

ACCELERATOR SEMINAR

“Validation of nm-Stabilization of CLIC Quadrupoles with Beam Experiments”

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In order to preserve the ultra low emittance of CLIC beams from the damping rings to the interaction point, all quadrupoles of the main linac need to be stabilized mechanically to the nm level above 1 Hz. The present R & D program is looking for technical solutions using electromechanical sensors and piezoelectric actuators in a closed feedback loop for stabilization. Once the mechanical stability is demonstrated it will be difficult to demonstrate the stability of the magnetic field to the same level.

The talk presents results of measurements at CESR-TA and SLS as well as a proposal for beam measurements at JLab with the aim of using particle beams as sensor the stability of CLIC quadrupoles.

**Thursday, September 16, 2010
1:30 p.m. – 2:30 p.m.
CEBAF Center Auditorium**