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Basis Light-front Quantization Approach to Λ_b and Σ_b Baryons

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Within Basis light-front Quantization framework, we obtain the masses comparable to experiment and the light-front wave functions of Λ_b and its isospin triplet baryons Σ_b^+ , Σ_b^0 and Σ_b^- . Our prediction of their electromagnetic properties is in agreement with other theoretical calculations. Meanwhile their parton distribution functions (PDFs) are obtained with the gluon and the sea quark PDFs generated dynamically from the QCD evolution of the valence ones.

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