

PROJECT PROGRESS SUMMARY

February 19, 1992

FET Operations

- Beam was run at 100 keV with the goal of establishing a procedure for minimizing bunch length. Work will continue this week.
- Recirculator beam line is back under vacuum and functioning normally.
- Budget quotes for 499 MHz chopper for 3-beam injector are in.
- A second polarized gun was assembled and HV processed at University of Illinois in preparation for shipping to CEBAF.

SRF

Cavities:

- Tested IA107/IA108, the first pair for the fourth linac cryomodule; transferred to the cryounit group last Thursday.
- IA110/IA114 is the first pair of 12 that has not met gradient specs; the RF data and assembly traveller are being analyzed.
- Assembled IA116/IA126 last Wednesday and it passed leak check and RF tests.

Cryomodules:

- The fourth cryounit for cryomodule traveller #11 was moved to the cryomodule area Thursday as scheduled. Cryomodule traveller #11 will be completed by 28 February.
- Cryomodule #10 was pulled from the test cave. It was to be installed today in tunnel position IL04 (third north linac cryomodule).

HOM Loads:

- Brazed 4 of the 23 sets of the next series of HOM loads; the rest will be done this week. They will be ready for RF testing.
- The ceramics order has been awarded.
- Completed flange assembly evaluations from various vendors are still being analyzed.

RF Windows:

- The primary braze vendor is back on line again. Their first run looks fine.
- The secondary braze vendor (Ceradyne) brazed with no fixture and saw bowing of the ceramic. They are now making their own fixture to correct this problem.

Arcs

Magnets:

- The final sextupoles and extraction correctors were delivered.
- The first shipment of 80 arc correctors was received.
- A review was held of the septum prototype designs; approval was given to proceed with fabrication.
- Assembly of six arc girders is underway. The rate will soon reach 4/day.
- A tolerance problem with the north linac warm girder was corrected and the unit reinstalled.
- Production magnet measurement of QA, QB, and QC is underway. The rate is ~7/day.

DC Power:

- The lead installation for east arc dipoles is at 54 of 148.
- Cable pulls for E5 were completed.

Alignment:

- Stand and bolt locations were marked for the east spreader/recombiner. Some interferences were found with the relocated sprinkler heads.
- The second stack of dipoles in the east arc was aligned. Reproducibility tests have begun.

Diagnostics:

- A test of the vibration of a harp wire achieved $<1 \mu\text{m}$ with damping.
- Procedures are being reviewed and modified to prevent damage of BPMs in the future.

Linac

RF:

- Commissioning:
 - Draft commissioning plan is complete; we are working on TOSP for operation.
- Systems Checkout:
 - Zone NL02 turned over for commissioning (with punch list).
 - Started power testing in zone NL03, and DC and low level tests in zone NL04.
- RF Power:
 - Received three more klystrons.
- RF Controls:
 - Calibrated modules for north linac checkout.
 - Work continuing on RF equations.
 - Version 19 software compiled and runs on the test stand, but quite a bit more debugging is required before it's ready to run the cold cavity.
- RF Separator:
 - Completed design for vacuum-tight assembly. Work on coupling loops continues.

Ops Electronics:

- Safety:
 - FET controlled-area radiation monitor neutron probes replaced with new models received from manufacturer. The remaining neutron monitors for the machine are being ordered.
- Diagnostics:
 - All viewer and harp documentation for the machine is complete and signed off.
- Controls:
 - Remaining fiber equipment for accelerator has been ordered.

Cryogenics:

- The remaining end station refrigerator (ESR) equipment was moved on 11 February.
- In process of connecting temporary power to the ESR for welding heat, lights, and overhead door.
- The return transfer line expansion can was set in the CHL for the south linac.
- Topographical map for the ESR transfer line is complete. Final station readings are scheduled to be complete next week. Drilling for the piers and pouring scheduled to start next week. Forms are being constructed for the pouring operation.
- The CTF 2800 refrigerator is operational completely on the computer. Capacity control has also been incorporated in the control logic.
- CVI is on site as of Tuesday, 11 February, and is progressing on the "Hit List." It is too soon to predict how much they will complete prior to the start of cooldown.

Software:

- Initial testing of the STAR system is proceeding. 5-10 Hz in the injector was achieved. In a separate test, 15000 signals were shipped over the system.

Physics

- Held final design review of the Hall A carriage last Thursday/Friday. Overall the consultants endorsed the concept and had excellent operational suggestions.

Civil Construction

End Stations:

- Started erecting service building #1 structural steel.
- Placed the slab on grade for the cooling tower.
- Preparing to place the concrete pad and retaining wall for the emergency equipment pad.
- Preparing to place the slab on grade for beam dump cooling building C.
- Continued installing sprinkler system piping, electrical conduits, and lights in all tunnel areas, and started the same in the halls.

Miscellaneous Projects:

- Completed the testing of the relocated sprinkler lines and the new LCW and instrument air lines in the accelerator tunnel.

Safety and Health Physics

- Two Assigned Radiation Monitor classes have been held.
- First quarter 1992 pre-operational well water samples have been taken.
- All boundary radiation monitors have new neutron detectors installed and have been recalibrated.

Support Services

Stockroom:

- Withdrawal activity for the week: \$25,662.
- Withdrawal activity for the month: \$76,345.
- Implemented new withdrawal form for walk-in customers.

Machine Shop:

- Fabricating four double scale leveling rod wall brackets for WBS 2.
- Fabricated two lapping fixtures for WBS 1.
- Fabricating two 1.0 and 1.5 meter scale bar adapters for WBS 2.

Fabrication Planning:

- Ordered 60 LCW fittings for WBS 2.
- Ordered modification of 15 stainless steel shafts for WBS 5 beam diagnostic device.

CEBAF Open House, 21 March

- CEBAF needs volunteers for the first public CEBAF Open House, Saturday 21 March 1992, 9 a.m. - 4 p.m., rain or shine. Tours of the EEL, the test lab, and the end stations are planned, as are continuous presentations and hands-on science activities. Volunteers are needed for all activities. Please call Tom Hassler at x7601 and volunteer.

Science Series

- The next CEBAF Science Series presentation, "From Acne to Suntans: Dermatology for the Teenager," will be held in the auditorium at 7 p.m. on Thursday, 20 February. The Science Series targets kids in grades 6 to 12, but everybody is welcome.