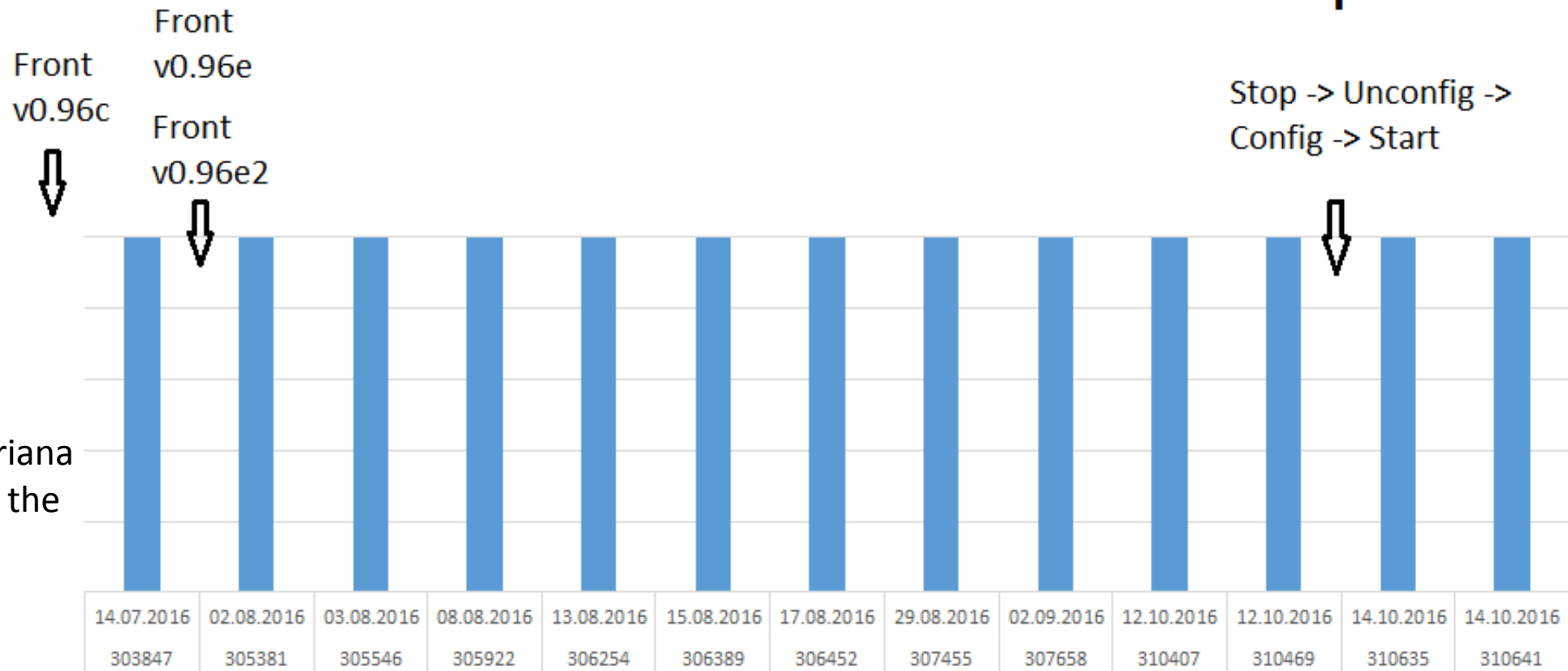# ABBA firmware vs. data status

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Firmware version vs. data

All the runs where for sure there is the double pulse
