

A.J. Stevens

AJS

Minutes of meeting: Radiation Safety Committee

Date: Friday, April 9, 1999

Present: L. Ahrens, A. Etkin, P. Ingrassia, E. Lessard, W. MacKay, S. Peggs, A. Stevens.

Subj: Planning for RHIC Commissioning

The primary purpose of this meeting was to plan a subsequent meeting to be held on Wednesday, April 21 to discuss radiation safety concerns related to the May – July commissioning run. The following topics and/or concerns should be addressed at the April 21 meeting.

(1) The plan for the run should be spelled out in terms of the beam type, intensity per bunch, bunch frequency, and energy.

(2) Assuming that the first part of commissioning in the rings involves single bunch injection until closed orbits are established, the committee would like to understand the mechanics of how N bunches are acquired from the AGS on demand, and what checks (perhaps in software?) are possible to ensure that only the desired number are injected. It is the committee's understanding that Mike Brennan should take part in addressing this concern.

(3) During the process of establishing closed orbits the committee would like to see some procedure in place by which the commissioners are instructed to monitor loss positions and take special action if more than 10 consecutive bunches are lost in the same location beneath an uncontrolled area. (All fencing will be in place prior to the commissioning run, and the region above the Lambertson magnets will also be fenced off. The vast majority of the uncontrolled areas are the arcs "proper.")

(4) The plan should be consistent with Operational Safety Limits previously established. These are: (1) No more than the equivalent of 2.85×10^{10} Au ions at 100 GeV/u should be in either ring during commissioning, (2) No more than the equivalent of 10^{10} Au ions at 10.4 GeV/u shall be lost under an uncontrolled area in an hour, and (3) No more than the equivalent of 1.53×10^{14} Au ions at 10.4 GeV/u shall be placed on the Transfer Line beam stop in a year.

Note that the committee's desire to see an action plan in the event 10 consecutive bunches are lost is a factor of 2 below the second OSL above for Au intensity of 5×10^8 per bunch.

(5) The committee would like to be "plugged into" the commissioning run in order to follow progress in understanding beam loss. Steve Peggs suggested that a suitable mechanism for RSC involvement would be for an RSC member to attend commissioning run meetings, which are scheduled to take place at 4 p.m. daily.

On another topic related to RHIC commissioning, Asher Etkin reported that sweeps of the major detectors, PHENIX and STAR, will take four people, two of whom will serve as “watchers,” verifying that no people enter during the sweep. The RSC members in attendance at this meeting are of the opinion that properly trained detector personnel can fill the watching positions during sweeps. Comments from other RSC members on this topic are welcome.

Distribution:

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