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Feasibility Studies for the Panda Experiment at Fair

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PANDA, the detector to study AntiProton ANnihilations at DArmstadt, will be installed at the future international Facility for Anti-proton and Ion Research (FAIR) in Darmstadt, Germany. The PANDA physics program is oriented towards the studies of the strong interaction and hadron structure performed with the highest quality beam of anti-protons [1]. In the preparation for PANDA experiments, large-scale simulation studies are being performed to validate the performance of all individual detector components and to advice on detector optimisation. The feasibility of the analysis strategies together with the calibration methods are being studied. Simulations were carried out using the framework called PandaROOT [2], based on ROOT and the Virtual Monte Carlo concept [3].

[1] [this http URL](#); Technical Progress Report (2005); Physics Performance Report (2009), [arXiv:0903.3905v1](#).

[2] [PANDA Collaboration] S. Spataro, J. Phys. 119, 032035 (2008).

[3] [this http URL](#)

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