

Charmed meson reconstruction with the PANDA detector

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The PANDA detector at the future GSI-FAIR facility will be a high precision experiment to study a variety of physics aspects of QCD at low energies [1]. Using a high precision antiproton beam with momenta up to $15\text{GeV}/c$ the study of the charmonium system, the search of exotic mesonic states and glueballs and investigation of in medium modification of charmed mesons will be accessible. These different aspects of the rich physics program require an excellent tracking system to detect short-lived particles, e.g. for the survey of the charmonium system above the $D\bar{D}$ threshold. To validate the physics performance of the planned PANDA detector two channels above the $D\bar{D}$ threshold in the charmonium system were selected as basic benchmarks of the performance of PANDA, in particular for the tracking of charged particles. The main background sources as well as the physics of these processes will be discussed.

[1] *Technical Progress Report*, PANDA collaboration, 2005

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