Prototype development for the backward endcap of the PANDA calorimeter (poster)

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The electromagnetic calorimeter will play a central role in the physics programme of the PANDA experiment. It will be a homogeneous calorimeter with more than 15000 PbWO\textsubscript{4} crystals. The backward endcap (524 crystals) will cover the region of large scattering angles. The scintillation light pulses will be detected by large area avalanche photodiodes (APDs). The APD signals will be amplified and shaped by customised ASIC circuits. In order to improve the light yield, the calorimeter will be operated at -25°C. A stable and uniform cooling is needed for a good linearity of the response and temperature monitoring system of thermal sensors is mandatory.

In order to build the backward endcap, tests of every single component are being performed in Mainz. A prototype with 16 crystals is under development for testing a complete and functional system before starting the construction of the full endcap. A test at the MAMI facility in Mainz with a gamma beam is foreseen for the next summer.

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