ID contributo: **1** Tipo: **non specificato**

Y* resonances investigation originated in K-light nuclei absorption by AMADEUS

The AMADEUS experiment deals with the investigation of the low-energy
kaon-nuclei hadronic interaction at the DAΦNE collider at LNF-INFN, which is fundamental to solve long-standing questions in the non-perturbative strangeness QCD sector. AMADEUS step 0 consisted in the re-analysis of 2004/2005 KLOE data, exploiting K^- absorptions in H, ^4He, ^9Be and ^{12}C, leading to the first invariant mass spectroscopy study with in-flight negative kaons. With AMADEUS step 1 a dedicated pure Carbon target was implemented in the central region of the KLOE detector, providing a high statistic sample of pure at-rest K^- nuclear interaction.

We will show the results obtained in the analysis of the $\Sigma^+\pi^-$ and $\Sigma^0\pi^0$ (pure isospin 0) channels, intended to shed light on the controversial nature of the $\Lambda(1405)$ state. The analysis of the $\Lambda(\Sigma^0)\pi^-$ channel, from which the measurement of the module of the isospin 1, S-wave non resonant transition amplitude ca be extracted for the first time, will be presented.

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