Unpacking
main difference between versions

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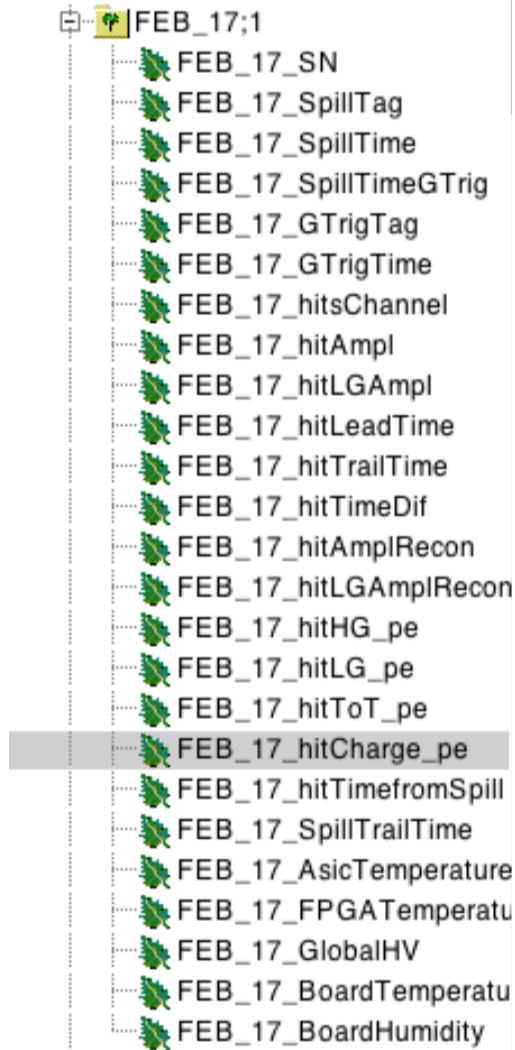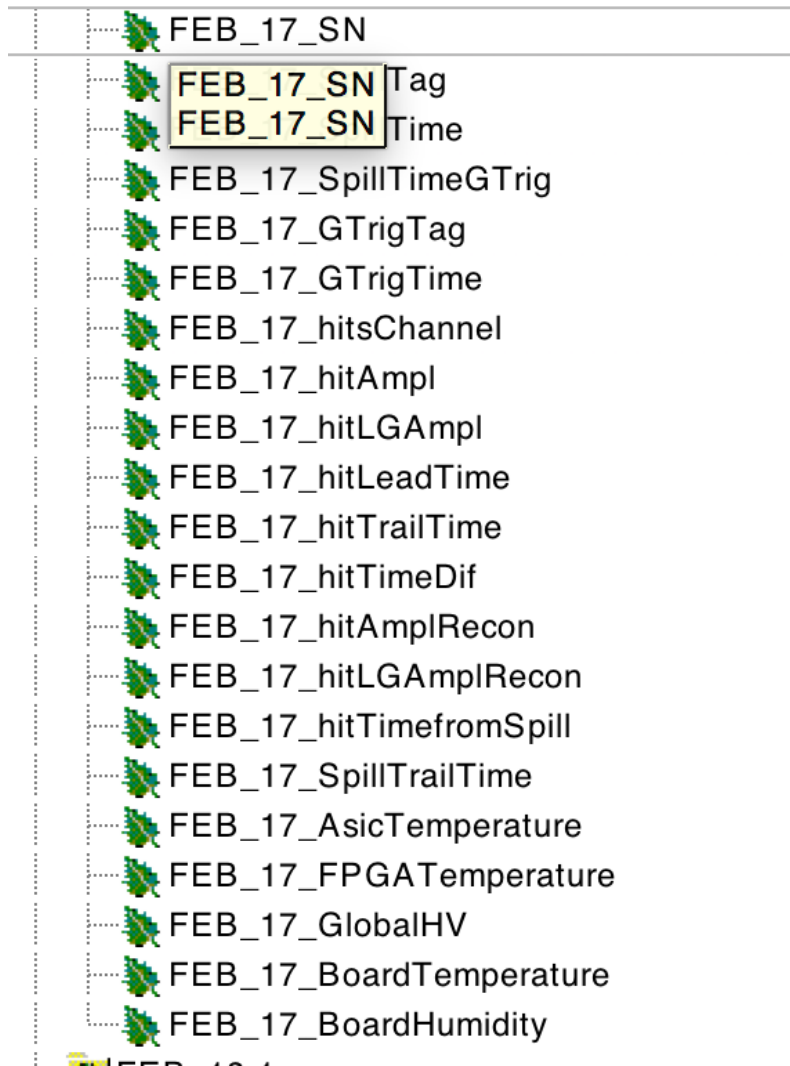
11.10.2018

