Workshop for young scientists with research interests focused on physics at FAIR



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The Micro-Vertex-Detector for the PANDA experiment

Friday, 7 September 2012 11:00 (30 minutes)

PANDA is a fixed target experiment that will be carried out at the future FAIR facility. PANDA will provide an excellent tool to address fundamental questions in the field of the hadronic physics, with a physics program that extends from the investigation of QCD to the test of fundamental symmetries.

The Micro-Vertex-Detector (MVD) located in the innermost part of the central tracking system will be composed by hybrid pixel and double-side micro-strip silicon detectors. The MVD will play an important rule for the PANDA physics goals. The possibility to reconstruct the secondary vertices and the applicability of a precise D meson tagging is essential for the spectroscopy in the open charm sector and the charmonium mass region. To this aim the MVD features a spatial resolution better than 100 micrometers, a time resolution better than 10 ns, a limited material budget, and a high data rate capability in a triggerless environment. An overview of the Micro-Vertex-Detector related to the physics goals will be presented.

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