

# Update on TPC Crate Tests and PMT Readout Studies

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# **FEM/ADC inventory for final two crates**

<b>Boards</b>		<b>Notes</b>	<b>At BNL</b>	<b>Extra Option 2</b>	<b>DMA Option 2</b>
1	FEM93	Good	FEM001	FEM117	FEM107
2	FEM119	Good	FEM002	FEM118	
3	FEM142	Good	FEM003	FEM120	
4	FEM144	Good	FEM004		
5	FEM147	Good	FEM005		
6	FEM79	Wrong SN	FEM006		
7	FEM65	Repaired	FEM007		
9	FEM68	Repaired	FEM008		
9	FEM70	Repaired	FEM009		
10	FEM75	Repaired	FEM010		
11	FEM76	Repaired	FEM011		
12	FEM81	Repaired	FEM012		
13	FEM82	Repaired			
14	FEM83	Repaired			
15	FEM86	Repaired			
16	FEM88	Repaired			
17	FEM122	Repaired			
18	FEM129	Repaired			
19	FEM134	Repaired			
20	FEM137	Repaired			
21	FEM140	Repaired			
22	FEM143	Repaired			
23	FEM145	Repaired			
24	FEM146	Repaired			
25	FEM66	"FEM Currently Broken"?			
26	FEM19	DMA			
27	FEM33	DMA			
28	FEM56	DMA			
29	FEM63	DMA			
30	FEM94	DMA			

# PMT readout studies: Using ADC data

- Finished debugging/rebuilding code
- Recreated all ADC related histograms from Georgia's and Leslie's PMT readout studies
- In the process of formally writing up the results
- Expanded results to include:
  - Cosmic data
  - Higher statistics
  - More accurate plots
  - Event-by-event determination of baseline from first three samples of each readout (Pre-pulse data)
  - Pulse integral now taken across entire pulse – algorithm starts at the max sample and works left and right until it finds two samples that cross baseline. Integral taken between those two bins
  - Properly synchronized time independent plots that consider multiple pulse channels and eliminate all noise
  - Plots with Connor's averaging technique