Minutes of Meeting: Radiation Safety Committee

Date: Tuesday 22 October 1996


Subject: E917 in the B1 beamline.

A. Carroll presented the experimental requirements for E917 to operate in the B1 beamline using first 1 GeV/A Fe beam (No Fe beam operation of energy < 1 GeV/A, CK-B1-E917-01), followed by Au beam of energy 6 - 10.8 GeV/A. [E917 spokesman (Richard Seto) stated they will not request to operate with Au of energy < 6 GeV/A]

Both of the other B secondary beamline will be LOTO OFF for the duration of B1 operation with both Fe and Au beams, CK-B1-E917-02. The security system for B5 will be recertified but B2 security may not; both B2 power supplies must be LOTO.

B1 operated last year with 2, 4 and 10.8 GeV/A Au beam. Fault studies were conducted and the area properly classified and controlled. The beam intensity requested for E917 is the same as last year, $5 \times 10^5$ ions/pulse. The B1 beam intensity will be limited by setting an upstream collimator to allow $< 5 \times 10^7$ ions/pulse transmission assuming the AGS is capable of delivering $< 1 \times 10^9$ ions/pulse for both Fe and Au, CK-B1-E917-03. The lower limit of $5 \times 10^5$ ions/pulse will then be achieved by using dual NMC’s in the B1 beamline, CK-B1-E917-04.

The experimental area remains the same as last year (fully enclosed beam pipe, two interlocking chipmunks, shielding configuration unchanged, access procedures unchanged). The “Z-calorimeter” will be removed however (downstream of the target), and replaced by an iron beamstop at the same location, CK-B1-E917-05. The liaison engineer for B1 must verify that the adjacent cave/area shielding has not been modified from last years configuration, CK-B1-E917-06. Tolerance on the dipole current comparators will also be as last years Au run, $\pm 3\%$. This allows $\sim \pm 1.5''$ movement at the target and $\sim \pm 2.5''$ movement at the new beamstop. There is one trim dipole (B1D181) in the “large dipole string” that must be LOTO OFF for Fe beam operation, CK-B1-E917-07 (Fe only), (it can be used for Au beam running).
A question of the NMC set-up for Fe must be considered when first setting up Fe then Au beams, CK-B1-E917-08. Currents for B1Q3/4 and B1Q5/6 must be limited to 130% of normal operating current (e.g. setting trip limit and tag access to controls), CK-B1-E917-09 (Fe only). Also, the maximum current for both B1D1 and B1D2 must be limited for each ion and energy, CK-B1-E917-10.

Finally, since the collimator and NMC’s must be set-up for each ion and energy, the Check-off list be also be done for each ion and energy.

cc: RSC
    RSC file