Antiproton-nucleus interactions and related phenomena

June 17, 2019 - June 21, 2019

ECT* - Trento

Scientific goals

Goals

Past work and encountered problems will be reviewed in a critical way. The past works will cover experiment and theory, including the determination of antiproton nucleon potentials, the formation and study of antiprotonic atoms and nuclear structure studies with antiprotons.

How modern theories (QCD, ChEFT,...) can contribute and improve the state of the art in the near future will be discussed. In particular, the propagation of uncertainties on the antiproton-nucleon potentials to the prediction of nuclear-structure observables will be investigated.

The opportunities offered by ELENA and FAIR with antiprotons will be discussed, with a focus on nuclear structure, as well as the needed developments on the experimental and theoretical sides.