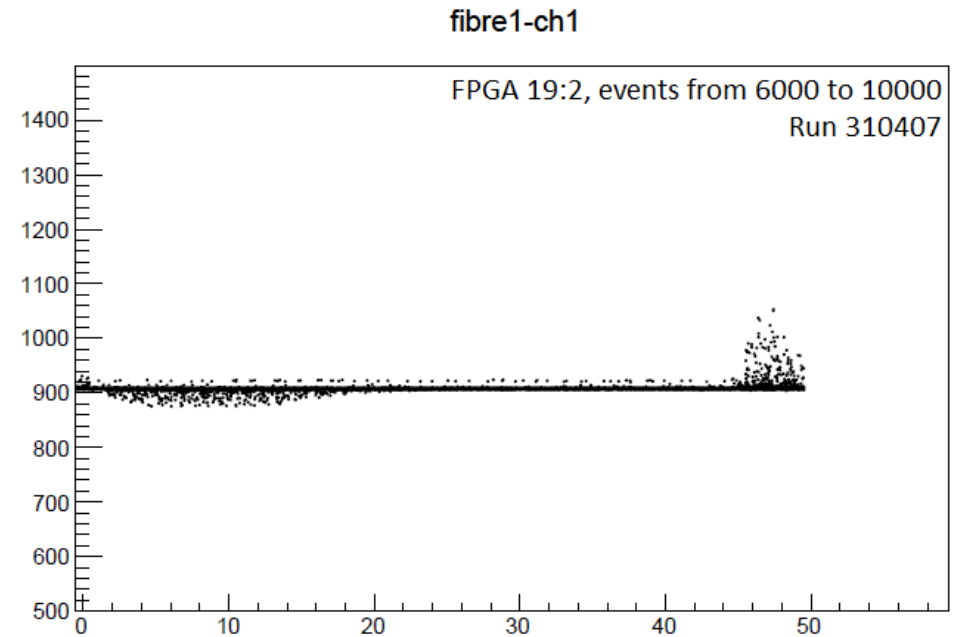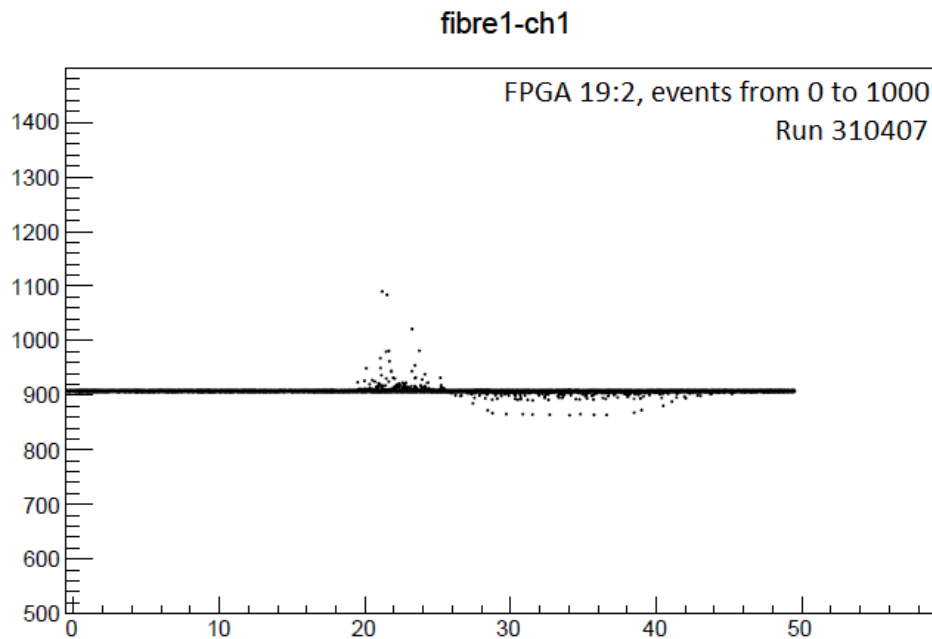
Front
v0.96c

Front
v0.96e

Front
v0.96e2

Stop -> Unconfig ->
Config -> Start

Thanks to Adriana
and Laura for the
scripts!

