

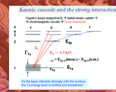
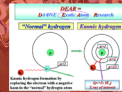
Laboratori Nazionali di Frascati

DEAR and SIDDHARTA

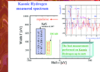
Kaonic atoms: a method to question the Nature about fundamental laws



The DEAR (DAΦNE Exotic Atom Research) and the upcoming SIDDHARTA (Silicon Drift Detector for Kaonic Atoms by TRISTAN Applications) experiments create exotic atoms that do not exist in nature. They are made of ordinary nucleus and a K⁻ meson which replaces an atomic electron. The radius of the kaonic hydrogen is about 250 femtometer smaller than the one of the ordinary hydrogen atom. By producing and studying such atoms DEAR/SIDDHARTA aim to investigate the low-energy strong interaction and fundamental symmetries of the nature, called chiral symmetries, helping to understand the origin of mass generation.



Dear on Daphne



By using the new DR Detector (DRD) provided by TRISTAN Applications, the experiment is optimized for sensitivity for the DRD for kaonic atoms.

