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One or two poles for the $\Xi(1820)$?

Wednesday, 10 July 2024 14:40 (20 minutes)

We recall that the chiral unitary approach for the interaction of pseudoscalar mesons with the baryons of the decuplet predicts two states for the $\Xi(1820)$ resonance, one with a narrow width and the other one with a large width. We contrast this fact with the recent BESIII measurement of the $K^-\Lambda$ mass distribution in the $\psi(3686)$ decay to $K^-\Lambda\bar{\Xi}^+$, which demands a width much larger than the average of the PDG, and show how the consideration of the two $\Xi(1820)$ states provides a natural explanation to this apparent contradiction.

session

B. Hadron Spectroscopy

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