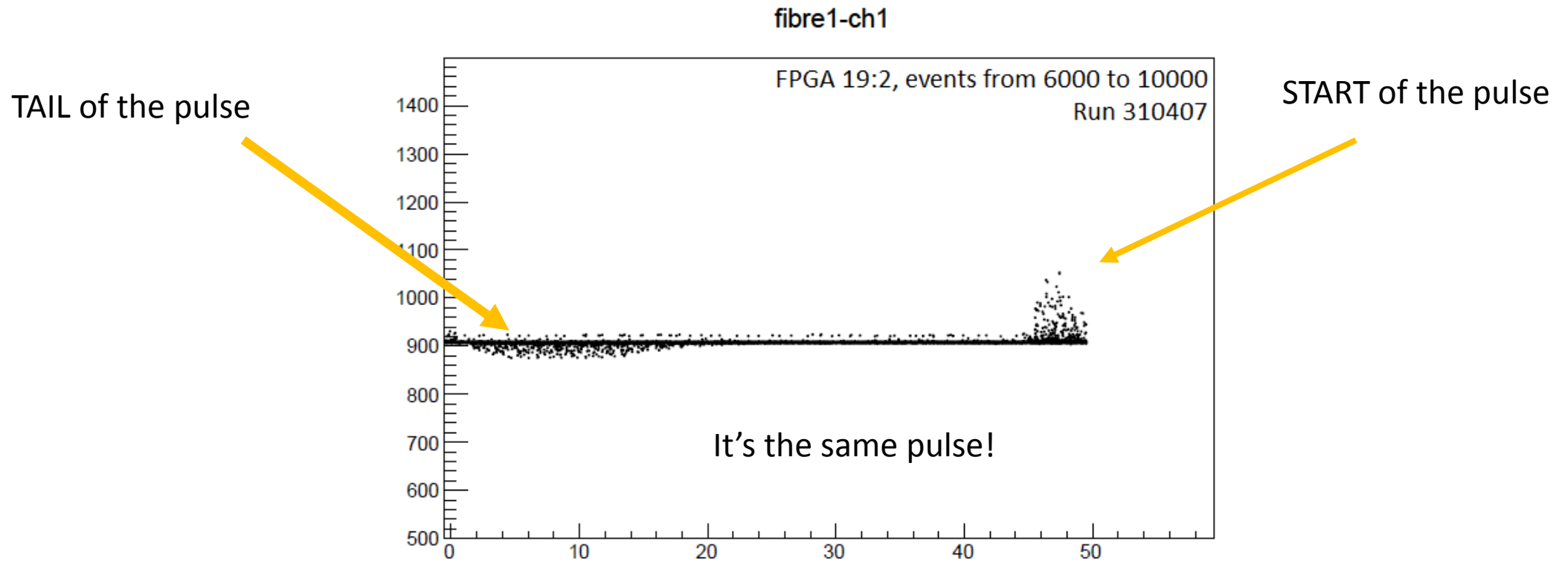| 14.07.2016	02.08.2016	03.08.2016	08.08.2016	13.08.2016	15.08.2016	17.08.2016	29.08.2016	02.09.2016	12.10.2016	12.10.2016	14.10.2016	14.10.2016
303847	305381	305546	305922	306254	306389	306452	307455	307658	310407	310469	310635	310641

What is happening (1)

At the beginning of the run the pulse could be in the correct position and after some time it is starting at a different sample:

