DAQ tests before Christmas

- Last week, some daq difficulties on belle2 daq side
- This week, test will continued until Friday 7 am CET
  - Except, others will shut down their systems earlier ??
- All tests without modules so far..

At rate > 20 kHz ONSEN received HLT trigger before DHH data resulting in memory overflow!
→ Requires further investigation

DAQ observations before Christmas

- Too many errors from DHH can break ONSEN
  (related to to many logs)
  - Solution implemented, not yet fully tested
- Overnight run at low rate (1kHz) fine with current setup / fw
- Tuesday short run at 38 kHz running stable
  - Errors not checked
- Tuesday run at 22 kHz fine, but some errors found

DAQ observations before Christmas

- CRC error in 5th frame (DHE start)

- All trig # are different

- DHE 16-bit word count wrong

- DHP frame # (47 & 23)
  - Is it supposed to by like this? Might be related to trig # prob

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- Correct DHC word count

- No missing frame

```
          ca fe ba be 00 00 00 08  00 00 00 14 00 00 00 10   |................|
          00 00 00 08 00 00 00 10  00 00 00 10 00 00 00 08   |................|
00000020  00 00 00 10 00 00 00 10 >59 46 f8 04 00 10 73 89   |.........YF....s.|
00000030  28 0f 6f 43 84 00 00 59  e3 84 e8 47 18 20 f5 3f   |(.oC...Y...G. .?|
00000040  00 00 17 53 23 77 bd a9  40 cb cd 02 10 21 f5 3f   |...S#w..@....!.?|
00000050  45 a1 38 7d 20 20 f5 3f  00 0b 00 00 00 00 00 00   |E.8}  .?........|
00000060  56 54 b1 0c 1a 20 a7 0b  00 00 d9 4d 47 b4 5d 33   |VT... .....MG.]3|
00000070  a3 4c 09 e1 12 20 f7 1c  cd f1 b2 15 22 20 f7 1c   |.L... ......" ..|
00000080  00 0b 00 00 00 00 00 00  7e 13 fe de 61 40 f8 04   |........~...a@..|
00000090  00 00 00 19 00 00 00 00  6b e2 2d 46               
```

DAQ observations before Christmas

- Terminating frame

- Unexpected frame order

  - 2nd DHE Start missing

- Missing EndOfFrame (LocalLink) after missing frame

  - Frame was dropped successfully in ONSEN

```
00000000   ca fe ba be 00 00 00 08   00 00 00 14 00 00 00 10   |................|
00000010   00 00 00 08 00 00 00 10   00 00 00 08 00 00 00 10   |................|
00000020   00 00 00 10 00 00 00 04 >59 46 f8 84 00 10 5e 09   |........YF....^.|
00000030   28 b1 6f 43 84 00 00 59   95 6e 1a 44 18 20 f5 f3   |(.oC...Y.n.D. ..|
00000040   00 00 a6 e3 23 81 c4 09   25 cc 49 8b 10 21 f5 f3   |....#...%.I..!..|
00000050   2d 27 33 80 20 20 f5 f3   00 0b 00 00 00 00 00 00   |-'3.  ..........|
00000060   be 6b 8c e4 12 20 f7 d4   b6 73 cf 34 22 20 f7 d4   |.k... ...s.4" ..|
00000070   00 0b 00 00 00 00 00 00   53 6d 4c 77 61 40 f8 84   |........SmLwa@..|
00000080   00 00 00 16 00 00 00 00   13 c0 df bc ba ad da 7a   |...............z|
```

Normal: DHC start – [DHE start – ghost – DHE end]^2 – DHC end

DAQ observations before Christmas

- Previous errors seems to occur only for rates > 20 kHz
- Trigger number messed up also in other frames
- DHC link instability (1-2 bit error in several hours)
- FTSW gets busy every 2nd run.
  - Related to FTB (requires update, but not yet done)
- Since today, RC is completely stuck. Not yet clear, maybe NSM?

- Links to EB and HLT fine
- SVD included in VXD RC.

Plans/Questions for January

- EPICS Upgrade to 3.16.1 ?!

- Alarm System check ?!

- Long runs at 30 kHz

- Shifter manual (Troubleshooting)

- RC of DATCON & DHH ? (reset, init, etc.)
  - Global PXD SlowControl overview ?

- Further checks on ONSEN inputs under development to avoid corrupt data

PERSY

What is the future plan for PERSY?

A lot of tests have to be done!