## Studies of the eta meson decays with the WASA detector at COSY

## PAWEŁ MOSKAL<sup>(a)</sup>, ON BEHALF OF THE WASA-AT-COSY COLLABORATION

<sup>(a)</sup> Institute of Physics, Jagiellonian University, Cracow, Poland

One of the basic motivations of the WASA-at-COSY experiment [1] is the test of fundamental symmetries and the search for phenomena beyond the Standard Model in the hadronic and leptonic decays of ground-state neutral mesons. In this context particulary interesting is the  $\eta$  meson since it is an eigenstate of P and C symmetries and all its strong and electromagnetic decays are forbidden in the first order.

At the cooler synchrotron COSY eta mesons are produced in collisions of proton or deuteron beam with hydrogen or deuterium pellet target. So far a sample of about  $10^9$  eta mesons has been collected.

Selected results and perspectives for experimentation by means of WASA-at-COSY detector setup will be presented.

[1] H.-H. Adam et al., arXiv:nucl-ex/0411038

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E-mail:

p.moskal@uj.edu.pl