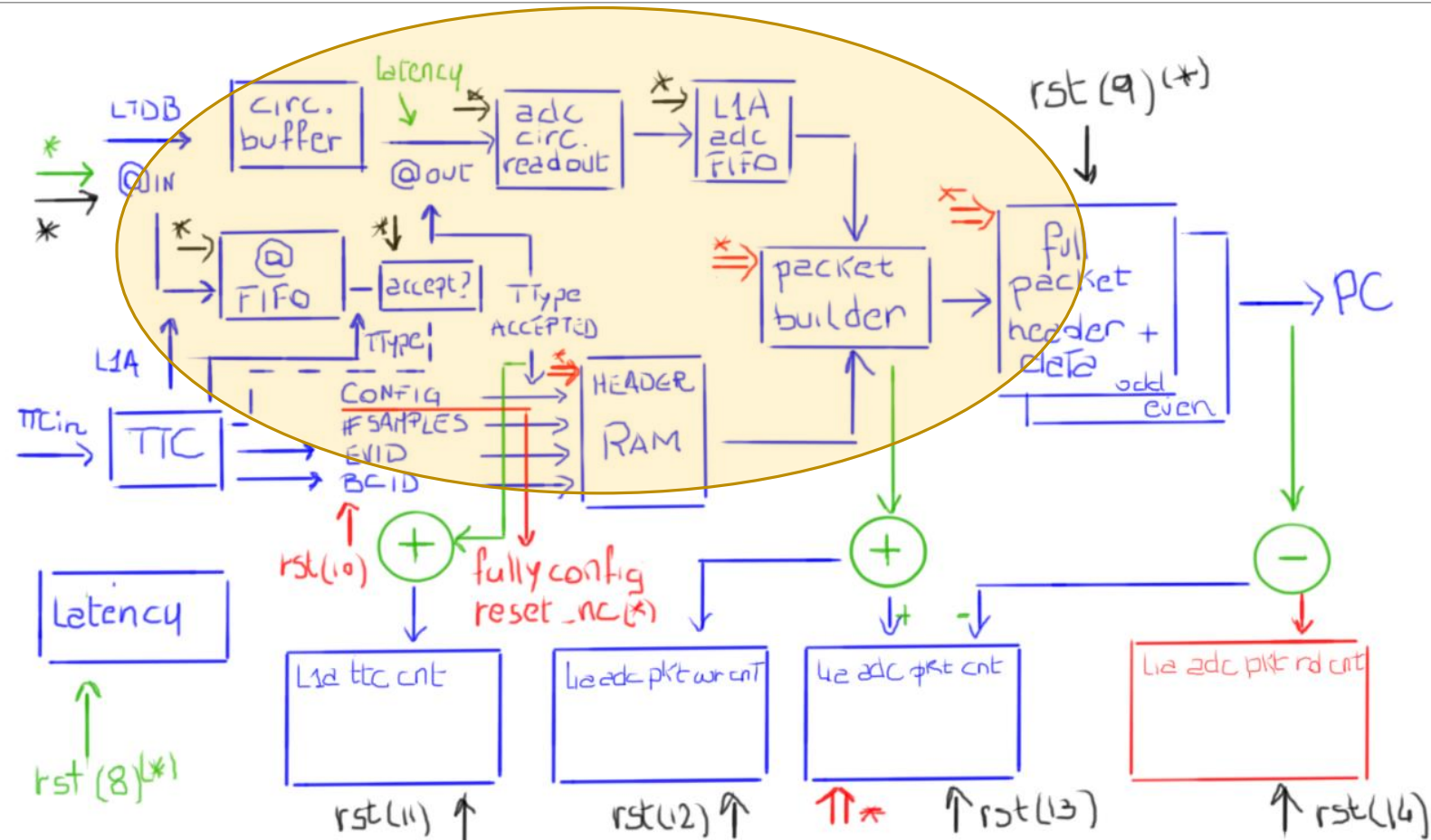➢ Always shifted from around sample 20 to around sample 48

What is happening (2)

