
Contribution ID: **32** Type: **not specified**

# The psi(4040) at the future PANDA experiment

*Monday, 16 September 2013 15:00 (30 minutes)*

The PANDA experiment will be carried out at the future FAIR facility, it
will be a fixed target experiment, where antiproton beams, of unprecedented quality and intensity,
will be used to study interaction on protons and on nuclei.
PANDA will be an excellent tool to investigate final states which include short-lived particles.
Since different charmonium states can be accessed in direct formation with all the available quantum numbers in
antip-p annihilations, the charmonium spectroscopy is one of the main goal of the experiment.
The PANDA experiment represents a unique possibility to improve both statistics
and precision of existing data and to further explore the physics in the charm quark
sector. Indeed, an energy scan with high precision over the full charm spectrum is still
missing and will not be delivered by future experiments currently planned as upgrade of the
existing facilities.
A detailed description of the possibility to reconstruct the psi(4040)-> D+ *D*- at PANDA, together with the study of
the huge hadronic background suppression will be presented. The importance of the Micro-Vertex Detector for the reconstruction of D mesons decay will be showed.

**Primary author:** Ms ZOTTI, laura (University of Torino and INFN Torino)

**Co-authors:** Dr FILIPPI, Alessandra (INFN Torino); Prof. MARCELLO, Simonetta (University of Torino and INFN Torino); Dr SPATARO, Stefano (University of Torino and INFN Torino)

**Presenter:** Ms ZOTTI, laura (University of Torino and INFN Torino)

**Session Classification:** Talks and Discussions