

Date: December 21, 1993

Minutes of the AGS Radiation Safety Committee

Subject: Heavy Ion Experiments for '93.

Meeting Date: August 31, 1993

Present: D Beavis, H Brown, A Etkin, JW Glenn, A McGeary,  
S Musolino, E Njoku, K Reece, J Spinner, A Stevens,  
K Woodle, & SP Yamin.

Guests: R Frankel (for E Lessard), J Hill, P Ingrassia, &  
W McGahern.

Summary

Heavy Ion running in the A3, B1 and C5 lines were reviewed and approved.

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Meeting Minutes

C5 Line - Ex. 877

H Brown reviewed his memo on modifications to the Experimental area for this run (Attachment 1).

A new collimator will be in the beam for part of the run and stored in the area when the Participant Calorimeter is in place. The levels at the fence from full beam hitting has not been calculated but are not expected to exceed 20 mrem/hr as scaled from calculations for the B1 line. Brown will calculate for this location. W McGahern will control the location of these devices.

C5D11 has been removed. With an appropriate current ratio limit on D10, it should be acceptable to operate in either polarity. This will be checked with a fault study (C5HICK1).

B1 Line - Small Experiments

K Woodle reviewed the setup to do the small HI experiments in a small separate area in the upstream end of the B1 line (Attachment 2). They want  $10^5$  per pulse in a 2x3 mm spot or  $<5 \times 10^5$  /  $\text{cm}^2\text{-sec}$ .

The B1C1 collimator and an NMC will assure this limit is not exceeded (B1HICK1&2).

There will be no access to Ex. 866's area when these users are running, the full B1HI check list will be completed, and all interlocks operational.

Access to this area can be made by the users after "read and sign" training. Only HP or EAG will sweep and reset the area.

B1 Line - Ex 866

D Beavis reviewed his analysis of modifications to Ex. 866's area in the B1 line (Attachment 3).

Again they plan on  $10^5$  per pulse and will limit it by 2 NMC's (B1HICK1) and B1C1 being setup to limit the beam to  $10^7$  per pulse (B1HICK2).

A calorimeter will be in the beam. Four feet of heavy concrete will keep levels outside to  $\sim 1/2$  mrem/hr from beam hitting it. (This calculation, without shielding, was used to evaluate the C5 line.)

The spectrometer magnet is not to be in the beam and on. Beavis will prevent it from being moved into the beam (B1HICK3).

Small air gaps will be allowed in the beam line as the Access Control system is setup for Class II operation.

A3 Line - Ex 878

Beavis reviewed changes that have been made to the A3 secondary beam line for this run (Attachment 4). As the new dipoles for the A2 line have been removed, the beam will operate as last year.

Changes include: a smaller stop, but should be adequate for the job (A survey will confirm this. A3HICK1), and the fence on the east side is now a concrete wall.

A Lock and Tag will prevent access to the area through the roll up door (A3ICK2).

With negative beam there is no need for NMC's in the beam. A sub-committee will look at what peak fluxes are expected and what protection is needed for positive running.

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Check List Items:

- C5HICK1 - Surveys are to be done for both polarities of C5D10.
- B1HICK1 - 2 NMC's installed in beam.
- B1HICK2 - B1C1 set to limit beam to  $<10^7$  per pulse.
- B1HICK3 - Spectrometer magnet prevented from bending the beam.
- A3HICK1 - Survey confirms beam stop adequate.
- A3HICK2 - Roll up door Tagged and Locked.

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Attachments (file only):

- #1 - Brown to RSC, Jul 22, '93
- #2 - Woodle to Glenn, Aug 27, '93
- #3 - "Proposed Mods to B1", Beavis, Mar 23, '93
- #4 - Beavis to RSC, Aug 30, '93

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