To: **Hall A Cryogenic Target Controls Group**
From: **Kathy McCormick**
Phone: 7340

Date: **March 11, 1997**

Re: **Minutes of March 7 Meeting**

Testing and Problems

- The Helium cell was tested. The new method of soldering the cell worked well, because at 520 psi the cell itself busted and not the solder joint. Will test one more time with the existing block and improved depth. After that, will make a new cell block incorporate all the improvements derived from the tests.
- Several upstream windows were machined from the 6000 series of Al. One busted at 45 psi, one was tested to 75 psi and didn't bust , and the third was damaged before testing. Soldering the upstream window on is now more reliable, so it has to be decided if the windows will be soldered or if more machining will be tried. (Note added by J. P.: we decided to machine the window from outside with 7075 Al.)
- There is a ball joint at the top of the lifter elevators. They need to be locked into place once the elevator is adjusted into the desired position. The commercial ball joints we received do not have locking mechanism. We will have to add on the locking mechanism.

Riad

- Gave a presentation on the Test Lab cold test. In summary, the CERNOX are within 8 mK (at 4 K) absolute at the LHe temperature using the pressure measured at the time. Also, the Allen Bradley and diodes were compared to the CERNOX and found to be in good agreement up to 80 K. Riad has many plots if you need more specific numbers.

Kathy

- Lifter
  - The lifter control box has been loaned to Hall C so they can use it in their target surveying. It should be back in the EEL by the 17th if all goes well. The manual control button sequence works and is being used in Hall C while testing.
  - Mark has taken the third lifter elevator from Rm 122 and mounted it with the others. A RS232 cable will have to be run between= Rm 122 (where the VME crate is) and the technician area.
- To Still Do
  - Modify the sequencer to update the lifter status and display this on the GUI.
  - Make sure that all of the targets are accounted for in the software, i.e. How many dummys are there vs Hall C? Where are they located on the target ladder? Is there a solid target on the end of the cryotarget ladder?
  - Submit the mark II limit switch mount to the shop.
  - Order more OPTO22 input switches.
- DAC
  Mike Johnson found an error in his DAC device support. He fixed it so the range of the DAC is now 0 to 10 Volts.

Fraser

- Will concentrate on software (GUI and database) to get the Hall A system configured properly.
- Will start top down tests of the parts of the control system that are now in place.
  - high power heaters
  - pressure transducers
  - temperature

Lars

- Working on a TCL gas panel GUI for Hall A.