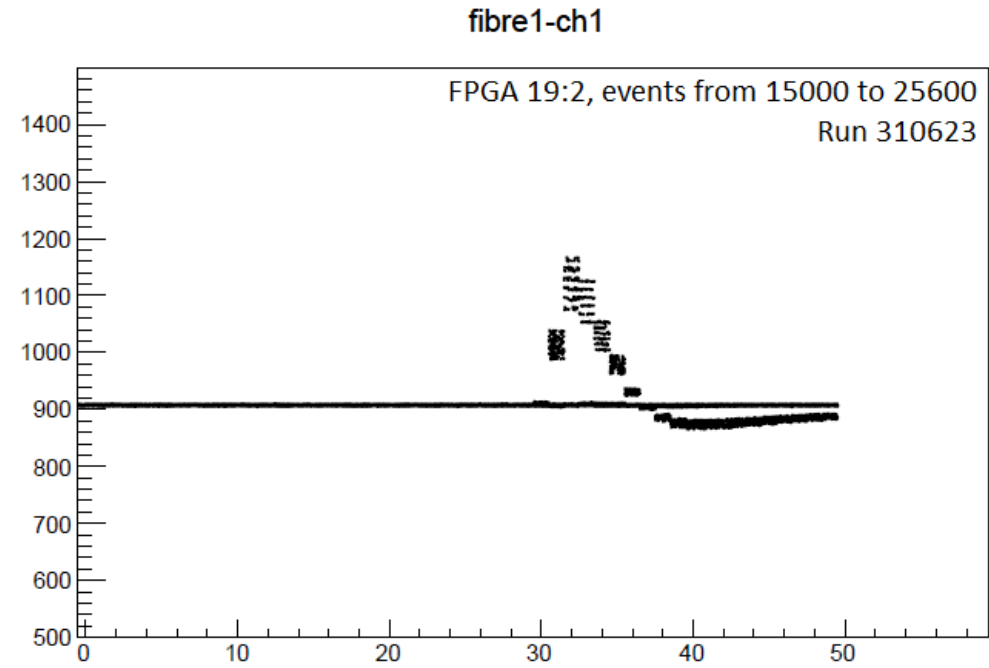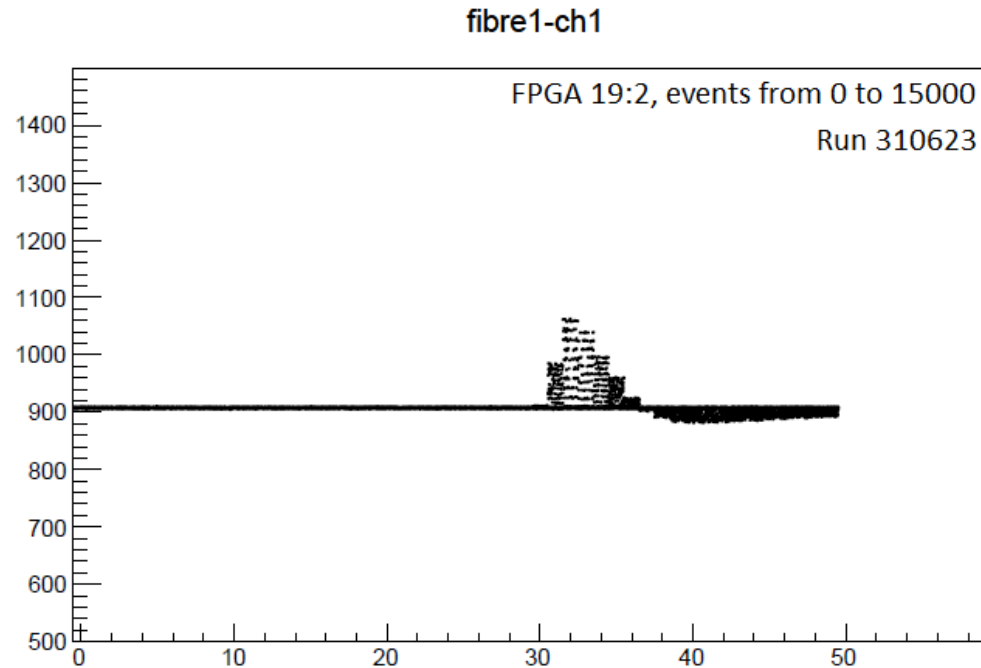It seems that there is a rotation in reading the data.

