

SEMINÁŘ OTF ÚJF, ŘEŽ

KRISTIAN PISCICCHIA

(LNF-INFN, Frascati, Italy)

Investigation of the low-energy kaon hadronic interactions in light nuclei by AMADEUS

Abstrakt

The AMADEUS experiment deals with the investigation of the low-energy kaon-nuclei hadronic interaction at the DAΦNE collider at LNF-INFN, trying to answer pending questions in the non-perturbative strangeness QCD sector. AMADEUS step 0 consisted in the reanalysis of 2004/2005 KLOE data, exploiting K^- absorptions in H, ^4He , ^9Be and ^{12}C , leading to the first invariant mass spectroscopy study with very low momentum (100 MeV) in-flight K^- captures.

The results obtained in the analyses of the hyperon-pion correlated events, searching for the resonant shapes of Y^* states, and the analyses of hyperon-deuteron, and triton correlations, leading to the first measurement of the K^- -4N cross section (for $p_K = 100$ MeV/c) will be presented. The preliminary measurement of the $K^-p \rightarrow \Sigma^0\pi^0$ cross section (for $p_K = 100$ MeV/c) will also be shown.

**Seminář se koná v pátek 20. 11. 2015 v 10:30 hod.
v seminární místnosti OTF ÚJF Řež**

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