

Characteristics of magnetic shields for protection PMT in the hadron calorimeter

Friday, 14 October 2016 15:15 (30)

CERN is preparing the new experiment aimed at the detection of weakly interacting massive long-lived particles. The experiment was called SHiP. The instrumental and technological solutions successfully used in experimental setups ATLAS, LHCb and others will be used in experimental setup SHiP. One of these units is a hadrons calorimeter. It uses several thousands photomultiplier tubes (PMT) placed in protective magnetic shields because PMTs are located near strong permanent magnets. Taking into account that since the creation of the experimental setup LHCb has been passed more than 10 years and there are new manufacturing techniques of magnetic screens appeared, it seems appropriate to explore characteristics of shielding screens used in the LHCb, and proposed the recommendations to magnetic screens' designs for SHiP experiment. This is the subject of this work.

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Session Classification : Poster session - VI

Track Classification : Methods of experimental physics