

Development of Multiplexer circuit at CRIB

The CRIB facility had a limited number of cables to the counting room and feedthroughs of the detector chamber, which limited the number of channels that could be acquired from the detectors. In order to obtain more data, a multiplexer module called MUX made by Mesytec, which could convert 16 channels data into two energy outputs, two position outputs and one timing output, was introduced. However, when we took data from the alpha source for the test, we could not get the data correctly due to low-frequency noise. Therefore, a high-pass filter was introduced and combined with the MUX to get the data correctly. This circuit was used in the $^{26}\text{Si}(\alpha, p)^{29}\text{P}$ experiment in January 2022 at CRIB, and data from many channels was able to be obtained.

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