

The system for parameters of working gas monitoring at MiniSPD stand

Tuesday, 10 November 2020 18:00 (15 minutes)

The paper presents a method and means for automated monitoring of the stability of the gas gain coefficient in the registration system based on gas-discharge proportional counters.

Experiments using straw-detectors require constant monitoring of the gas gain, which depends on a complex of variables. However, it is not always possible to control each parameter, hence the need to track the complex influence of all factors.

To solve this problem, a system was built that digitizes the complex influence of all factors and is designed to diagnose and debug the detector, as well as prevent distortion of experimental data.

The work of system is based on tracking the peak position from a calibrated source (Fe55) on the ADC spectrum obtained from the data acquisition system.

The position of this peak in the specified range of values is the main indicator of the correct operation of the system.

Using this system, useful information was obtained about the undesirable influence of some of external factors and complex troubleshooting were detected on the experimental stand.

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Session Classification: High energy physics

Track Classification: HEP II - detectors/electronics