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Characterizing of a new Mesytec MADC-32 in comparison with NIM standard ORTECMCA(Module# 927)[1] ARMEN GYURJINYAN, ROZA AVETISYAN, Nuclear Science Laboratory, University of Notre Dame, Notre Dame, IN 46556 / Alikhanyan National Laboratory, Yerevan, Armenia, WANPENG TAN, ANI APRAHAMIAN, Nuclear Science Laboratory, University of Notre Dame, Notre Dame, IN 46556 — We compare two different types of ADC modules with respect to resolution. In Gamma-Ray spectroscopy, some of the best ADCs used are the NIM ORTEC APEC-927 ADCs.This ADC has a maximum resolution of 16K and costs on the average of 10000$. And yields an energy resolution for 1.6 keV at 1 MeV. We have tested and characterized a much cheaper Mesytec MADC with 32 channels in comparison the ORTEC dual Aspec-927 module.152Eu calibration source was used to get data simultaneously from a 109% efficiency Ge detector.RadWare was used to analyze both spectra and look at the resolutions of the ADCs as a function of energy, as well as the linearity. We found very insignificant differences between the two types of ADCs enabling us to use much cheaperelectronics modules to get data of nearly equal quality.

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