



Contribution ID: 39

Type: **Short Talk (5')**

K-matrix formalism in light-meson spectroscopy

Friday, 4 December 2020 15:35 (5 minutes)

In this work we study the K -matrix formalism and show how this can be applied to Dalitz plot analyses of charm-meson decays, such as $D^0 \rightarrow K_s^0 \pi^+ \pi^-$. The K -matrix, in contrast to the typical Isobar Model (IM), allows to properly include in the decay amplitude broad-overlapping resonances and non-resonant background, which are features of some of the known experimental results in light-meson spectroscopy. The $\pi\pi$ S-wave scattering presented in this work is a good example of this underlying dynamics. Moreover, the K -matrix formalism imposes by construction a unitarity constraint, which is not ensured by other approaches as IM.

Primary author: ORDONEZ, Sebastian (National University of Colombia)

Co-author: Prof. MILANÉS, Diego (Universidad Nacional de Colombia)

Presenters: ORDONEZ, Sebastian (National University of Colombia); Prof. MILANÉS, Diego (Universidad Nacional de Colombia)

Session Classification: Common Session