

The Delta resonance at different physical parameters

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In this presentation we would like to determine the properties of the lightest resonance in the baryonic sector of QCD: the Delta(1232) resonance. We determine the finite volume energy spectrum of $\pi - N$ system. Using Luescher formalism we can predict the mass and the width of the delta resonance. In our analysis we include ensembles with the same pion mass at different spatial volume ($L = 2.7$ and 3.7 fm) and with the same spatial volume at different pion masses ($M_\pi = 200, 250$ MeV). In addition we show our first results at the physical pion mass. 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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