

PM 7.2

Project Progress Summary

23 October 1990

Semi-Annual Review

Project preparations for a November review are continuing, although the date has not been set yet.

Injector and Front End Test

- Beam viewers in the injector became operational in preparation for a 100-kV beamline test planned for this week.
- The injector girder beamline hookup to the quarter-cryomodule was completed. Attachment of the rest of the beamline will progress through this week.
- Software is now to the state that operation of the HPA RF system from the control room is possible.
- ODH classification 1 will be set on 7 November at 5 p.m. in the north linac tunnel and service building due to continuing progress in commissioning the CHL.
- ODH sensor installation was completed and the sensors calibrated and tested.

WBS 1

- Retest of the IA014/IA015 cavity pair shows essentially the same results as in the first vertical test. This pair had been installed in a liquid helium vessel and was removed. It must now be reprocessed. IA010/IA016 cavity pair has been turned over to cryo unit assembly. IA007/IA008 cavity pair is ready for turnover.
- An improved VAT gate valve is being evaluated.
- The second cryomodule's four cryo units have the beam pipe and primary/secondary circuits connected. Leak checking is in progress. The waveguides have been shipped from Calorstat and are expected by the end of this week.
- The quarter-cryomodule in the tunnel has been connected to the injector beam pipe. The downstream side connection is in progress.
- Work has begun on the next full cryomodule. This is the second one using production cavities.
- The niobium flange machining for the pair parts was awarded to Kosmos. Software to automatically locate and lock onto cavity resonances has been completed and commissioned. The automatic cavity testing data acquisition and analysis software is being debugged and optimized.
- Electron beam weld repair has been completed on six windows. Three have been completely cycled and the other three were to be done today. The titanium coating was to be done this morning and the RF testing this afternoon. Another six windows are ready for EBW.

WBS 2

FET:

- The drawing for the LCW piping in the injector and first portion of the north linac tunnel was signed and sent to the contractors for bid.
- Installation of the stands for elements unique to the FET is complete.

Magnets:

- The epoxy system for the dipole magnets was changed to a less brittle, more tough system at the advice of our own internal reviewers, the coil vendor, and an external reviewer at the Lawrence Berkeley Laboratory Light Source Project.

Stands:

- The contract for extrusion for the quadrupole girders was placed.

System Integration:

- Issues of the song sheets for tunnel, elements, and water system through the north linac were signed off for preliminary distribution and review through the Project Management distribution system.
- Interferences in the west arc were investigated and given to Project Management for resolution.

WBS 3

RF Controls:

- Seven RF crates and fourteen control modules have been delivered, and we are starting to load them.
- Module power supplies are being fabricated.
- Curt Hovater visited Herotek, the diode manufacturer. We expect no problems with our order for the precision amplitude detectors.
- I/O board tests complete; the board is functioning properly.
- Kelly Mahoney visited PST, Inc., the 2.5-W amplifier contractor, to discuss and resolve technical and schedule problems.

RF Power:

- ETM has just shipped two more HPAs. Curt Hovater made a factory visit. The production is going smoothly, and they look like they will meet our schedules.
- Gamma Microwave plans to ship HOM filters 23 October. Rick Campisi will visit Gamma next week to check on progress.
- We still have some minor problems with the waveguide circulators in that the isolation changes with input power. Bill Alton will come to CEBAF next week to make power tests and optimize a unit near full power.

WBS 4

- Built a 24-V power supply for vacuum valves and vacuum pumps.
- Pulled cables for the FET vacuum system.
- Finished check prints for AC power design in service buildings E3, E4, and E5.
- Completed WBS 7 cable pull at end of north linac service building.
- Terminated the 22 FET magnets.
- Finished acceptance testing of all trim system utility chassis now on hand.

WBS 5

Software:

- Superlan is now in debug and should soon be operational.
- Injector cryogenics crates were test run.
- RF control software is being tested on the emulator.
- Screens are being built for safety computer.
- HP to PLC link completed.
- Ingres and alarms computers installed in MCC.
- Old Ingres operable, new one under test.

- New profile software operable and under test.

Hardware:

- FET ODH system installed and tested.
- FET interlock logic installed on PLCs and being tested.
- First 20 FSD modules completed.
- 100-MHz BPM tunnel electronics boards stuffed and being installed in chassis.
- Injector beam viewer cameras and plungers operational.
- 1500-MHz BPM tunnel electronics boards being stuffed.
- RF interface chassis complete.

WBS 6

Procurements are complete for the initial Hall C data acquisition system. After assembly and testing, the system will be used next summer to test the first prototype HMS drift chamber.

WBS 7

- 30,000-gallon He dewar installed.
- Trying to start up CHL compressors for the acceptance test. The effort has been extended due to difficulties bringing the power and water systems on line.

WBS 8

Accelerator Enclosure

- Completed painting the tunnel.
- Continued interior work on the west arc and exit stair buildings. The exteriors and roofs of these buildings are essentially complete.
- The paving of remaining roads and parking lots is essentially complete.
- Energized the 40-MVA substation.
- Site grading and seeding are nearly complete outside linac areas.
- Completed final punch list inspection of the east arc service and exit stair buildings.

End Stations

- Completed saw-cutting beam tunnels A and C; cut wall sections have been removed from beam tunnel A.
- Started forming for the new relocated wall sections for beam tunnel A.
- Completed concrete floor slab in beam dumps A and C; forming the walls and roofs for these structures.
- Forming and installing reinforcing steel for the slab on grade in Hall C.
- Completed concrete work on the stairwell and elevator shaft in the counting house.

EEL Building

- Completed interior finish work.
- Completed punch list inspections.
- The subcontractor continued working on correcting punch list items.

Systems Integration and Installation

- Issued schematics for electrostatic precipitator/beam-pipe vacuum interlocks.
- Issued site drawings.

-MCC and injector reconnected to test lab 7.5-MVA transformer, to make power to these areas independent of interruptions associated with CHL acceptance testing.

Accelerator Division Support Services

Machine Shop:

- Completed twenty rush jobs for front end test.
- Completed beam transport chicane magnet stands.
- Completed modification of the 45-keV magnet.

External Fabrication

- Successful installation of the HOM filter support bracket on the quarter-cryomodule.
- Fabrication complete for the chicane magnet stand top plate.
- Received eight crates and sixteen modules from manufacturer.
- Checked six production drawings for quoting (WBS 4).
- Received camera holder brackets for WBS 5.
- Received differential pump station Z-axis adjuster.

CEBAF Science Series

The second presentation in the fall series will be held in CEBAF Center at 7 p.m. Thursday evening. Dr. Suzette Kimball, a coastal erosion specialist at the Virginia Institute of Marine Science, will engage attending middle and high school students on the topic "Where's the Beach?" Parents, the public, and CEBAF staff and contractors are also invited.