Review of Engineering Status
March 20, 1997

Following are brief minutes of the meeting held on March 20, 1997 to discuss the engineering status of BRAHMS. In attendance were D. Beavis, C. Pearson, A. Pendzick, D. Phillips, and F. Videbaek. It is planned to have periodic meetings on a monthly basis to review the engineering and design progress.

Magnets

Overall the magnet engineering and design is on schedule.

The first coil for **D1** will be inspected March 31, 1997. The drawings for the iron are being checked.

The coil design for **D3** is complete and in the checking process. The mechanical drawings for the magnet are 80% complete. Design needs the clamp thickness soon to complete the mechanical drawings.

D5 coil is expected to be completed this summer. Backlegs and field clamps are presently in the BNL shops being fabricated. BRAHMS should start planning on when/how to map this magnet.

D4 design awaits final choice by experiment on 24VIII72 or 18D72. The layout drawing requires updating of the 24VII72 and adding the RHIC pump station. In addition, it would be useful in knowing the residual activity of the coils and iron for the 18D72 in evaluating the choice. Choice of magnet is expected to be made by March 28.

D2 needs a specification to ensure that the magnet is constructed with suitable fixtures and meets the design needs of the experiment. A review procedure needs to be established to ensure that the magnet will not contain any large surprises.

Platforms

The design and engineering of the platforms will start after the magnet choices are complete. A preliminary layout for the mid-rapidity spectrometer has been placed on sgs0.hirg.bnl.gov.

A compilation of the design parameters is in progress. Tolerance on the platform elevations as a function of position was briefly discussed.

Infrastructure

The **power supply and pump room area** will be located in the existing service building which had previously been designated for the experimental counting house. A decision was made to place a mezzanine in the support building for the power supplies. The area on the floor will be used for the pump room for the magnet cooling water.

The **BRAHMS' gas systems** could be located in the power supply/ pump room. The experiment will review issues of the gas systems to determine if this is an acceptable location. This could reduce the requirement of building a gas house outside the shield wall.

The **counting houses** will be buildings of modular construction on the opposite side of the IR.

The area layout drawing needs to be updated to shows the proposed power supply/pump room, counting house location, cooling tower location, additional substation, and the possible tray and cable routes. A memo from D. Beavis and D. Phillps with the updated area layout should be sent to RHIC.

The layout of the **fast electronics hut** requires the resolution of the lower level of the shielding design including the access port for the experimental cables and the power supply cables. The experiment still prefers large openings over 4 inch PVC for routing the experimental cables. Fire protection issues for the adjacent service building and the RHIC utilities over the fast electronics hut need to be resolved.

The magnet **water system** is similar to one required for an experiment in the U line. The EP&S division may decide to design both systems and pass them by the AGS water group for engineering approval. This may decrease the engineering and design effort for the water systems and also reduce the loading on the AGS water group.

A **manpower loading estimate** for the AGS labor needs to be submitted to A. Pendzick for integration with the other additional manpower requests.