Data integration for experiments with independent setups

J.Agramunt[1], A. Tolosa-Delgado[1]

[1] *IFIC, CSIC-Universitat de Valencia, 46071 Valencia, Spain*

Nowadays nuclear physics are developing more and more large and expensive detectors that travel from one facility to another. This fact implies that the data acquisition system (DAQ) of the detectors and the facilities aren't always directly compatible. In the BRIKEN[1] experiments, to investigate decay properties of very neutron-rich nuclei, specially β-delayed neutron decay, in fact, three independent systems are running, BigRIPS[2] for the fragment identification, AIDA[3] for the implant decay detections and BRIKEN for the neutron and gamma detection. We will present in this talk the method developed at IFIC and used in the BRIKEN campaign at Nishina center (RIKEN,Tokio) to synchronize, merge and pack the data, and GASIFIC[4] the data acquisition system employed with the BRIKEN detector. The new packing method developed at IFIC allows us to wrap all correlated data in a single event to improve and simplify the analysis of this kind of experiments

[1] J. L. Tain et al., Acta Phys. Pol. B **49**, 417 (2018).
[2]T. Kubo, Nucl. Instr. Meth. B **204**, 97 (2003).
[3] https://www2.ph.ed.ac.uk/ td/AIDA/
[4] J. Agramunt, et al., Nucl. Instrum. Methods Phys. Res., Sect. A **807**, 69 (2016).