

RICH Detector Status

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FNAL

Electronics

- Testing Finished
 - 94 (of 100) boards were working out of the box
 - 3 were fixed
 - 3 more to be fixed (next week?)
- Readout (VME) is implemented
 - Minor details are yet to be worked out with 14th floor people

Electronics (cont.)

- Low Voltage Power is re-done
 - Average current per front-end board is 330 mA from 5V (1.7 W)
 - Total power needed ~150 W. Intend to provide it with three supplies
- Expected running mode (tested to work)
 - Three VME controllers, each reading out 30 front-end boards

Calibration LED's

- LED driver boards were modified
 - Current driven
 - Sharp cutoff of current left charge on the LED, hence a long tail
 - A resistor + inductor in parallel with LED reduced the tail by a factor of 4
 - SPICE simulation confirmed observations
- A hand-made circuit to drive 4 LED chains is almost complete

Photomultiplier Tubes

- New HV supplies (from Indiana) are in the hall
 - Spec's are 3 kV, 200 mA
- HV is on over the weekend
 - Hope to fry all the PMT's which leaked
 - Save electronics during debugging
 - Total power delivered is 850 W
- Column 14 trips the supply

Photomultiplier Tubes (cont.)

- Earl and Sasha identified 58 problems in 2001
 - Two of the problems (dead PMT's) were confirmed
 - Next week we'll identify all existing problems and start fixing them. Plan to finish by June 1
- Spare tubes found:
 - 64 FEU's and 15 Hamamatus
 - Need 2240 FEU's and 608 Hamamatus