PHENIX Drift Chamber 1/10/97

- What is the manpower plan for the prototype FEE board production and testing?
  At Stony Brook we have commitments from Chuck Pancake and Jane Wu for 1/3 of their time. We hope to add grad students after the E877 crew graduates away.

- Are the resources for board production and testing included in the cost estimate?
  The numbers included are rough, but board testing has been included specifically as a budget item.

- What was learned from the prototype about the assembly procedure (transferring wire meshes to arc)? Are the stereo wires different? Any design changes?
  Design changes involve flex cables, HV board and feedthru seal. Wire transfer worked and is similar for X and UV sections.

- How many channels have been tested so far? What is the history of wire breakage? Have the HV and gas problems on the prototype been fully solved?
  1) No wires are known to be broken at this time. Many wires have lost electrical contact. Likely culprit is the kapton feeds. These will be replaced. 2) HV is not holding in most of the chamber and the problem appears to be internal to the chamber. Vlad has only 1 section of 12 wires working. This is similar to the results from the test beam. 3) All gas seal problems are solved.

- How will the software needs (on- and off-line) be met?
  Jeff needs help. Noone at SUNY identified at this time to make substantial effort. Baublis from PNPI and Steve Johnson from SUNYSB have made a start on the software.

- What is the schedule (and manpower) for designing and implementing the cooling scheme? How is integration of PC1 Cooling handled?
  Tom has made progress in the cooling design. Heat sink to cooling pipes. Location and thermal dissipation calc. has been done and looks achievable.

- Is there time to incorporate prototype test results into the design review & production schedule?
  Test results point to no flaw in design principle.

- Complete information on the gas system is supposed to be worked out in January. What is your schedule for this?
  Conceptual internal gas system scheme exists. We will initiate Tracking gas system design this month with PNPI & BNL people.

- When do you plan a DC safety review?

PHENIX Pad Chamber 1/10/97

- What is the time scale for resolving production cost and schedule problems? What is the time scale and resources for chamber redesign associated with the cost issue?
  More known after Jan 27 meeting at McGill.
- Should PC3 be split into 2 or 4 parts? When to decide?. How do we address the problems of potential increasing thickness of the PCs?
  Calculation shows no benefit to 4 piece split and a factor of 2 deflection benefit to 2 vs. 1 piece for PC2 and PC3. Present concept is no split, maintaining least material.
- What is the status of the cooling system design?
  Not yet started.
- Is the PC FEE fully specified? What is the present schedule for production and installation, can it be accelerated? Is it limited by manpower, prototyping, testing?
  We are completing a spec on PC Fee TGLD for a prototype submission. Spec done in 1-2 weeks.Spec on motherboard also near completion. Schedule is near minimum and is design and prototyping limited.
- How can the communication among the groups involved be improved?
- Who is responsible for system integration within PC and between PC and the other tracking detectors?
  ? McGill needs an engineer.
- How will the software needs (on- and off-line) be met?
  McGill student plus postdoc part time.
- Complete information on the gas system is supposed to be worked out in January. What is your schedule for this?
  Nikkinen is working on internal PC system. BNL & PNPI personel to work on Tracking gas system starting this month.
- When do you plan a PC safety review?

PHENIX Time Expansion Chamber 1/10/97

- What is the experience with the prototype on wire integrity?
  Wire problems solved. Window design change fixes cause of 2/750 wire lost last 12 months.

- Does the current pre-production prototype have any significant design changes from the intermediate prototype? Have these been tested?
  No significant design changes. Wire transfer and other assembly techniques are new.

- What is the schedule for PC2-TEC-PC3 cooling system design & review? Is there any impact on chamber mechanics?
  Cooling and cabling system design can begin this month. No impact on Chamber mechanics

- What is the status and schedule of design/review of FEE and its interfaces (timing, etc.)?
  Prelimiary Fee design rev Oct 96. Final rev after Fall sector test.

- When will there be a complete design for housing and servicing the FEMs, including cable plant?
  Cabling and cooling will both begin this month at BNL. Extra engineering or design resources will be requested.

- What is needed to read out through the real PHENIX chain? Will the full chain be tested spring 1997? Will the system be ready for the Spring 97 Sector Test?
  See Transparency

- How many channels have been tested? will be tested this spring? Is this large enough to satisfy the TAC?
  TEC-PS 160 channels stand alone, 32 on the chamber. Spring sector test will be 32 channel TEC-PS/FADC/DMU test.

- Who is responsible for system integration within TEC and between TEC/PC? Is there an assembly drawing for TEC/PC2-3?
  Jacques Negrin is responsible for system integration. There are PC2/TEC/PC3 assembly drawings

- Complete information on the gas system is supposed to be worked out in January. What is your schedule for this?
  Conceptual internal gas system for TEC exists. Gas system design will start soon with BNL and PNPI personel.

- When do you plan a TEC safety review?

PHENIX PC Schedule/Major Procurements

Final PC Mech Design Review	Apr-97
Prelim PC Fee Design Review	Mar-97
Purchase all PC Parts	Apr-97
Fab of Revised TGLD	Jan-97
Final PC Fee Design Rev	Nov-97
Preprod Fab of TGLD	Aug-97
PC3 Arm 1 Fab	Sep-97 to May-98
PC2 Arm 1 Fab	Jan-98 to Sep-98
PC1 Arm 1 Fab	Apr-98 to Nov-98
PC3 Arm 1 @BNL Ready for Installation	Jul-98
PC2 Arm 1 @BNL Ready for Installation	Nov-98
PC1 Arm 1 @BNL Ready for Installation	Jan-99
Readout Cards Ready for Install	Dec 97 to Nov 99
PC3 Arm 2 Fab	Sep-98 to May-99
PC2 Arm 2 Fab	Jan-99 to Aug-99
PC1 Arm 2 Fab	Apr-99 to Nov-99
PC3 Arm 2 @BNL Ready for Installation	Jul-99
PC2 Arm 2 @BNL Ready for Installation	Oct-99
PC1 Arm 2 @BNL Ready for Installation	Jan-00

PHENIX Sector Test Spring 97

Required Sector Test Components

TEC Preproduction Prototype

TEC FEM Prototype

TEC-PS Rev2

TEC-PS PCB Rev2

DCM-T

PHENIX Master Timing Module

ONCS 1.0 Software

DCM Readout Device

Commercial Serial Control Card (PC card)

Monitoring Software

PHENIX DC Schedule/Major Procurements

Begin ASD8 Procurement	**Jul-96**
Final DC Mech Design Rev	**Dec-96**
Begin DC Arc Arm1 Fab	**Dec-96**
Begin DC Modules Arm1 Fab	**Mar-97**
Final DC Fee Design Rev	**Jun-97**
Begin TMC Procurement	**Jun-97**
Begin ASD8/TMC PCB and FEM Procurement	**Jul-97**

PHENIX TEC Schedule/Major Procurments

Order Tooling 1st Assem. Line	Sep-96
Final Mech Design Rev	Feb-97
Order TEC Parts	Feb-97
Order Tooling 2nd Assem. Line	Feb-97
Final Fee Design Rev	Dec-97
Full Fee and FEM order	Dec-97