The Straw Tube Tracker of the PANDA experiment

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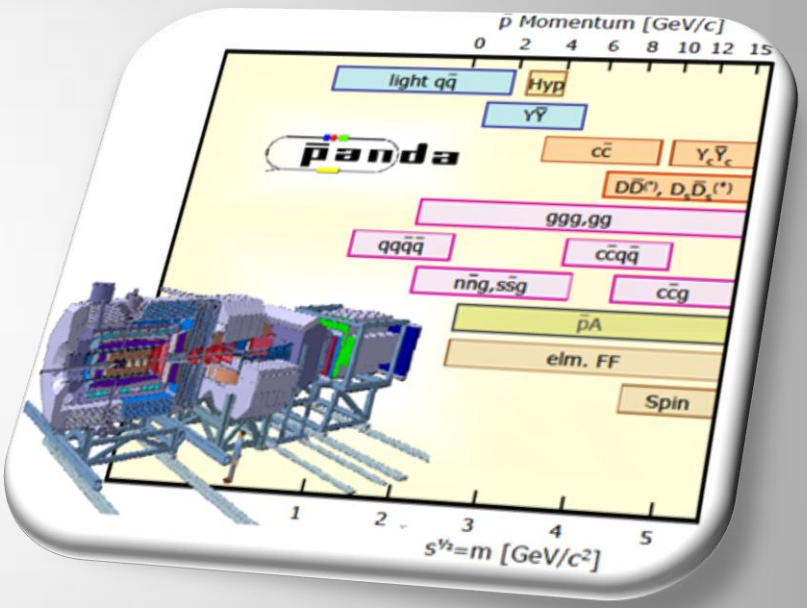
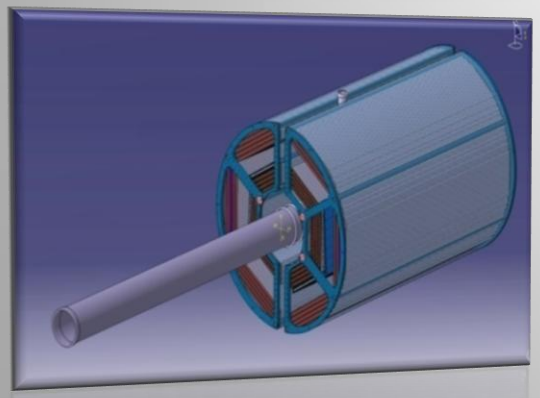
$\bar{P}$ANDA, antiProton ANnihilations at DArmstadt, is a next generation hadron physics detector planned to be operated at FAIR at Darmstadt, Germany.
It will use cooled antiproton beams in the momentum range 1.5 - 15 GeV/c, interacting with nucleons and nuclei.
Gluonic excitations, the physics of strange and charm quarks and nucleon structure studies will be performed with unprecedented accuracy.



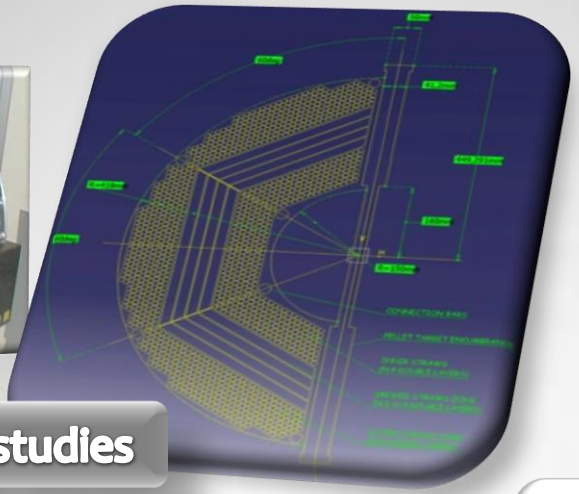


The Straw Tube Tracker (STT) is one of the possible options for tracking the charged particles inside the target spectrometer.
Consisting of drift tubes called *straws*, it will provide precise measurements of the track coordinates and will reach a momentum resolution on the percent level.

