

# **$Y^*$ resonances investigation in low-energy kaon-nuclei hadronic interactions**

*Wednesday, 20 May 2015 15:00 (30 minutes)*

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. We analysed the 2004/2005 KLOE data, exploiting  $K^-$  absorptions in  $H$ ,  ${}^4He$ ,  ${}^9Be$  and  ${}^{12}C$ , to extract for the first time the module of the non-resonant transition amplitude, below threshold, in the  $I=1$ ,  $\Lambda\pi^-$  channel. A similar analysis is presently ongoing for the  $\Sigma^+\pi^-$  and  $\Sigma^0\pi^0$  (purely  $I=0$ ) channels in order to study the shape of the controversial  $\Lambda(1405)$  state.

**Primary author:** Mr PISCICCHIA, Kristian (LNF)

**Presenter:** Mr PISCICCHIA, Kristian (LNF)