Where in the (front FPGA) firmware

Calibration runs

Some calibration runs taken: 310619, 310621, 310623, 310625, 310627 (for more details [ELOG](#)).
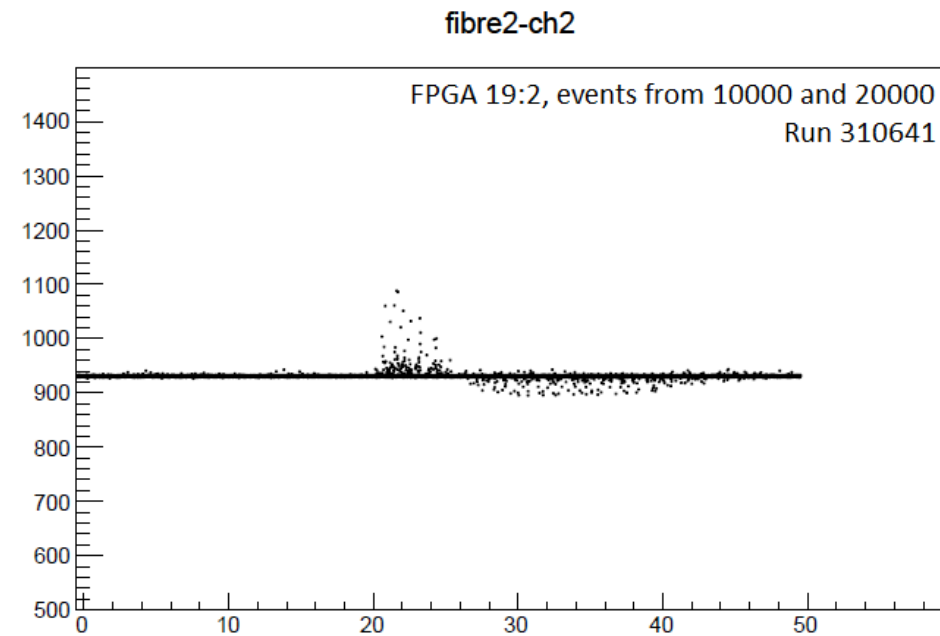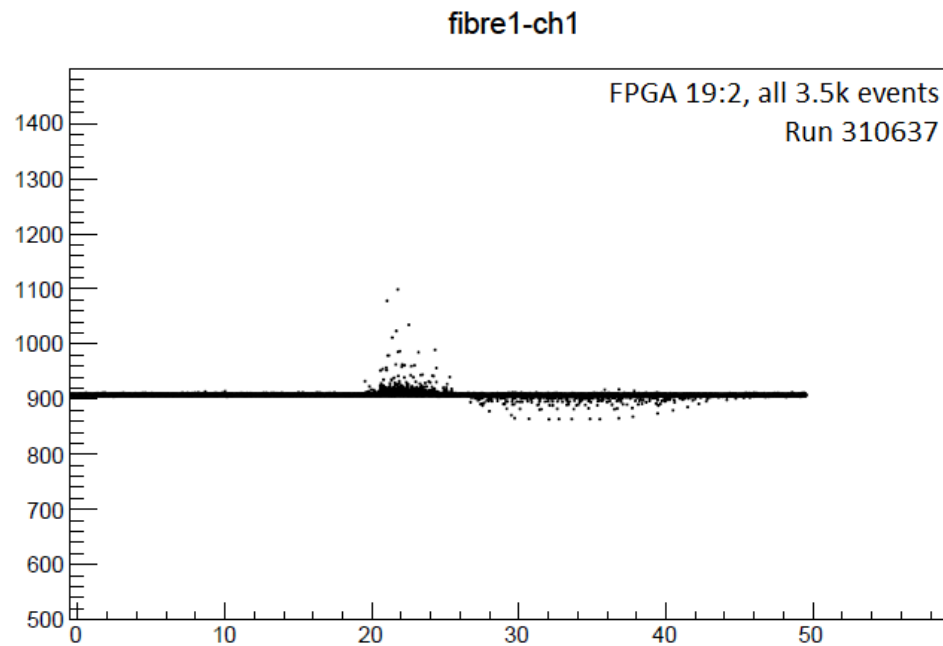High Ramp, 25600 events, different trigger rates.

