

技术及应用

快时间分辨平行板雪崩计数器性能测试

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摘要 用²⁴¹Am α 源对裂变多参数实验中使用的平行板雪崩计数器(PPAC)进行了各探测单元时间分辨和位置分辨的系统测试。PPAC的工作气体为异丁烷, 流气气压为600 Pa, 阴极工作电压为-600 V。使用飞行时间法测得探测单元的时间分辨好于400 ps, 使用延迟线法得出位置分辨为6 mm。结果表明, PPAC的性能满足实验需求。

关键词 [平行板雪崩计数器](#) [时间分辨](#) [位置分辨](#)

分类号

Systematic Test on Fast Time Resolution Parallel Plate Avalanche Counter

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Abstract Systematic test on each detect unit of parallel plate avalanche counter (PPAC) used in the fission multi-parameter measurement was performed with a ²⁴¹Am α source to get the time resolution and position resolution. The detectors work at 600 Pa flowing isobutane and with -600 V on cathode. The time resolution was got by TOF method and the position resolution was got by delay line method. The time resolution of detect units is better than 400 ps, and the position resolution is 6 mm. The results show that the demand of measurement is fully covered.

Key words [parallel plate avalanche counter](#) [time resolution](#) [position resolution](#)

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