

# Calibration module for Run23 production w/ F4A

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# Calibration module for F4A production

- Calibration w/ F4A is necessary for dN/deta analysis
  - This should be done by Apr. 1<sup>st</sup> (deadline of IRC formation for SQM)
- 3 calibration modules are made and worked w/ CDB
  - HotDead Map : Joseph, code is ready (InttMaskedChannelSet, Previously )
  - BCOMap : Jaein, code is ready (InttBCOMap)
  - DACMap : Takashi, code is ready (InttDACMap)
- These modules should be tested at least for Run20869 (Boff for dN/deta)
- Geometry (read from file) is a file

# CDB for InttDACMap

- CDB (database) uses 3 labels to identify the CDB file
  - **GlobalTag**: ProdA\_2023 or MDC2 (or more)
  - **Domain** : parameter name: INTT\_DACMAP
    - Similar name is good for HotDeadMap and BCOMap
  - **TimeStamp** : 64bit integer which enables calib\_par for each beam crossing (if necessary, but not ). RunNumber is used for run23
    - CDB allows 2 different timestamp, Begin-End type and Begin-(no end) type
      - End-time should be greater than Begin-time (The same is not accepted)
    - `cdb->insertPayload("INTT_DACMAP","CDBTTree_INTT_DACMAP.root", 20869,20870);`

- Module is tested with CDB TestBench

```
=====
CDB GLOBALTAG : hachiya
TIMESTAMP : 20869
Fun4AllServer::setRun(): run 0 uses CDB TIMESTAMP 20869
calibinfo DAC : INTT_DACMAP CDB
CDBFile: /sphenix/user/hachiya/calibration/INTT_DACMAP/fb/c5/fbc57b510a51212c46c98b6cef0219f8_CDBTTree_INTT_DACMAP.root
=====
```

```
rc->set_StringFlag("CDB_GLOBALTAG","hachiya");
rc->set_uint64Flag("TIMESTAMP",20869);
```

I would like to commit [this module to coresoftware](#) for dN/deta

# DACMAP for run 2023

DAC	Run2023 RunNumber	Comments
23, 30, 60, 90, 120, 150, 180, 210	7364 – 9185	L1Delay scan
8, 12, 16, 20, 24, 28, 32, 36	9226 – 9231	DAC scan1
23, 30, 60, 90, 120, 150, 180, 210	9290 – 9296	L1Delay scan
68, 72, 76, 80, 84, 88, 92, 96	9301 – 9302	DAC scan4
8, 12, 16, 20, 24, 28, 32, 36	9303 – 9303	DAC scan1
28, 32, 36, 40, 44, 48, 52, 56	9304 – 9314	DAC scan2
48, 52, 56, 60, 64, 68, 72, 76	9318 – 9318	DAC scan3
68, 72, 76, 80, 84, 88, 92, 96	9319 – 9319	DAC scan4
88, 92, 96, 100, 104, 108, 112, 116	9320 – 9320	DAC scan5
108, 112, 116, 120, 124, 128, 132, 136	9321 – 9322	DAC scan6
15, 30, 60, 90, 120, 150, 180, 210	9324 – 9328	DAQ
128, 132, 136, 140, 144, 148, 152, 156	9329 – 9329	DAC scan7
148, 152, 156, 160, 164, 168, 172, 176	9333 – 9333	DAC scan8
168, 172, 176, 180, 184, 188, 192, 196	9334 – 9334	DAC scan9
188, 192, 196, 200, 204, 208, 212, 216	9335 – 9335	DAC scan10
15, 30, 60, 90, 120, 150, 180, 210	9402 – 10449	DAQ
15, 30, 60, 90, 120, 150, 180, 210	10480 - 20954	DAQ

I would like to commit **this DAC setting** for dN/deta

Ask Chris to commit

2024/3/27

Calibratio

DAC	Run2023 RunNumber	Comments
236, 240, 244, 248, 252, 25???	21008 – 21014	DAC scan12
212, 216, 220, 224, 228, 232, 236, 240	21015 – 21015	DAC scan11
188, 192, 196, 200, 204, 208, 212, 216	21016 – 21016	DAC scan10
168, 172, 176, 180, 184, 188, 192, 196	21017 – 21017	DAC scan9
148, 152, 156, 160, 164, 168, 172, 176	21018 – 21018	DAC scan8
128, 132, 136, 140, 144, 148, 152, 156	21019 – 21021	DAC scan7
108, 112, 116, 120, 124, 128, 132, 136	21022 – 21029	DAC scan6
88, 92, 96, 100, 104, 108, 112, 116	21030 – 21037	DAC scan5
68, 72, 76, 80, 84, 88, 92, 96	21038 – 21048	DAC scan4
15, 30, 60, 90, 120, 150, 180, 210	21506 – 21506	DAQ
68, 72, 76, 80, 84, 88, 92, 96	21508 – 21508	DAC scan4
48, 52, 56, 60, 64, 68, 72, 76	21518 – 21537	DAC scan3
15, 30, 60, 90, 120, 150, 180, 210	22055 – 23667	DAQ
11, ???	23668 – 23668	DAC scan0?
15, 30, 60, 90, 120, 150, 180, 210	23896 – 23904	DAQ
15, (30, 60, 90, 120, 150, 180, 210)など	23905 – 23923	DAQ0 SCAN
15, 30, 60, 90, 120, 150, 180, 210	24750 – 25152	DAQ
20, 30, 60, 90, 120, 150, 180, 210	25153 – 25153	DAQ
25, 30, 60, 90, 120, 150, 180, 210	25155 – 25338	DAQ
15, 30, 60, 90, 120, 150, 180, 210	25477 – 25565	DAQ
25, 30, 60, 90, 120, 150, 180, 210	25566 – 25566	DAQ
15, 30, 60, 90, 120, 150, 180, 210	25567 – 25570	DAQ
25, 30, 60, 90, 120, 150, 180, 210	25571 – 25573	DAQ
15, 30, 60, 90, 120, 150, 180, 210	25920 -	DAQ