and perform a sensitivity study on {more general new physics} models, using the lattice data.

Field of contribution

Phenomenology

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