Contribution ID: **1055** Type: **Poster**

Untagged analysis of B → πlν̄ and first measurement of |Vub| at Belle II

Wednesday 29 July 2020 13:45 (3 minutes)

A long standing discrepancy between the results of exclusive and inclusive measurements of the CKM matrix element |Vub| exists. The charmless semileptonic decay B → πlν̄ is one of the most accessible and powerful channels for determining |Vub| in exclusive modes at e+ e− B-factories. Using data from the Belle II experiment, a new precision measurement of |Vub| becomes possible. In preparation for first precision measurements, an untagged measurement method for extracting B → πlν̄ events is developed. Lepton and pion candidates are combined to form B → πlν̄ candidates. In order to increase the purity, a series of selections is imposed to suppress continuum and other backgrounds. Signal is extracted from a fit to the two-dimensional ΔE and Mbc distribution in bins of the momentum transfer squared of the B-meson to the pion final state. A simultaneous form factor fit to the measured partial branching fractions and lattice QCD input is carried out to determine values of |Vub|.

Secondary track (number)

I read the instructions

Yes

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