

CONTROLS FOR CEBAF BEAM ENERGY DETERMINATION

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ARC is an equipment of CEBAF (at Jefferson Lab) to measure the absolute energy of the electron beam. The determination of the CEBAF beam energy with a resolution of 10^{-4} requires a very accurate measurement of two quantities: the total bending of the beam and the field integral along the deviation. The bending measurement is done with scanners and is also used for beam diagnostics. The control for the Magnetic Field Integral Measurement is a large application and needed specific routines for magnetic measurements. All the control software was written with EPICS. This paper describes the hardware choices and the two control software which have the same philosophy and the same architecture. The experiment runs since June 1998.