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Pole trajectories of the $\Lambda(1380)$ and $\Lambda(1405)$ resonances from the combination of lattice and experimental data

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Chiral unitary models predict an interchange of the two trajectories of the $\Lambda(1380)$ and the $\Lambda(1405)$ away from the SU(3) limit at next-to-leading order. Recently the BaryonScattering collaboration has performed a coupled channel ($\pi\Sigma - \bar{K}N$) lattice spectral analysis in the region of $\Lambda(1405)$ for $m_\pi \sim 200$MeV pion mass. In the present contribution we reanalyze the energy levels using a coupled-channel chiral approach constrained by experimental data. In addition we investigate the contributions of heavy channels and higher partial waves.

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