

## The $\Xi(1820)$ resonance, one or two poles?

*Thursday 4 April 2024 11:30 (30 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  $K^- \Lambda \Xi^+$ , 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. We also propose a reaction to observe the two-pole structure.

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