

# mCBM run 2456

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# Overview

Run 2456 with online reconstruction chain

Duration: 2445 TS, 16 min

54 tsa files

Processing nodes: node8, node9, node17

Example of online command (node9)

```
cbmroot-run cbmreco_fairrun -i shm:flesnet_37209354590_1?queue=skip -c /opt/reco/config/cbmreco_001.yaml -p 31337
```

5 STS components included

# Online logging

Information from slurm.out:

```
Unpack [ 135.1 ms] TS 0 (index 0), components 5 / 28, microslices 505, input rate 56.3 MB/s, digis 1389823
...
Unpack [ 1235.9 ms] TS 777 (index 7334), components 5 / 28, microslices 505, input rate 63.6 MB/s, digis 19064722
```

```
TriggerDigi [ 20.0 ms] TS 0, digis 1389823, triggers 249
...
TriggerDigi [ 259.6 ms] TS 777, digis 19064722, triggers 4120
```

```
BuildEvents [ 0.3 ms] TS 0, triggers 249, events 249, frac STS digis 2.9 %
...
BuildEvents [ 4.8 ms] TS 777, triggers 4120, events 4120, frac STS digis 5.3 %
```

```
DigiEventQa [ 0.4 ms] TS 0, events 249, digis 40486, digis per event (162.6 +- 64.2), digi time (2.1 +- 3.9) ns
...
DigiEventQa [ 7.7 ms] TS 777, events 4120, digis 1001397, digis per event (243.1 +- 80.0), digi time (4.8 +- 10.4) ns
```

# Performances from tsa files

Example command (@files):

```
./cbmreco_fairrun
```

```
-i /scratch/redelbach/mcbm_data/2456/2456_node8_2_0000.tsa
```

```
-i /scratch/redelbach/mcbm_data/2456/2456_node8_2_0001.tsa -c /opt/reco/config/cbmreco_001.yaml
```

More details from re-running in debug mode

End of run summaries:

Unpack: Time / TS : 2360.14 ms

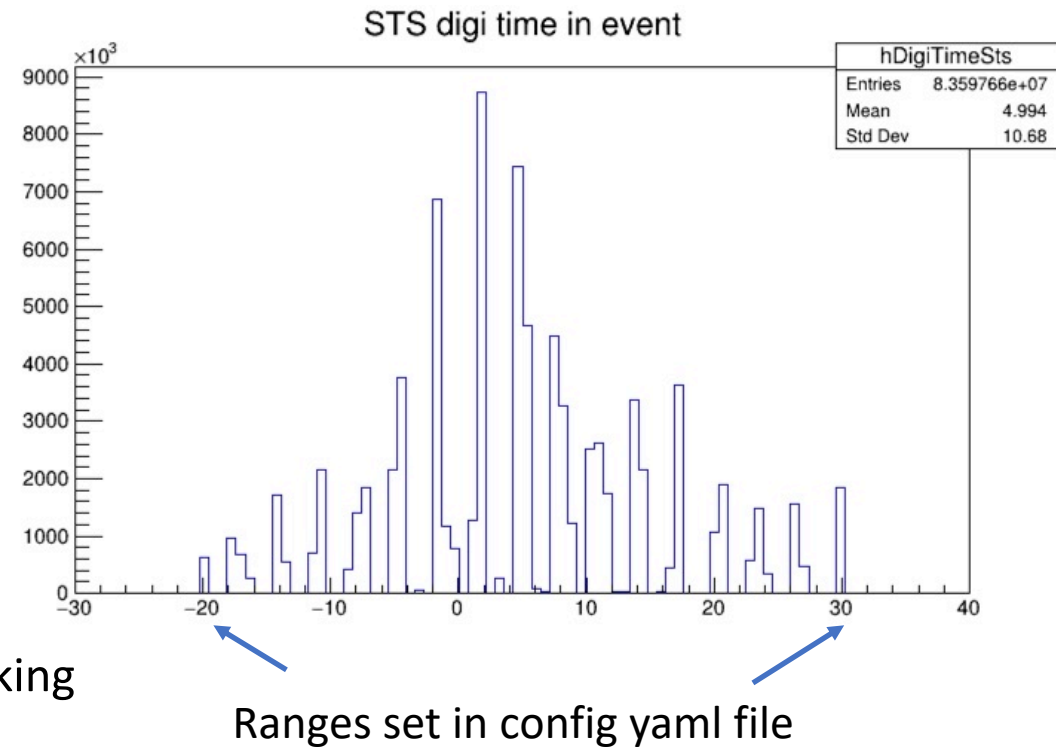
TriggerDigi: Time / TS : 606.73 ms

BuildEvents: Time / TS : 15.03 ms

Output possible in root file for validations

Options for improving performances of unpacking

→ Project of Bachelor student M. Zick



# Error in StsUnpacker for tsa files

Errors during unpacking in Run 2456:

SourceTs: Reading time slice 20 (index 1506) at t = 1655421273100800000 ns

cbmreco\_fairrun: /home/cuveland/src/cbmroot/core/data/sts/CbmStsDigi.h:55:

CbmStsDigi::CbmStsDigi(int32\_t, int32\_t, double, uint16\_t): Assertion `time <= kMaxTimestamp' failed.

[INFO] SourceTs: Reading time slice 20 (index 1511) at t = 1655421273740800000 ns

cbmreco\_fairrun: /home/cuveland/src/cbmroot/core/data/sts/CbmStsDigi.h:55:

CbmStsDigi::CbmStsDigi(int32\_t, int32\_t, double, uint16\_t): Assertion `time <= kMaxTimestamp' failed.