

A NEW APPROACH TO THE DESIGN OF THE MULTICHANNEL ANALOG PROCESSORS

Yu. Kalinin, I. Mart`yanov, T. Sadykov, M. Tachimov, N. Zastrozhnova
Institute of Physics and Technology, Almaty, Kazakhstan

The principles and the design of the multichannel low noise stochastic processor for the calorimeter of the cosmic rays experiment with the "Halo" formations at the energies of $(10^{15} - 10^{17})$ eV are considered. A new feature of this system is the use of the Monte-Carlo method as the for means the measurement and digitization of pulse charges from the detectors. In this report there is discussed briefly the general architecture and the main building blocks of the stochastic processor. The main units of this processor are: the white-noise generator [1], the equal-probability amplitude pulses generator, the measuring channels, etc. There are represented the structural diagrammes of the stochastic processor and the single channel, the principal circuit diagrams of the different blocks and the timing diagrams of the voltages.

References

[1] Patent RK 4364, Bull. Inventions RK 1(1997)100.