

# The Delta resonance at different physical parameters

*Thursday, 2 November 2023 15:50 (20 minutes)*

In this presentation we would like to determine the properties of the lightest resonance in the baryonic sector of QCD: the Delta(1232) resonance. Using two-hadron operators we calculate the finite volume QCD energy spectrum of  $\pi - N$  in the  $p$ -wave. Using Luescher formalism we can predict the mass and the width of the delta resonance. In our analysis we probe the Luescher formula by including several volumes and pion masses down to the physical point. Having results from so many different parameters we are in a position to perform controlled chiral extrapolation of the delta resonance parameters.

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