

Connecting Matrix Elements to Multi-Hadron Form-Factors

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We review developments in calculating multi-hadron form-factors and transition processes via lattice QCD. Our primary tools are finite-volume scaling relations, which non-perturbatively map spectra and matrix elements to their corresponding infinite-volume amplitudes. We focus on two hadron processes probed by an external current, and provide various checks on the finite-volume formalism in the limiting cases of perturbative interactions and systems forming a bound state. Additionally, we study model-independent properties of their corresponding infinite-volume amplitudes, allowing us to rigorously define form-factors of resonating systems and amplitudes useful for BSM physics.

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