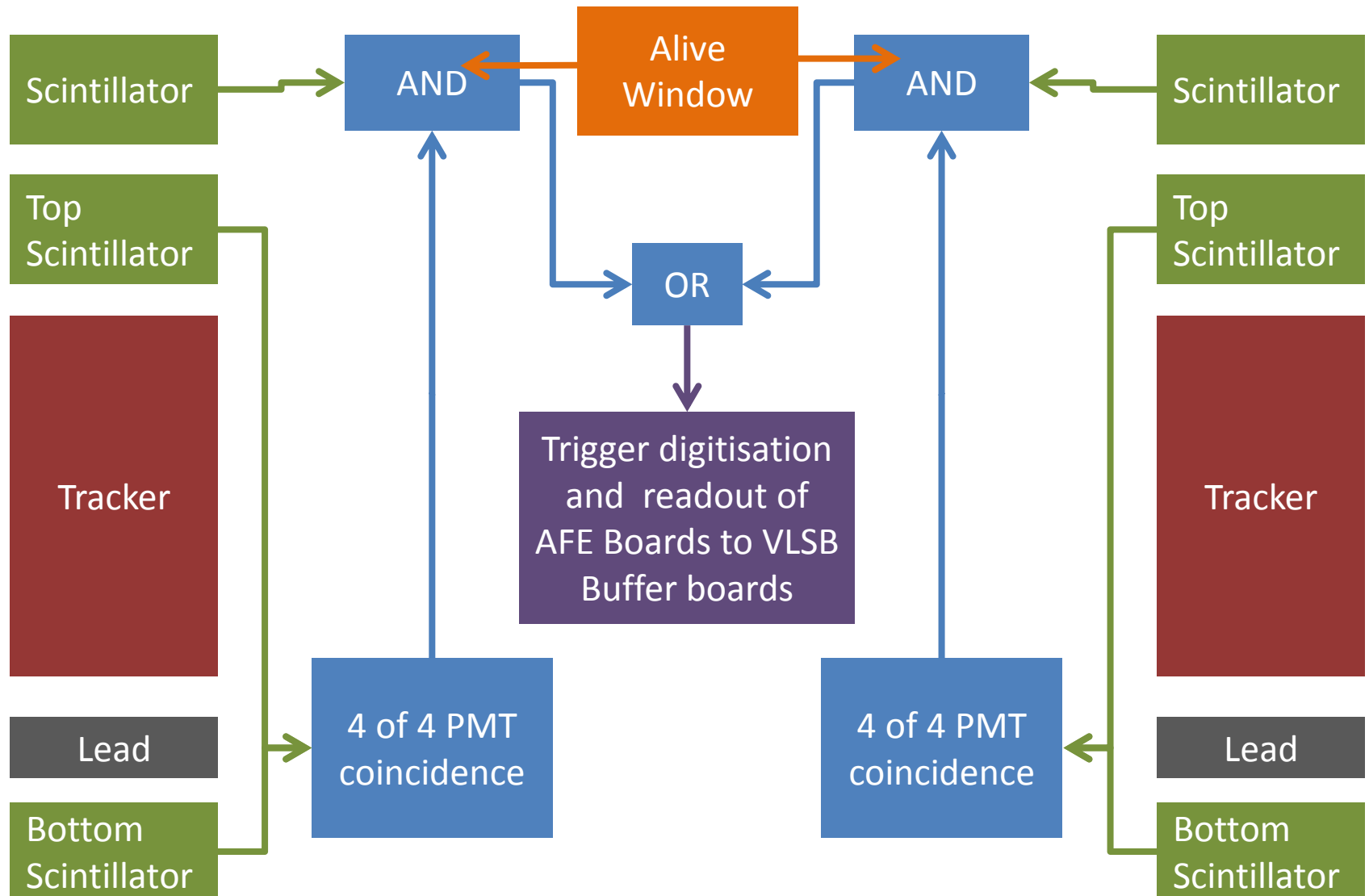


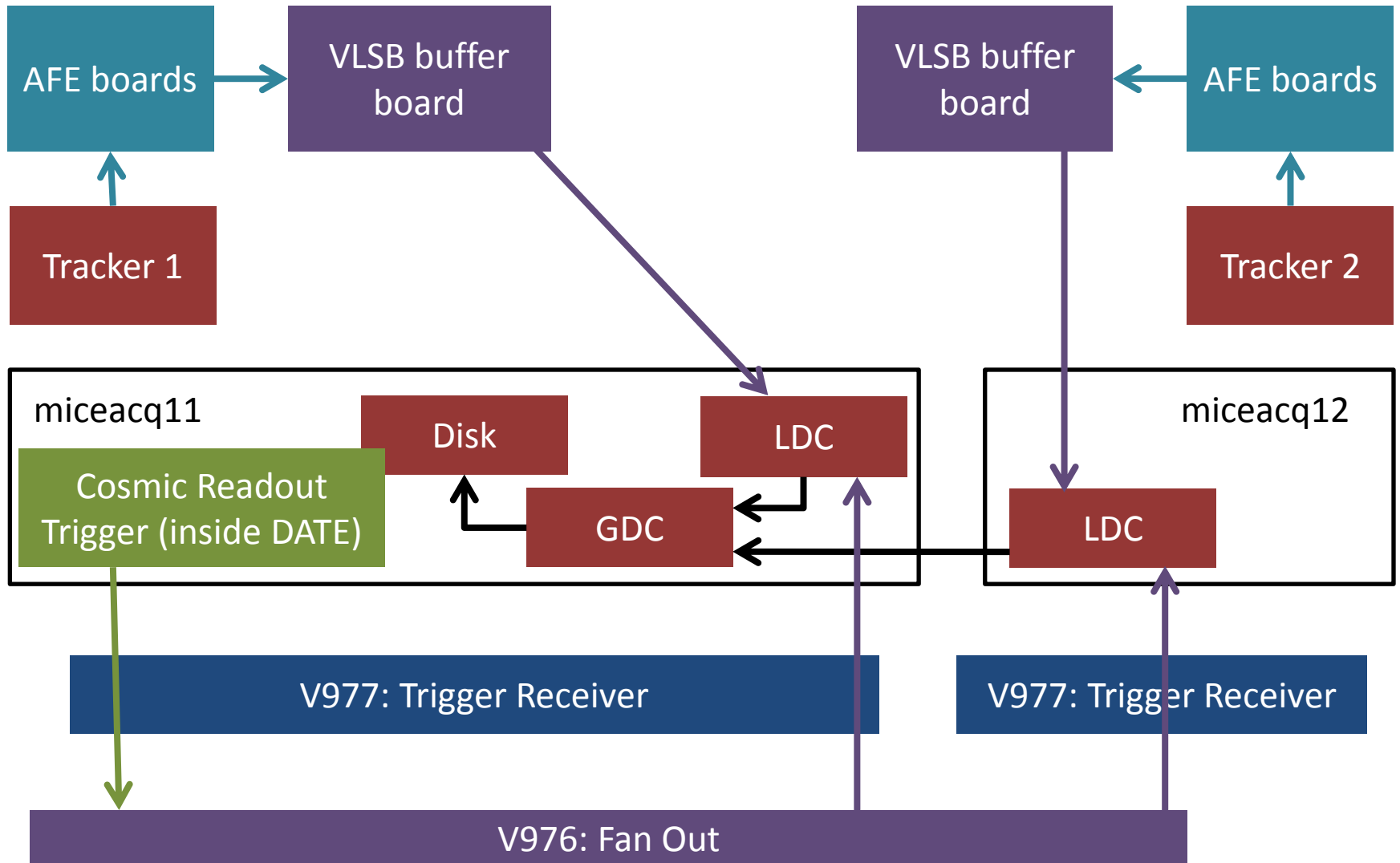
Summary of Data Taking in Lab7

Edward Overton

Setup: Cosmic Triggering



Setup: Readout Trigger



Some important points in the cosmic run

- 22/9/11: Finished calibration. Start of tracker cosmic run using both trackers.
- 27/9/11: Power to AFE boards tripped off. Reinitialised and restarted run.
- 15/11/11: Paul R, Alan B came over to investigate the excess of empty readouts being seen in the tracker. The solution was to require 4/4 coincidence on PMT's above / below each tracker.

Present status

- Both trackers are presently being read out.
 - 0 bricks of lead are under tracker 1.
 - 3 bricks of lead are under tracker 2.
- Trigger rates (measured yesterday via scalars) are:

| Channel | Count at 13:15 (14/12) | Count at 15:20 (14/12) | Triggers/min (14/12) | Triggers/min (6/12) |
|---------|---------------------------|---------------------------|-------------------------|---------------------|
| 1 | 30,855 | 31,185 | 2.64 | 2.69 |
| 2 | 7,084 | 7,173 | 0.71 | 0.68 |
| 1+2 | 37,831 | 38,247 | 3.3 | 3.4 |

- Miceacq11 has 40Gb of disk space left. This is a little low – we should keep an eye on it (1GB of data corresponds to about a week of comics' at present rate)
- Data is manually backed up to micestore where it can make its way to the grid (via Henry). Consider making this part of the DATE restart procedure?

