

Cherenkov Detector for WASA at COSY

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WASA (Wide Angle Shower Apparatus) is a large-acceptance detector for charged and neutral particles. It has been operated at the CELSIUS storage ring in Uppsala (Sweden) until June 2005 and has now been transferred to the Cooler Synchrotron (COSY) in Jülich. The installation of WASA at COSY will significantly enlarge the possibilities of the COSY facility. The physics program of WASA at COSY can be summarized as: symmetries and their violation, dynamical isospin breaking, decays of η and η' mesons. The WASA detector is currently being modified to cope with the higher beam energy available at COSY. Major modifications will take place in the forward part of the detector. To increase the identification power and the kinetic energy resolution a Cherenkov detector will be added. The proposed Cherenkov detector consists of 80 wedge shaped modules arranged symmetrically around the beam axis. Cherenkov light emitted by charged particle will be transferred to a photomultiplier tube by means of total internal reflection. The amplitude of the signal on the PMT will give information about the kinetic energy of the particle.

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