

# HCAL DOC shift: July 28 - August 4

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# Outline

- Time period:
  - Full shift runs from Mon., July 28 - Mon., August 11
  - This report covers Mon., July 28 - Mon., August 4
  - MWGR from Wed., July 30 - Fri., August 1
- Issues affecting MWGR:
  - Flaky CAEN adaptor on ttc-hcal
  - Lights on for TOTEM
  - S-link errors for DCC 723 (HF)
  - SLB idle in crate 10
- Issues not affecting MWGR:
  - Investigation of CCM for HFM08
  - Work on new laser

# Lights on for TOTEM: Wed. morning

- e-logs: 820730, 820859
- Symptoms:
  - Usual effects on HF data quality when lights are on
- Solution:
  - This intervention will continue for O(weeks)!
  - We have called TOTEM and asked them to notify us and turn off lights when possible

# Flakey CAEN adaptor on ttc-hcal: Wed. night

- e-logs: 820848, 820858
- Symptoms:
  - HCAL fails to configure multiple times in global.
  - Chainsaw reads: Applications ttc::TTCciControl:4 configuration timed out
  - Handsaw logs read: ERROR  
TTCXDAQBase::actionPerformed for event type  
'ItemRetrieveEvent', item 'StrobeCounter'  
failed: Caught exception:  
BusAdapterException 'Could not read from CAEN  
BusAdapter'
- Solution (temporary): reboot ttc-hcal
- Solution (long-term): under investigation

# SLINKs errors for DCC 723 (HF): Wed. night

- e-logs: 820865, 820839
- Symptoms:
  - HCAL fails to configure
  - cDAQ errors read: Failed to prepare SLINKs for 723
  - Seating for SLINK cable is OK on both DCC and FRL
- Solution (temporary): remove FED 723 from global run
- Solution (long-term): Not obvious. Under investigation by cDAQ.
  - cDAQ expert is on vacation.
  - FED 723 will be out of global for O(weeks)!

# SLB idle in Crate 10: Fri. morning

- e-logs: 821232, 821244, 821365
- Symptoms:
  - RCT complains of BC0 and phase errors, all from HCAL crate 10
  - No SLB errors in MonVis, but all SLBs from crate 10 are idle
- Solution (?):
  - Dick observes that RJ-45 cable from the HCAL Master TTCf was not well plugged into crate 10 TTCf. Reseated.
  - Waiting to hear if this solves the problem.

# Investigation of CCM for HFM08: Wed. morning

- e-log: **820724**
- Symptoms:
  - ADCs in current HFM08 CCM do not work
  - After replacing the CCM, HFM08 won't configure
- Solution:
  - Put original CCM (bad ADCs) back into HFM08
  - Further investigation required

# Work on new laser: Wed.

- e-log: 820902
- German refilled laser with premix gas  
(output 0.5 mJ/pulse  $\rightarrow$   $\sim$  7 mJ/pulse)
- Updated PCI driver and laser software to fix bug with internal triggers
- Fixed swap of PMT and RADDAM fibers in HFM
- Now: no light arriving on HFRADDAM fiber on the horizontal near side of HFM
  - Need to open splitter box to understand
  - Other fibers OK



# Conclusion

- Generally pretty smooth
  - HCAL included in global for **more runs** than any other subsystem (other than HLT and L1, of course)
- HCAL interrupted the global run twice this week:
  - Failed to configure due to CAEN adaptor on `ttc-hcal`
  - SLINK errors on FED 723
- HCAL affected RCT once this week:
  - Possibly due to poorly seated cable on crate 10
- Two long-term issues **O(weeks)** to consider:
  - TOTEM work means lights sometimes are on for HF
  - cDAQ investigation means FED 723 excluded from global