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Partial wave analysis for antiproton proton and $e^+ e^-$ annihilation processes

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In the year 2010 a subgroup of the PANDA Collaboration started with the first Partial Wave Analysis (PWA) activities. The main objective is to develop a powerful, user-friendly and highly modular PWA software package with the ability to provide amplitudes in different formalisms and to support analyses of all physics cases at PANDA and also of data from other hadron spectroscopy experiments.

After a brief overview of the present status of the software package the first PWA results obtained with the existing tools are presented. These analyses are mainly focused on important aspects of antiproton proton annihilation processes within the energy range accessible with the PANDA experiment. For this purpose Crystal Barrel LEAR data are currently under investigation in order to gain a deeper insight to the production mechanisms of vector mesons.

In addition analyses for the identification of resonances in radiative J/ψ and $\psi(2S)$ decays from BES III data are summarized.

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