Recent Calibration Activity

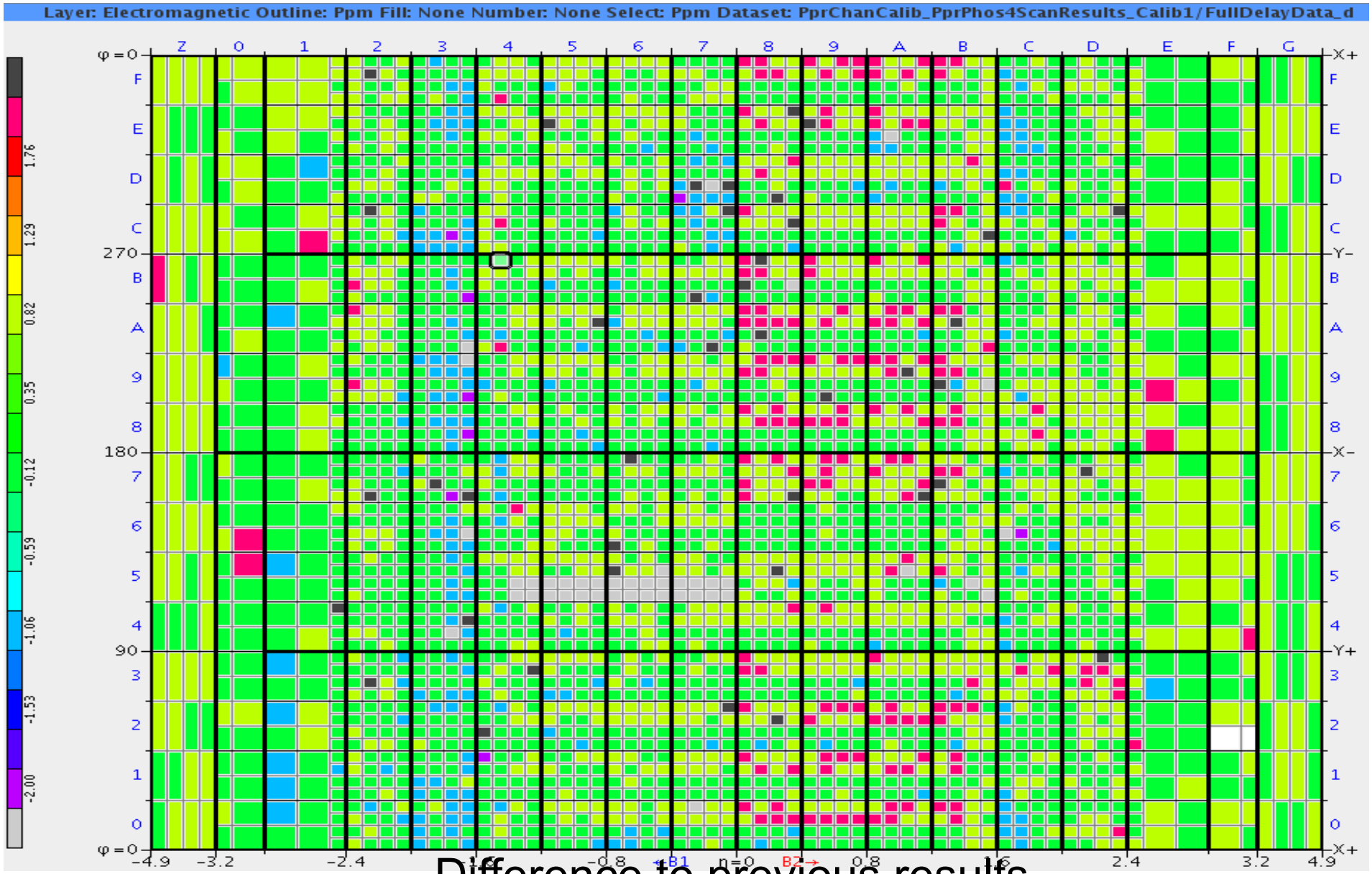
Murrough Landon
7 February 2011

- PHOS4 scans
- Energy scans

PHOS4 Scans

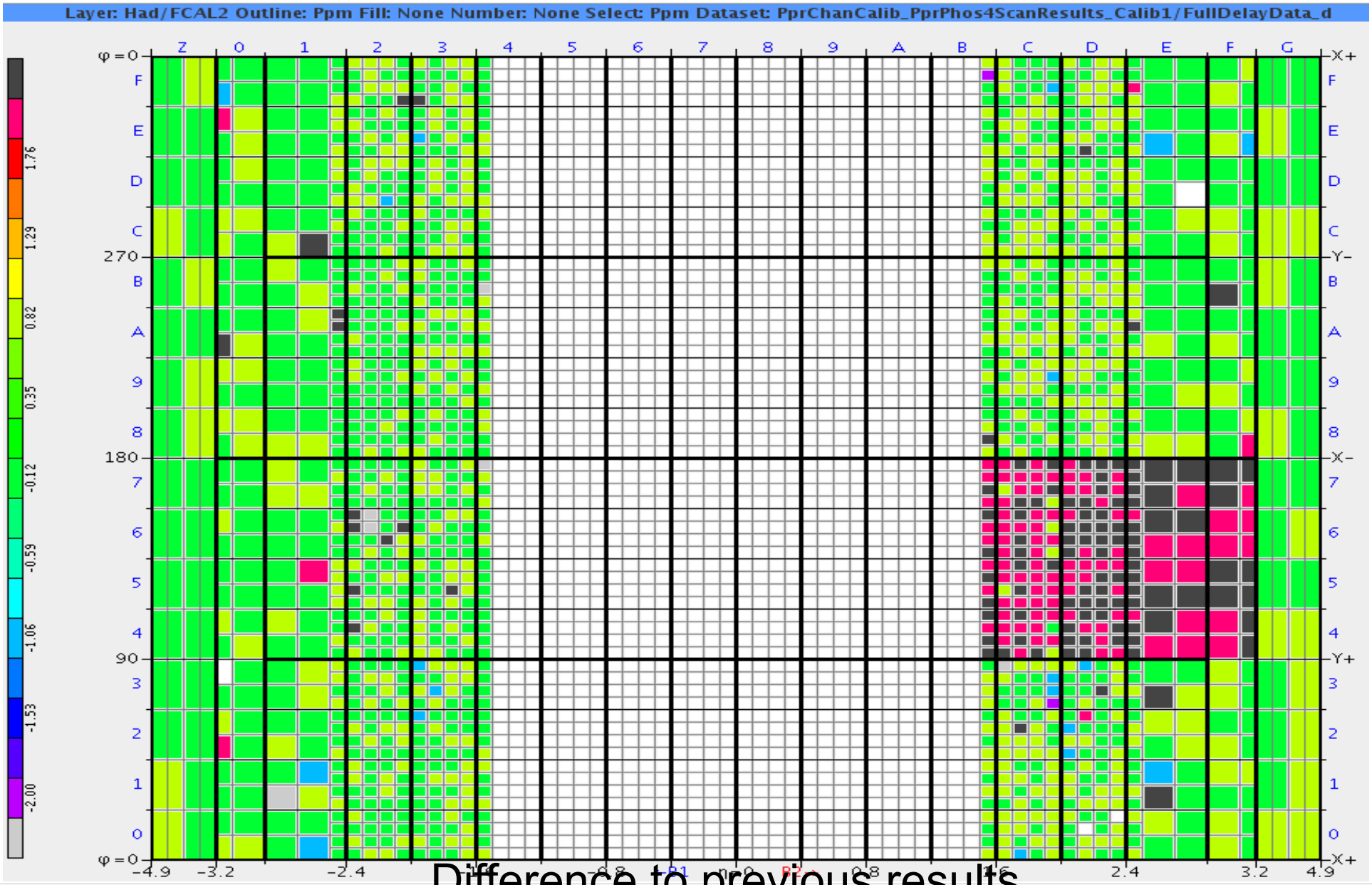
- PHOS4 scans set timing for energy calibration
  - Last calib timing update at the beginning of June 2010
- LAr:
  - Many attempts this year, various problems…
  - Also various improvements being made
    - Online procedure (two runs for full coverage and overlap treatment)
    - Offline analysis and plots
  - First good set of runs (173182,173183) on 28 January
  - And another set (174155,174158) on 4 February
- Tile
  - One good run (171991) on 12 January
    - All drawers apart from four dead towers and one misbehaving MCM
  - Since then, three dead drawers

LAr Results: EM (scale ±2ns)



Difference to previous results

LAr Results: Had/FCAL2 (scale ±2ns)



