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Two-Body Decays of Bottom Baryons into Pentaquarks and Vector Mesons

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The LHC collider is the only machine to study physics of bottom baryons. Among a majority of decays observed, the hidden-charm pentaquark observation is one of the most important output by the LHCb Collaboration. In the Λ_b- and Ξ_b-baryon decays both unflavor and strange pentaquarks accompanied by a light pseudoscalar meson were found. Doubly-strange pentaquarks are still waiting for their discovery in a similar channel or with a vector meson instead. The later ones seem to be more interesting for experimental Doubly-strange pentaquark observation by the LHCb Collaboration. The flavor $SU(3)$-symmetry can be used to relate widths of bottom-baryon weak decays into a pentaquark and light vector meson and predict their ratios as well as specify the most promising experimental channels.

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