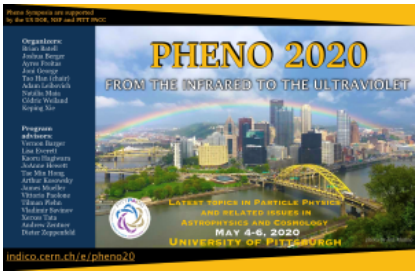

Contribution ID: **894** Type: **Parallel Talk**

First measurements of isospin amplitudes in Lambda_b and Xi_b decays

Tuesday 5 May 2020 14:30 (15 minutes)

Ratios of isospin amplitudes in hadron decays are a useful probe of the interplay between weak and strong interactions, and allow searches for physics beyond the Standard Model. We present the first results on isospin amplitudes in b-baryon decays, using data corresponding to an integrated luminosity of 8.5 fbˆ−1, collected with the LHCb detector in pp collisions at center of mass energies of 7, 8 and 13 TeV. The isospin amplitude ratio |A1(Λb⟶J/ψ Σˆ0)/A0(Λb⟶J/ψ Λ)|, where the subscript on A indicates the final-state isospin, is measured to be less than 1/21.8 at 95\% confidence level. The Cabibbo suppressed Ξbˆ0⟶J/ψΛ decay is observed for the first time, allowing for the measurement |A0(Ξbˆ0⟶J/ψ Λ)/A1/2(Ξbˆ0⟶J/ψ Ξˆ0)|=0.37±0.06±0.02, where the uncertainties are statistical and systematic, respectively.

Summary

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