RAM usage & root tree entries

- Unpacking V1
  - RAM + swap = (Data file size) x 3;
  - All events in data file is one entry in the root tree:
    - Doesn't mater how many spills lost;
    - Synchronization done by GTrigTag.

- Unpacking V2
  - RAM +swap = 2GB;
  - Each spill is separate entry in the root tree;
    - Each spill should be exist like separate entry;
    - Synchronization done by spills, GTrigTag and time from spill start.

*_all.root branches

FEB_17_SN
FEB_17_SN Tag
FEB_17_SN Time
FEB_17_SpillTimeGTrig
FEB_17_GTrigTag
FEB_17_GTrigTime
FEB_17_hitsChannel
FEB_17_hitAmpl
FEB_17_hitLGAmpl
FEB_17_hitLeadTime
FEB_17_hitTrailTime
FEB_17_hitTimeDif
FEB_17_hitAmplRecon
FEB_17_hitLGAmplRecon
FEB_17_hitTimefromSpill
FEB_17_SpillTrailTime
FEB_17_AsicTemperature
FEB_17_FPGATemperature
FEB_17_GlobalHV
FEB_17_BoardTemperature
FEB_17_BoardHumidity

FEB_17;1
FEB_17_SN
FEB_17_SpillTag
FEB_17_SpillTime
FEB_17_SpillTimeGTrig
FEB_17_GTrigTag
FEB_17_GTrigTime
FEB_17_hitsChannel
FEB_17_hitAmpl
FEB_17_hitLGAmpl
FEB_17_hitLeadTime
FEB_17_hitTrailTime
FEB_17_hitTimeDif
FEB_17_hitAmplRecon
FEB_17_hitLGAmplRecon
FEB_17_hitHG_pe
FEB_17_hitLG_pe
FEB_17_hitToT_pe
FEB_17_hitCharge_pe
FEB_17_hitTimefromSpill
FEB_17_SpillTrailTime
FEB_17_AsicTemperature
FEB_17_FPGATemperatu
FEB_17_GlobalHV
FEB_17_BoardTemperatu
FEB_17_BoardHumidity

Added:
  FEB_*_hitHG_pe
  FEB_*_hitLG_pe
  FEB_*_hitToT_pe
  FEB_*_hitCharge_pe

```
if (reconHG_pe>0 && FEB[ih].hitAmpl->at(iev)<3000){
      FEB[ih].hitCharge_pe.push_back(reconHG_pe);
} else if (reconLG_pe>0 && FEB[ih].hitLGAmpl->at(iev)<3000){
      FEB[ih].hitCharge_pe.push_back(reconLG_pe);
} else {
      FEB[ih].hitCharge_pe.push_back(reconToT_pe);
}
```

Available packages in Unpacking_*_v2.2

- TDM Unpack
- Unpack
- HG vs LG calibration
- HG vs ToT calibration
- LG vs ToT calibration
- Stopping Proton
- T9 root file analysis

Procedure for analysis:

- TDM unpack

- Unpack

- Put proper calibration in bin/*_calib

- HG reconstructed

- Stopping Proton or/and T9 root file analysis (now it is not using any calibration files)

Stopping proton & T9RootFileAnalysis

- Proton stop
  - Line 186
    - int NumberEvDis = 10000;

NumberEvDis is default number or trigger to check or create Event display.

- T9 root file analysis
  - Line 188
    - int NumberEvDis = 10000;