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## Three-particle formalism for multiple channels: the $\eta\pi\pi + KK\pi$ system in isosymmetric QCD

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We generalize the three-particle finite-volume formalism to allow for multiple three-particle channels, focussing on the two-channel  $\eta\pi\pi$  and (positive G-parity sector of the)  $KK\pi$  system in isosymmetric QCD. The formalism we obtain is thus appropriate to study the  $b_1(1235)$  and  $\eta(1295)$  resonances. The derivation is made in the generic relativistic field theory approach using the time-ordered perturbation theory method. We study how the resulting quantization condition reduces to that for a single three-particle channel when one drops below the upper  $(KK\pi)$  threshold. This work was done in collaboration with Zachary T. Draper.

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