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PPAC characteristics for unstable nuclear beams of intermediate energy I SHOHEI OKUMURA — High-energy unstable nuclear beams produced by projectile fragmentation contain a variety of particles with a wide range of energy. Therefore, in elastic scattering experiments using unstable nuclear beams, the separation of inelastic processes is essential. The particles must be 'tagged' by their momentum. For momentum analysis, we insert a position detector at the focal plane of the beam line spectrometer. The parallel-plate avalanche counter (PPAC) is a detector used to measure the positions of ion beams in the beam line. The PPAC is highly reliable and versatile in sense that its signals have extremely fast rise and fall times ($\sim 10^{-9}$sec) and that it can be applied to a wide range of energetic ions. As it is often used in low-energy experiments, the detection characteristics are well known in those ranges. Our objective is to reveal the yet unknown PPAC characteristics for unstable nuclear beams of intermediate energy. Our main interests are the detection efficiency, time and position resolutions, and their beam rate dependency, which are being tested with 6 GeV ^{20}O beams at the National Institute of Radiological Sciences.

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