THE SMALL MUON TELESCOPE FOR 5 GEV MUON FLUX REGISTRATION IN THE UNDERGROUND LABORATORY IN LODZ.

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The muon telescope is placed in the underground laboratory at the depth of 13 m. It is registering directions of muons which have minimum energy of 5 GeV at the ground level. These muons originate from interactions of cosmic rays (mainly protons) of energy from 20 to 5000 GeV in the Earth atmosphere. The variability of Solar activity leads to variation of cosmic ray proton flux entering the atmosphere and – in consequence – the variation of the flux of created muons.
The telescope has 4 layers of 20 Geiger–Müller tubes each. The hardware trigger selects clear 4-fold coincidence events, which allow reconstruction of the muon direction. The counting rate is about 5 Hz. The barimetric coefficient is equal to 0.0007/mb. Photo, description and results of 3 Forbush decreases registered during period September–November 2000 can be viewed on http://ipj.u.lodz.pl The detailed description, method of data reduction and first results are presented.