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LHC results on tree-level beauty decays

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LHC results on tree-level beauty decays
Tree-level beauty decays present crucial ingredients in the search for physics beyond the SM through quark flavour changing transitions.
This contribution covers recent LHC results in charged-current semileptonic decays and beauty decays to both charmed and charmless fully hadronic final states.
The semileptonic decays must be studied to determine the parameters |Vub| and |Vcb| in order to over-constrain the Unitary Triangle.
First studies with semileptonic beauty baryons, which are uniquely accessible at hadron colliders, are presented.
Semitaunonic decays provide an opportunity to test for physics that couples differently among the leptonic families, and recent results in this area are presented.
Tree level decays to hadronic final states provide complementary constraints on the parameters of the Unitarity Triangle, in particular the internal angle gamma, which is currently the least precisely determined.
Several recent results on beauty decays to charmed and charmless final states are presented, including their combined impact on the determination of the angle gamma.

Experimental Collaboration

LHCb

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