A NEW AIRBORNE DETECTOR FOR ATMOSPHERIC MUONS

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We will report on the design and development of a new experiment to measure the high-altitude cosmic-ray muon flux. The general goal of the experiment is to obtain better constraints on the low energy atmospheric neutrino flux. The detector should be flown by commercial aircrafts on routes crossing the equator to measure the dependence of the flux on the geomagnetic latitude. Muons with momenta $< 350\,\mathrm{MeV/c}$ will leave a track in three scintillator hodoscopes and will stop in a tank with 50 litre of liquid scintillator. This active absorber should be read out by wavelength-shifting fibres. The experimental results will be of relevance to the atmospheric neutrino anomaly.