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The PSD supermodule response study at proton beam energies 2-5 GeV at CERN test beams.

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The study of supermodule of the CBM Projectile Spectator Detector response at proton beam energy 2 – 5 GeV has been done at CERN T10 beam line at first half of September 2017. The PSD supermodule is an array of 3x3 modules and is assembled from 9 modules with transverse dimensions of 20x20 cm2 and longitudinal dimension of 5.6 interaction lengths. These modules are constructed at INR for the CBM experiment at FAIR. The module consists of 60 lead/scintillator layers with sampling ratio 4:1. Light from each scintillator plate is collected by WLS fiber. Scintillator light from 6 consecutive scintillator plates (section) is detected by 3x3 mm2 Hamamatsu MPPC. In total, 10 MPPCs are used to detect light from 10 longitudinal sections in each module. Preliminary results on the longitudinal profile of energy deposition, response linearity and energy resolution are presented in this talk.

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