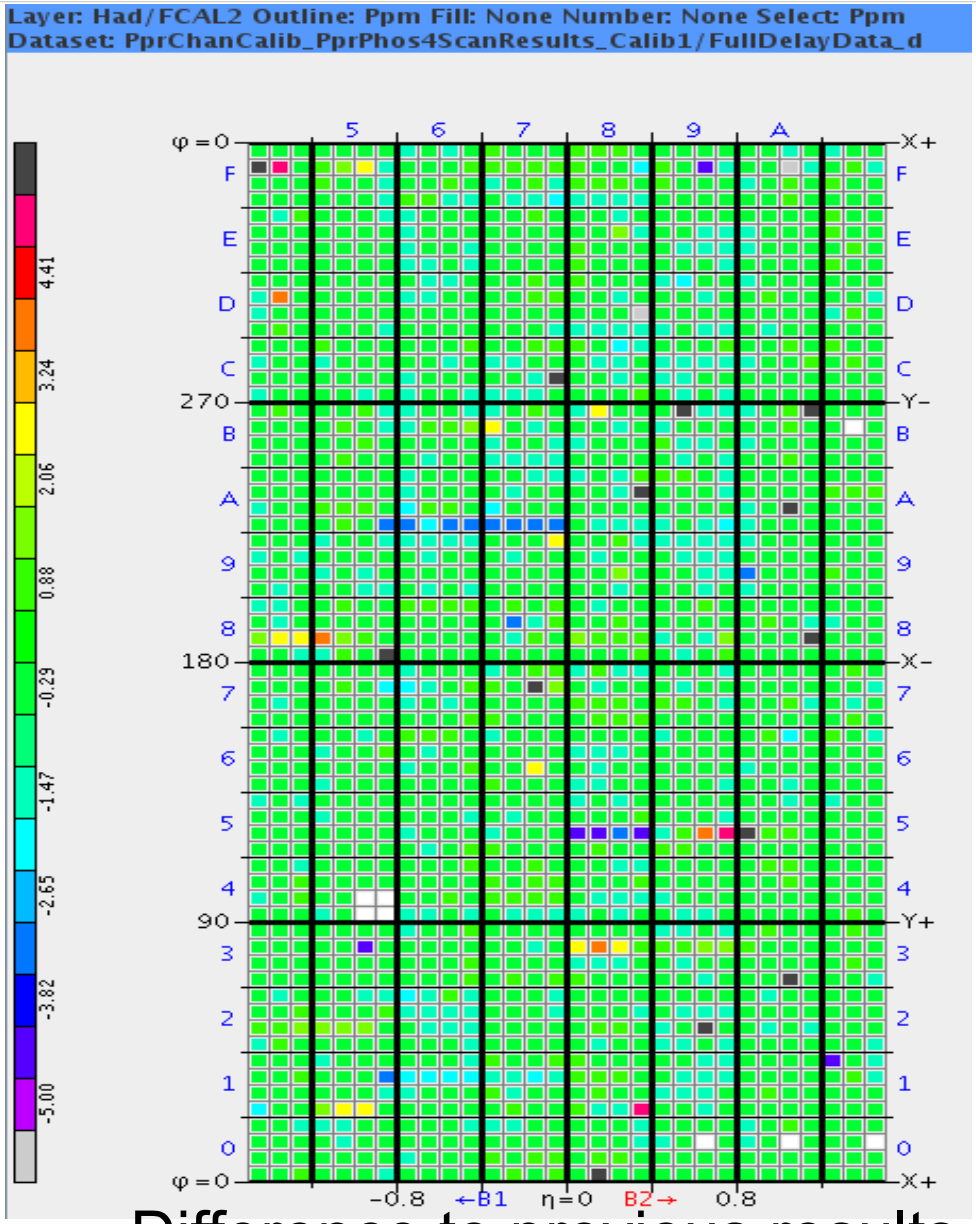
Difference to previous results

LAr Results: Summary

- Overall fairly stable
- Large corrections for one previously faulty TBB
- 1-2ns corrections for (mostly) alternate half front end crates on the EM barrel A side
  - Due to replacement of fibre fanout
  - Smaller effects also seen on EM barrel C
- Large correction for one HEC-A quadrant
  - Replacement of controller board in that crate (last July!)
- Scattered towers (black/grey spots, ~40 per layer?) with large corrections (typically around 10ns)
  - At first glance seems correlated with atypical gains for those towers (compared to neighbours)

Tile Results (scale ±5ns)

- Large corrections for two drawers (only one was dead last year)
- Scattered towers with large corrections
- Four dead towers plus one bad MCM this run
- Otherwise fairly stable

