

Abstract Submitted  
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**Low-energy antikaon nucleon and nucleus interaction studies<sup>1</sup>** JOHANN MARTON, Stefan Meyer Institute, Austrian Academy of Sciences, LEANNIS COLLABORATION — The antikaon (K<sup>-</sup>) interaction on nucleons and nuclei at low energy is neither simple nor well understood. Kaonic hydrogen is a very interesting case where the strong interaction of K<sup>-</sup> with the proton leads to an energy shift and a broadening of the 1s ground state. These two observables can be precisely studied with x-ray spectroscopy. The behavior at threshold is influenced strongly by the elusive Lambda(1405) resonance. In Europe the DAFNE electron-positron collider at Laboratori Nazionali di Frascati (LNF) provides an unique source of monoenergetic kaons emitted in the Phi meson decay. Recently the experiment SIDDHARTA on kaonic hydrogen and helium isotopes was successfully performed at LNF. A European network LEANNIS with an outreach to J-PARC in Japan was set up which is promoting the research on the antikaon interactions with nucleons and nuclei. This talk will give an overview of LEANNIS research tasks, the present status and an outlook to future perspectives.

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