

Abstract Submitted  
for the HAW09 Meeting of  
The American Physical Society

**The New DAQ System in RIKEN RIBF** HIDETADA BABA, TAKASHI ICHIHARA, TETSUYA OHNISHI, SATOSHI TAKEUCHI, KOICHI YOSHIDA, YASUSHI WATANABE, Nishina Center, RIKEN, SHINSUKE OTA, SUSUMU SHIMOURA, CNS, University of Tokyo — The new DAQ system for RIKEN RI-Beam factory (RIBF) have been introduced. Several thousands of RI beams are produced by the fragmentation and fission reactions. The in-flight RI-beam separator named BigRIPS discriminates RI beams by using many beam profiling detectors placed at seven focal plains along the beam line of 77-meter-long. RI beams identified by BigRIPS are impinged on the reaction target. The reaction products are transported to spectrometers, and measured by particle and gamma detectors. The detector section of BigRIPS is used in all experiments, but the other detector sections vary according to the experimental condition. Since many experiments with a different setup are shifted one after another in several weeks, the DAQ system is required the flexibility and the scalability. Therefore, we developed the new DAQ system with the functions of hierarchical event build in online and parallel data readout from CAMAC/VME modules. It is remarkable that these functions are achieved by only using commodity computer and network equipments and standard CAMAC/VME modules with the flexibility and the scalability. In this paper, we will introduce the configuration and the performance of this new DAQ system.

Hidetada Baba  
Nishina Center, RIKEN

Date submitted: 01 Jul 2009

Electronic form version 1.4