Contribution ID: **109** Type: **Poster**

Phenomenology of excited vector mesons and predictions for a yet undiscovered $\bar{s}s$ state $\phi(1930)$

Tuesday 26 September 2017 20:45 (15 minutes)

We study the decays of two nonets of excited vector mesons which predominantly correspond to $n\ ^{2s+1}L_J = 2^3S_1$ (radially excited vector mesons) and $n\ ^{2s+1}L_J = 1^3D_1$ (angular-momentum excited vector mesons). By using a quantum field theoretical approach we evoluate the decay widths of these mesons into two pseudoscalar mesons and into pseudoscalar and ground-state vector mesons. Moreover by introducing vector meson dominance we study radiative decays of excited vector mesons into a photon and a pseudoscalar meson. We compare our results with the experimental data from PDG. We also make predictions for an unkown $s\bar{s}$ state in 1^3D_1 nonet, that we call $\phi(1930)$. This state was not yet discovered but can be found in the upcoming Gluex and Mesonex experiments at Jefferson lab.

Author: PIOTROWSKA, Milena (Jan Kochanowski University)

Co-authors: GIACOSA, Francesco (Kielce University); Mr REISINGER, Christian (J. W. Goethe University)

Presenter: PIOTROWSKA, Milena (Jan Kochanowski University)

Session Classification: Poster session

Track Classification: Hadron decays