

ACCELERATOR SEMINAR

“A High-Peak and High-Average Current, Low Emittance, Long Lifetime Electron Source for ERL Applications”

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This research is to develop a replacement for the standard photocathode/laser source with a phase controlled thermionic source that eliminates the electron back-bombardment and the poor quality beam associated with the normal use of thermionic sources in RF guns. The source would only emit electrons during the peak portion of the RF electric field. The source would be CW, filling every RF bucket in the gun section, and capable of high peak and average current, low emittance beam. As an example this technique is applied in generation of JLab's magnetized beam for ion beam electron cooling. Some preliminary proof of principle experiment results are presented.

**Thursday, April 2, 2015
11:00 a.m.
CEBAF Center, F113**

Coffee before seminar beginning at 10:45 a.m.