

Abstract Submitted  
for the APR15 Meeting of  
The American Physical Society

**Redetermining CEBAF's Absolute Energy** TONG SU, Kent State Univ - Kent, THE JLAB MARATHON COLLABORATION — With the upgrade of the Jefferson Lab accelerator (CEBAF) from 6 GeV max energy to 12 GeV, all the dipole magnets in the machine were refurbished. Most of them were switched from open c-shaped to closed h-shaped by adding extra iron. With these upgraded magnets, the energy calibration of the accelerator needed to be redetermined. We will show how an extra external dipole, which is run in series with those in the machine, helps us cross check the current in the magnets as well as precisely map out the integral field for any machine setting. Using knowledge of the relative performance of the dipoles as well as the bend angle into the Hall, has allowed us to already determine a 4th pass 7 GeV beam to better than 7 MeV. In the future, we will use g-2 spin precession as a second independent energy determination. This work is supported by Kent State University, NSF Grant PHY-1405814, and DOE Contract DE-AC05-06OR23177 (JLab).

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Date submitted: 09 Jan 2015

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