Tagger + Beamline Integration Issues

Mtg 6/11 Jlab

1. Spectrometer Magnet

* key question : maximum e^- energy

- current design: 1.5 T @ 12 GeV

not much room to grow

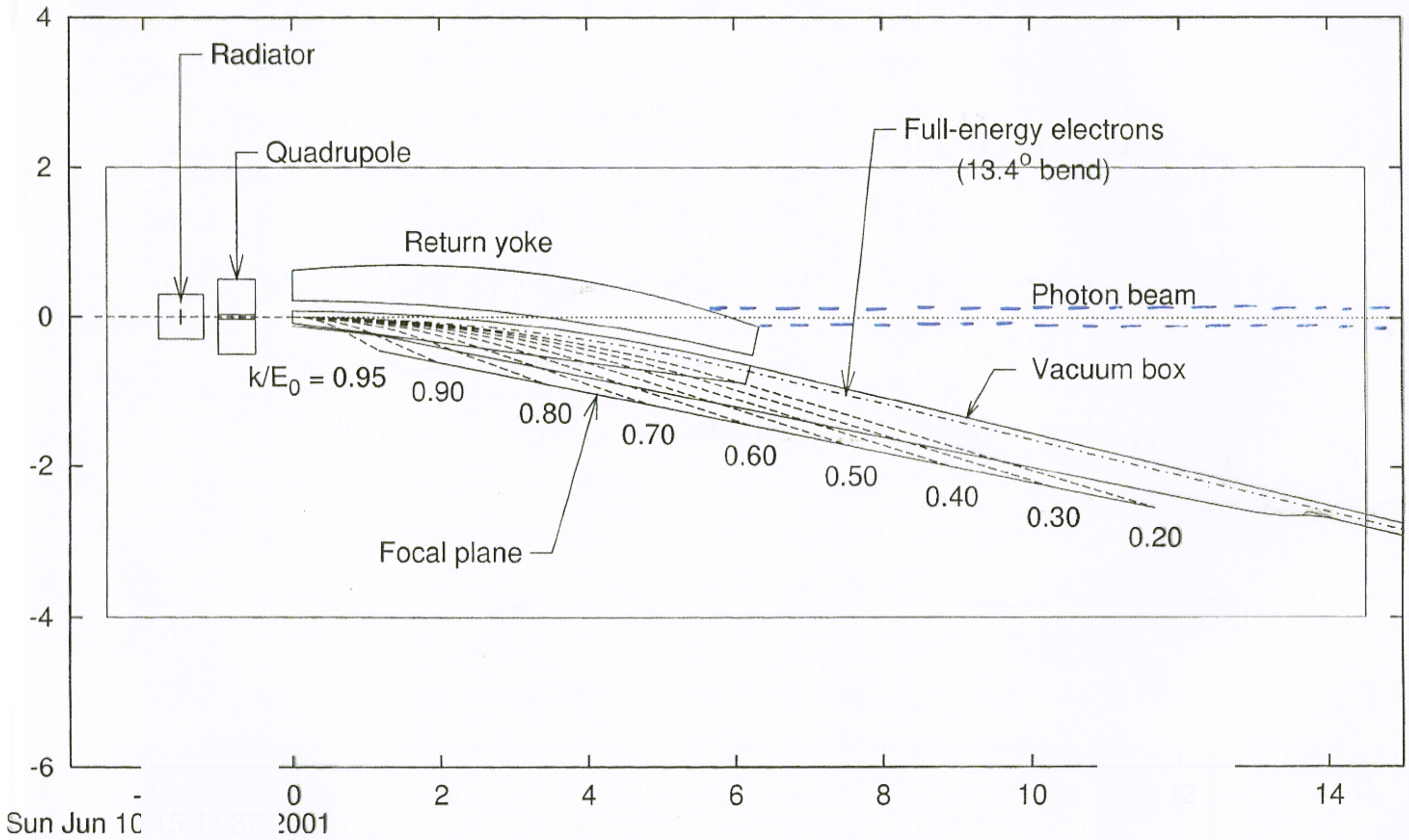
- cost differential: $\propto E^2$

* power, cooling demands comparable to Hall B tagger.

* changes since cdr v3 :

- vacuum box extended so that $\theta_{scatt} > 150°$ to focal plane from exit window

Tagger Building



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2. Beam line instrumentation

a. removable beam counter upstream of collimator

b. photon spot imaging (MWPC) device upstream of collimator after exit from vacuum

c. polarimeter (pair spectrometer with micro-tracking devices) just inside hall - needs real estate

d. does collimator need to be removable?

e. beyond this disussion...

* radiation monitoring devices

* active feed back system

* photon beam transport pipe

3. Interface to DAQ

a. some electronics mounted on base

· discriminator, threshold circuit
setup + calibration capability

b. some electronics in rack: local trigger logic, communication to counting house

- question: is pipeline depth sufficient to let tagger tdc run dead-timeless?

c. polarimeter and photon beam monitoring requires "min. bias" triggers constantly flowing at some pre-scaled level.