# Ultra-high energy gamma-ray astronomy with the Baksan air shower array

V. S. Romanenko, V. B. Petkov, D. D. Dzhappuev, I. M. Dzaparova, E. A. Gorbacheva, I. S. Karpikov, M. M. Khadzhiev, N. F. Klimenko, A. U. Kudzhaev, A. N. Kurenya, A. S. Lidvansky, O. I. Mikhailova, G. I. Rubtsov, S. V. Troitsky, A. F. Yanin, Ya. V. Zhezher, K. V. Zhuravleva.

**Viktor Romanenko** (vsrom94@gmail.com)
Baksan Neutrino Observatory of Institute for Nuclear Research of Russian Academy of Sciences, Russia

The Baksan EAS array is located at the Baksan Neutrino Observatory near Mount Elbrus at altitude of 1700 m above the sea level. The array is equipped with a large-area (175 $m^2$) muon detector which makes it possible to separate the primary photons from hadrons. Using experimental data accumulated for 9.2 years, preliminary estimates of the flux upper limit is deduced for cosmic gamma-rays with energies above 300 TeV. Currently the project to increase the EAS array is almost completed. This includes the muon detector with a total area of 410 $m^2$. It should result in a considerable improvement in the gamma-hadron separation and expand the potentialities of gamma astronomy with energies above 10 TeV at the Baksan EAS array. The status and the prospects of the experiment are discussed, and some preliminary data is also presented.