Some Issues and Questions:

- From the last phone meeting:
 - More sub events than cosmic triggers:
 - We were reading out every 3s. Each readout trigger is a sub event, not a cosmic! Now increased readout to 40s intervals. Should see cosmic in most readouts.
 - ?
 - Has this changed the data (between runs 1850, 1851)?
 - Ed S saw 3/5 station hits in tracker 0. Is this still true in 1851?
- infoBrowser on machines is not operational.
 - Have asked Yordan. He says try restarting the network / machines. Have not yet tried as we are taking cosmics and I don't want to upset the calibration software in case an AFE was reset.

One more issue:

- emails from Ed S: we were seeing split readouts: (DATASET 1843)

```
--- New Spill ---  
tracker 1, payload = 16 bits (empty);  time = 00:00  
tracker 2 payload = 1 particle event;  time = 00:00  
--- New Spill ---  
tracker 1, payload = 1 particle event;  time = 00:03  
tracker 2, payload = 16 bits (empty);  time = 00:03  
- Is this present in latest dataset?
```

 - I also saw this in run 1843. Not sure if it still present in 1851 (40s intervals run). I found it difficult to tell since most spills had something in.

Summary

- Cosmic run is progressing
- There has been a lot of debugging to get where we are (especially when AB and PR were in lab7!)
- There are some things we don't understand (split spills to LDC's)
- Still more to understand and debugging todo.