

REGISTRATION OF SIGNALS COMING 500–1000 MICRO-SECONDS AFTER THE MAIN EAS FRONT.

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We have made an attempt to register in Lodz air shower array signals up to 1.2 milliseconds after the main EAS pulse. Special electronic arrangement has been set up for registrations of delayed signals from Geiger-Müller counters. Statistically significant excess of number of signals from muon detector has been found in 500–1000 microsecond period after the main front in about 30% EAS with muon content (muon energy ≥ 0.5 GeV) larger than $1.5E5$.

Photomultiplier signals from two 0.5 m^2 scintillation detectors separated by about 30 m were registered in the digital oscilloscope triggered by the EAS. We have found EAS events when 2–3 signals from each scintillator were observed simultaneously from both detectors in 500–1000 microsecond period after the EAS (when expected muon background is 0.05).

Lodz air shower array setup, results and up to date interpretation of the effect is presented.