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## Low Energy Antikaon-nucleon/nuclei interaction studies by AMADEUS

*Wednesday 14 March 2018 18:00 (30 minutes)*

The AMADEUS collaboration is performing experimental investigations in the sector of the low energy strangeness hadron physics.

The strategy consists of taking advantage of the monochromatic low-momentum negatively charged kaons produced by the DAΦNE collider,

investigating the  $K^-$  nuclear absorption processes in the materials of the KLOE detector, used as an active target.

The  $K^-$  single and multi-nuclear absorption on H,  $^4\text{He}$ ,  $^9\text{Be}$  and  $^{12}\text{C}$ , both at-rest and in-flight ( $p_{K^-} = 100\text{MeV}$ ), are studied with the aim to determine the nature of the controversial  $\Lambda(1405)$ , the non-resonant hyperon pion formation amplitude below the  $\bar{K}N$  threshold, the yield and cross sections of  $K^-$  multi-nucleon absorptions intimately connected to the antikaon multi-nucleon clusters properties and the  $K^-$  scattering cross sections on light nuclear targets.

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