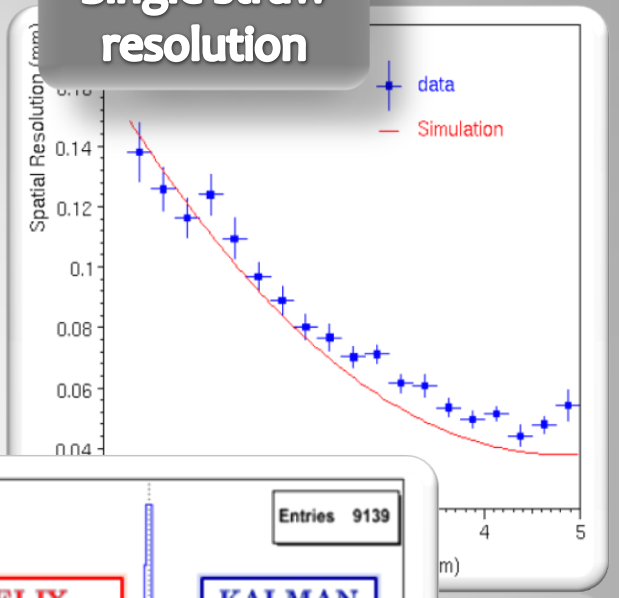
In this poster, the design of the Straw Tube Tracker (STT), together with some results from simulated and experimental studies, will be presented.

Mechanical tests

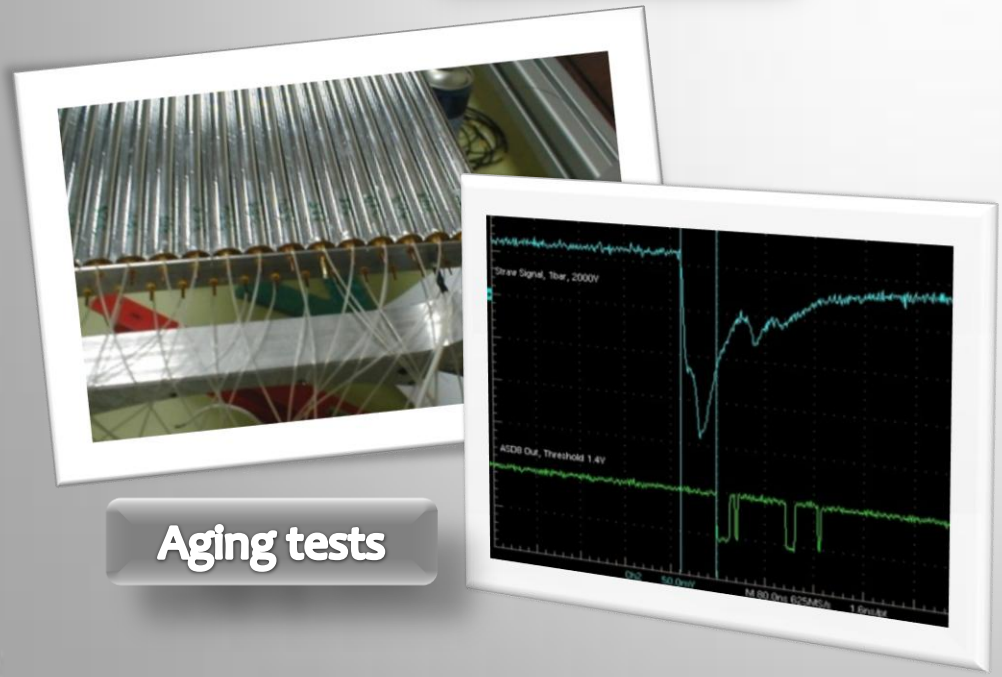
Design studies



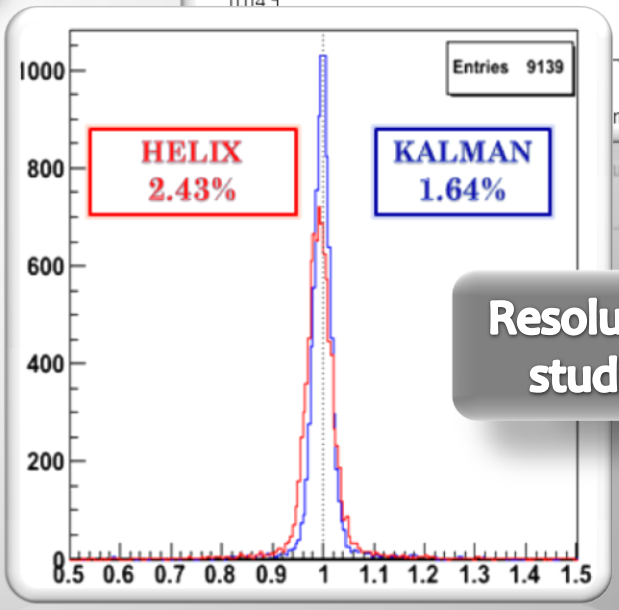
Single straw resolution



Aging tests



Resolution studies



http://www-panda.gsi.de/auto/_home.htm