**Chicago 3.4.6 Detector Systems Consolidation & Refurbishment**

So far during the Year-End Technical Stop (YETS), the CIS techs have helped repair three modules. In LBA58, they checked and crimped Harting pins for high voltage input; in EBC58, they joined cut digitizer sense wires; and in EBA40, they replaced a digitizer to resolve previous data corruption errors. In addition, the techs have helped identify cooling leaks in ~6 modules, stabilizing the length of the cooling cycle from 200 minutes to over 1000 minutes. The modules in question will be examined more closely and the leaks will be plugged during the remainder of YETS. More modules with suspected electronic issues will be accessed and repaired in the coming months.

Additionally, the techs have taken shifts at the test beam facility for characterizing performance the Phase-II upgrade technologies under beam conditions. They have also taken shifts in the ATLAS Control Room where they are responsible for monitoring TileCal and Forward detectors during data taking.

**Chicago 3.4.7 Front End Maintenance**

**Chicago 3.4.8 Calibration Systems and Testing Facility**

The CIS techs have continued monthly validation of CIS runs to calculate the CIS constant for each TileCal channel. They verified the stability of the constant over time, checked the quality of the calibration runs, and updated the online database for future data taking. Since the first part of Run 3 data taking has finished, they have reprocessed the CIS constants over the full range of data taking to ensure their accuracy. These constants will be used upstream by other calibration systems to reprocess their database conditions and ultimately for processing TileCal data for ATLAS.

In addition to working on CIS calibrations, the techs have also worked on the analysis of PMT scans for the L1Calo system. These results have been used to catalogue and address problematic PMTs comparing results from trigger and hardware systems. They have also moved Tile trigger monitoring systems into the data quality monitoring display in the ATLAS control room so that trigger rate problems can be actively monitored by shifters.