Status and Plans for the Anode Electronics

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Endcap Muon Meeting, Fermilab 12/1/00

1. Preamp-Discriminator ASIC Production
   (a) Chip is ready for production.
   (b) Took 2 months to get a quote from AMI (foundry).
   (c) Took 1 week to get a quote from MOSIS.
      i. MOSIS quote was 30% cheaper than AMI.
      ii. With MOSIS can use standard packaging company.
   (d) Will submit order for $\approx$ 2500 chips to MOSIS next week. Should have normal 8-12 week delivery schedule.
   (e) Will test all chips before sending to board manufacturer.
   (f) Will place order for remaining chips in April, 2001 after we know the yield from the first order.
2. Preamp Board Production
   (a) Design finished and board ready for production.
   (b) All components ordered.
   (c) Met with board manufacturers yesterday. Company is ACC Electronix. Have visited their plant. They seem very qualified to produce the boards.
   (d) Submit order for all boards next week.
      i. 2500 by April, 2001.
      ii. 5000 by August, 2001.

iii. 2500 by November, 2001.

(e) Fully-populated boards will be tested at the manufacturer before being shipped to us.

3. Delay Chip Production

(a) Added test input signal capability for ALCT testing.

(b) Made preproduction submission to MOSIS in Nov. 2000. Chips should be back in Feb. 2001.

(c) Have quote from MOSIS for full production. Again, cost is 30% less than AMI.

(d) Submit full order to MOSIS in Mar. 2001.

(e) Will test all chips before sending them to UCLA.

4. Signal Cable Production

(a) Have 2700 feet of cable in hand. Enough for $\approx$ 20 chambers.

(b) Ordered 35,000 feet (2/3 of total required) in Nov. 2000. Has a 12-16 week delivery schedule.

(c) We need to:

i. Get exact cable lengths.

ii. Produce drawings of all cables and harnesses.

iii. Choose labeling scheme.

iv. Choose production company and testing procedure.

v. Put cabling into FAST site procedures.

5. Burn-in Test Results

(a) Put 99 boards under power in oven at 85° C ($\approx$ 8 times the failure rate as for 25° C).

(b) No failures after one week. Temperature increased to 95° C.

(c) Will test all boards once a week for 3 months.

(d) Have to decide how to incorporate this into our final testing procedures.