

Monday 20 May 1996

K. Reece  
KRC.

Minutes of Meeting: Radiation Safety Committee, sub-committee.

Date: Wednesday 1 May 1996

Present: A. Etkin, J. Geller, S. Musolino, D. Passarello, K. Reece, G. Smith, R. Thern.

Subject: BTA co-injection transformer.

With this meeting, the "BTA co-injection transformer sub-committee" will make recommendations to the full RSC and further discussions will be considered by the RSC as a whole.

A change to the electronics was proposed by G. Smith and J. Geller. This change assumes that the Booster extraction *always* occurs in  $\sim 1\mu\text{s}$  with a repetition period of no greater than  $\sim 7.5\text{Hz}$ . With these guidelines, the "peak detector/track and hold" circuit can be eliminated and directly feed the integrators ( $\sim$  charge sensitive amplifiers) which will be designed to have a discharge time constant of  $\sim 100\mu\text{s}$ . **This proposal was accepted by the sub-committee and will be part of the presentation to the full RSC.**

Although the first view of this system had hoped to allow the transformer to run asynchronously to the machine cycle, later discussions proposed locking a "system reset" to the AGS cycle (ref: AGS T0). [This idea was noted in sub-committee meeting minutes from 28 March 1996 - use the decoded AT0 from Siemens to feed both the Main Magnet timing AND this transformer] However, a more detailed consideration of the use of ANY decoded event found that the magnet cycles *could* be built by placing AT0 at *any* B(t) location in the cycle. Therefore, the only relevant event to reference the transformer reset to is one that *always* represents a fixed minimum time between it and "first injected beam in AGS". One possible event could be an "invert" event that is *always* generated by the internal main magnet timing (hardwired). **This should be discussed with I. Marneris and J. Sandberg.**

Also, the sub-committee was reminded of a proposal (ref: 28 March 1996 minutes) to "auto-attenuate" the LEPT beam for ATR beam requests. [Inhibit the charging circuit for one of the LEPT quadrupoles to obtain  $\sim x0.01$  attenuation of the Linac beam] This will be included in the system description proposal to the full RSC.

As mentioned above, this proposal for the BTA current transformer system will be presented to the full RSC for review. All RSC members should re-visit the 28 March meeting minutes (distributed, but in RSC file also) and these latest developments from the sub-committee.

**Attachments:**

1. Copy RSC meeting minutes 28 March 1996.
2. Memorandum Glenn to Reece, 30 April 1996, re: Co-injection interlock.
3. E-mail Carolan to Reece, 25 April 1996, re: Co-injection system questions.

cc: RSC w/o attachments.  
RSC file w/attachments.