

International Workshop on Partial Wave Analyses and Advanced Tools for Hadron Spectroscopy



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Phase ambiguities in complete experiments and PWA

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For quite some time it is well known that single-channel physical observables are invariant with respect to a general energy and angle dependent phase rotation. This invariance is called continuum ambiguity. We show that, contrary to well-behaved energy dependent invariance, angle dependent phase rotation mixes multipoles, and changes their analytic structure. A direct consequence is that without determining the angular dependence of the free phase, partial wave decomposition is non-unique.

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