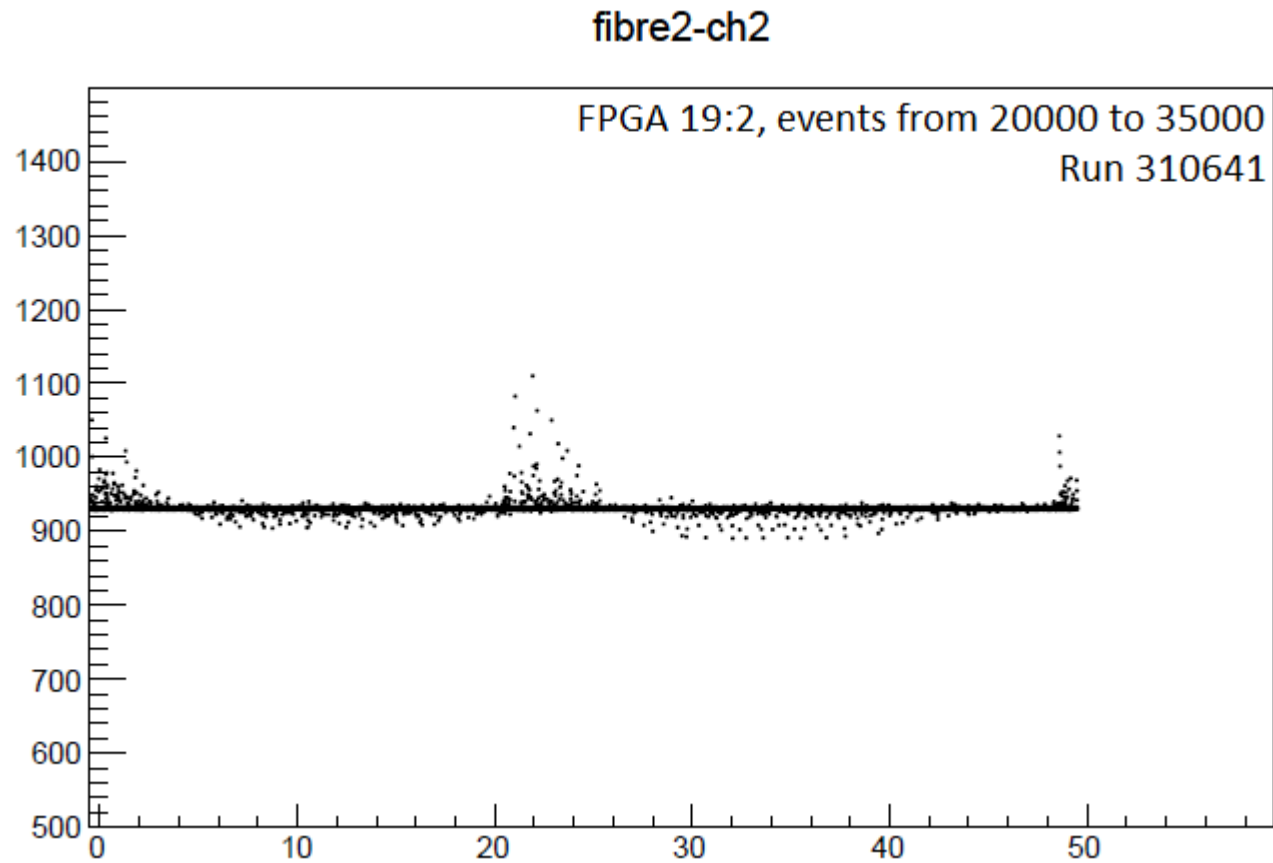➤ No pulse issue in all the runs (firmware version used v0.96e2)

Recent Physics runs

The most recent Physics runs (310637, 310639, 310641, 310695, 310731) where collected with:

➢ STOP -> UNCONFIG -> CONFIG -> START

➢ instead of STOP -> START

But.. Later in the data..

Recent updates and TODO

- New instructions for the shifter:
  - always use STOP -> UNCONFIG -> CONFIG -> START per each ABBA run
  - take about 20000 events per each run (about 5000 per FPGA)
- Reverted to an older firmware version v0.96c (but just yesterday evening I discovered that this issue is there also in this version)

- Open question: since which version the issue is there?

- TODO: find out how to solve it in the firmware