Contribution ID: **120** Type: **Oral Presentation**

Studying Hadrons in Matter with PANDA

Thursday, 8 September 2011 10:10 (20 minutes)

Possible modifications of hadron properties in nuclear matter is subject of extensive theoretical and experimental studies. So far experimental approaches have been limited to the light and strange quark sector. With the PANDA detector at the HESR at FAIR it will be possible to extend this kind of studies to the charm sector in antiproton-nucleus collisions. If the momentum of the incident antiprotons is properly selected, then they can annihilate with protons in the nucleus of a target atom and form charmed hadrons. The formed hadrons have relatively small momenta with respect to the nucleus and therefore act as a probe in the nuclear medium. In this talk I will discuss predicted effects on charmonium states and D mesons. In particular I will report on a study of the possibility to measure the J/Psi-nucleon dissociation cross-section with PANDA. This cross-section is relevant for the interpretation of the J/Psi suppression observed in high energy heavy ion reactions, a possible signature of the existence of a quark-gluon plasma.

Primary author: Dr BUEHLER, Paul (Stefan Meyer Institute)

Presenter: Dr BUEHLER, Paul (Stefan Meyer Institute)

Session Classification: Hadron Physics I

Track Classification: Hadron Physics