

Unitary dispersive approach for the three pion light meson decays

Friday, 29 July 2016 14:50 (30 minutes)

I will focus my talk on our recent studies of three-body final state interactions [1]. We considered the decays $\eta/\omega/\phi \rightarrow 3\pi$ in the dispersive frameworks that are based on the main constraints of the S-matrix theory, namely unitarity, analyticity, and crossing symmetry. Our results indicated that the final state interactions may be sizable. In my talk, the Dalitz plot distributions and integrated decay widths will be presented as well the comparison with the recent WASA-at-COSY and KLOE data. As a further application of the formalism, I will also discuss the electromagnetic transition form factors of $\omega/\phi \rightarrow \pi^0\gamma^*$ and extraction of the Q-value for $\eta \rightarrow 3\pi$. [1] Phys.Rev. D92 (2015) no.5, 054016 , Phys.Rev. D91 (2015) no.9, 094029 , Eur.Phys.J. A51 (2015) no.10, 135

Presenter: DANILKIN, Igor (Johannes Gutenberg-Universitaet Mainz)

Session Classification: Mesons