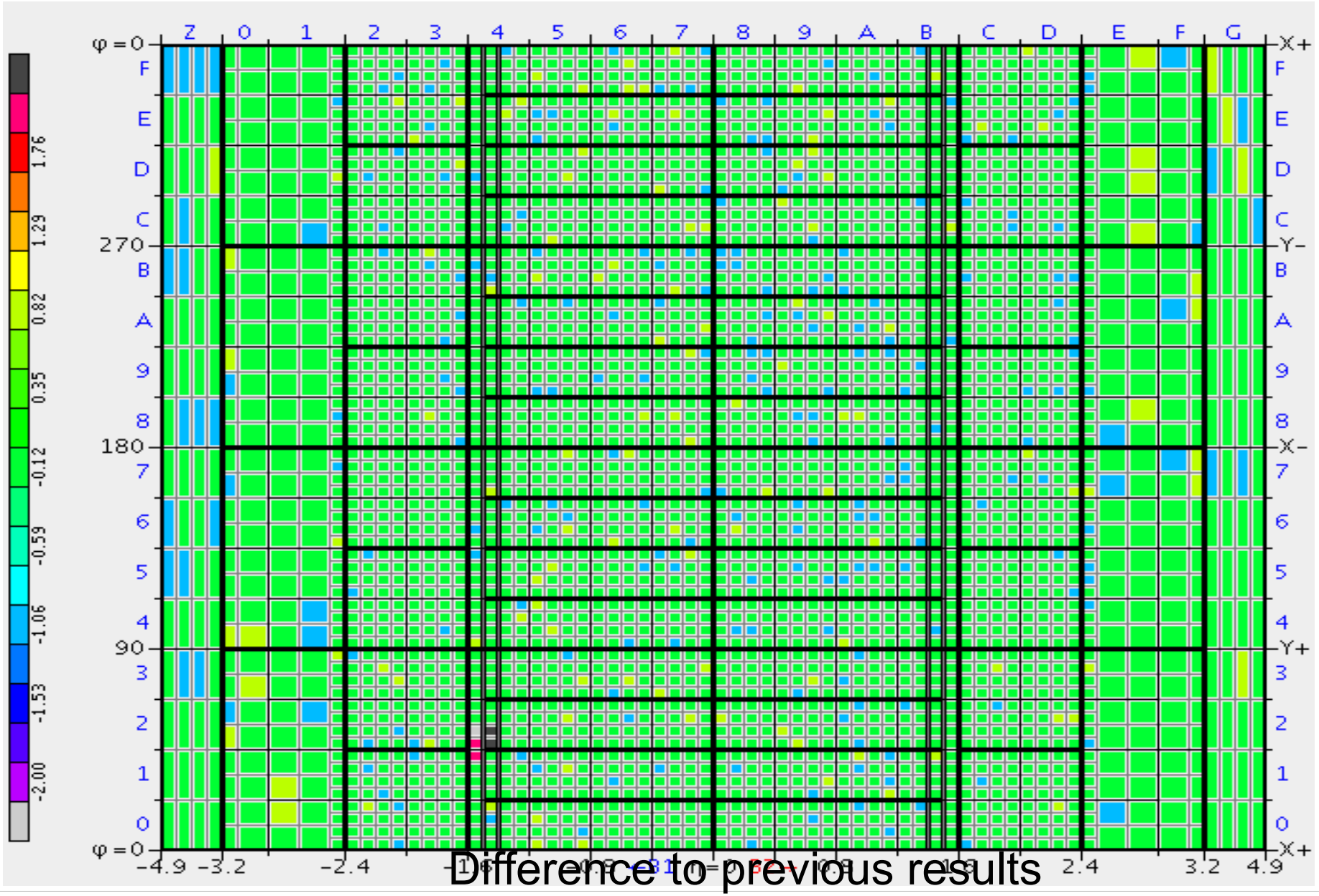


Difference to previous results

Stability?

- After updating timings, look at new PHOS4 scans
  - So far only managed to do this for LAr
    - Try again with Tile tomorrow
  - Of about 5200 LAr towers:
    - 4613 unchanged
    - 147: +1ns
    - 476: -1ns
    - ~10 larger (4 from 1 misbehaving MCM)
  - Analysis chooses delay to nearest 1ns so some jitter expected
  - Stability (over one week) seems good

Latest LAr Results (scale ±2ns)



Difference to previous results

Energy Scans

- LAr energy scans with updated timing taken on 4 Feb
  - Not yet looked at in detail
- Hoping for Tile runs tomorrow
- News next week?