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## Signal Integrity Analysis of Sealed MRPC for Muongraphy

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As a novel imaging technology, Muongraphy has great potential in nuclear matter detection. MRPC has a significant advantage in the application of muongraphy. The signal quality is a crucial index to measure the performance of MRPC detector. This paper has analyzed the signal integrity of the sealed MRPC structure in detail with CST simulation. Including the reflection of high frequency signal in signal line, the reflection of signal through via hole, the cross talk of signals under multiplexing. The characteristics of the reflected signal are given. The via hole will bring a strong reflection for 2GHz signal. The saltation of signal line width will also affect signal integrity. The experiment result verify the simulation results to a certain extent. The optimization scheme is proposed ,which includes changing via hole's size, setting the discrete capacitor,ect.

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