

# Project Progress Summary

11 September 1990

## Injector and Front End Test

- First cryomodule is in the tunnel.
- Four klystrons have been installed in the first HPA.
- Copper cavities (chopper 1 & 2, capture section) have been installed on the injector girder as injector reassembly continues.
- Electronics have been reinstalled in high-voltage cage for the gun. First try to run gun from control room this week.
- Helium transfer line end box for FET has been moved into place for welding.
- Lines for the Kinney pump in the W5 building have been welded; electrical wiring has been hooked up; test next week.

## WBS 1

- John Brawley did some seam welds on the elbows; the work turned out very well.
- The cryomodule was moved to the tunnel as scheduled on September 6.

## WBS 2

- The first two girders for the magnetic elements of the front end test were received from WBS 1 with the vacuum pump, beam tube, and BPM assembled and are being prepared for receipt of the magnetic elements.
- The first batch of quadrupoles (QJ's) required in the FET had their centers measured by the multipole test stand. The center measuring system was verified for repeatability and accuracy by reversing the magnets and by optical survey techniques.
- The injector service building low-conductivity water system was commissioned.
- The Survey and Alignment Group verified fiducials on the first cryomodule for the second time as a final check.

## WBS 3

### RF Controls:

- Received buffer board, CPU board, and midplane board from Tri-Circuits.
- The video board for the converter module has been received from Technicircuits.
- Started the design for the arc detector logic card.

### RF Power:

- The Ferrite Components circulator was modified to handle greater RF power by replacing the matching disk in the RF load with a matching circuit in the adjacent waveguide. A modified circulator was received and tested at CEBAF this week. The new unit operated with 5 kW RF power into a waveguide short circuit on the output without any problems. Isolation, return loss and insertion loss were all well within specifications. Will return circulators already received to Ferrite Components for modification.
- Gamma Microwave will not meet the HOM filter September delivery. They indicate that they will not be able to deliver until November due to their late receipt of special size waveguide extrusion. We are working through Procurement to improve this performance.
- Received four more Hipotronics high-voltage power supplies and moved them into the north linac.
- Expect shipment of two more HPA units from ETM on 13 September and two more units by the end of September.

## WBS 4

- No report received.

### WBS 5

- Made computer connection between CHL and CTF.
- Loaded all the automatic startup software on the CTF.

### WBS 6

- Hall C support structure RFP went out 7 September; dipole RFP expected out this week.

### WBS 7

- All subassemblies fabricated for the LN<sub>2</sub> system in the CHL. Installation in progress.
- Final leak check of 16-inch outer jacket<sup>2</sup> of CHL return transfer line to south linac.
- Supply transfer line to south linac loaded into sleeve. Expansion can then be installed to complete.
- Grating over about 50% of transfer line trench.
- Pressure started in 4-K system on 5 September.
- Started fabrication on NE end box.
- NW end box in tunnel NW supply transfer lines leak check complete.
- Started to weld 2-K circuit of NE quadrant supply transfer line.
- Welded leak in neck of 10,000-liter dewar. Lower leak test in progress.
- Electrical power connected to the K-15 Kinney pump in the W5 building and to the DB-127 compressor in CHL.
- Electrical cables for the cryogenic instrumentation and controls for the FET are being installed and terminated in the CAMAC racks.
- Software programming for the FET cryogenic and vacuum instrumentation has been initiated.

### WBS 8

#### Accelerator Enclosure:

- All structural steel for all the buildings has been erected. The contractor is working on the siding and roofing.
- The main access roads and 3/4 of the perimeter road are paved.
- Virginia Power is starting to install the pole line for the 40-MV substation.
- The tunnel up to the middle of the east arc is painted.

#### End Stations:

- The concrete roof for the underground portion of the counting house is complete.
- Personnel access tunnels to the three halls are complete.
- Backfilling is complete to the end of the beam switchyard.
- Excavation for the Hall A and Hall C beam dumps is halfway done.

#### EEL:

- The building and the surrounding area are substantially complete. The contractor is starting to work on punch list items.

### Linac Installation

- Received drawings for review on Instrument Air from WBS 8.0.
- Continuing installation on cable tray and 4 x 4 box duct in north linac.

### Accelerator Division Support Services

#### Machine Shop:

- Completed .040" and .080" aperture assemblies.
- Valve stand assembly for WBS 1 complete.
- FET tunnel model upgraded.

#### Stockroom:

- Successfully completed an internal DOE audit.

#### External Fabrication:

- HPA water hose fittings ordered.
- PR written for 10,000 linear feet of cable tray dividers.
- Drawings for chopper and aperture units, arc type BPM, and adjustable beam view assembly ready for production.