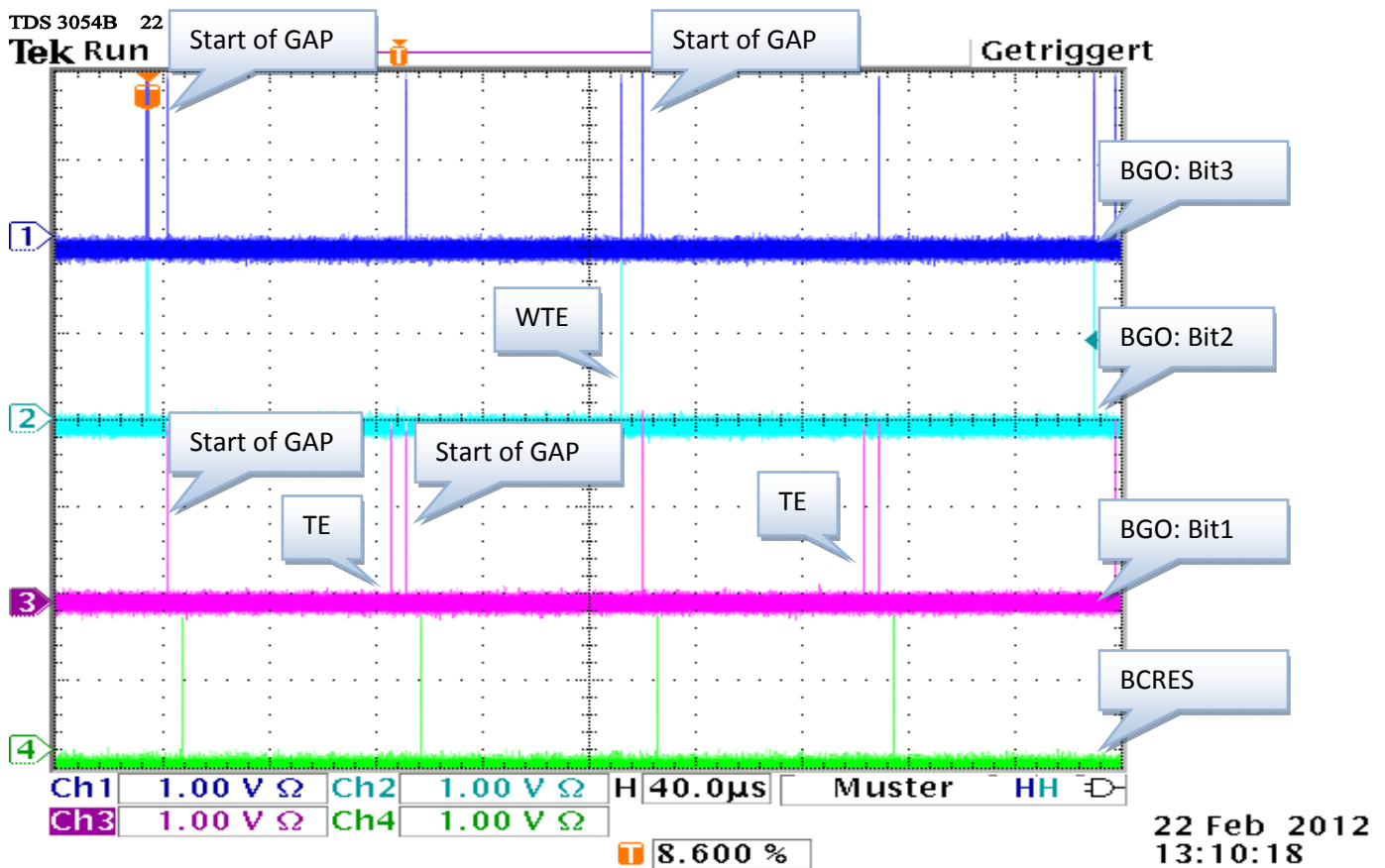


TCS firmware V1033 Test

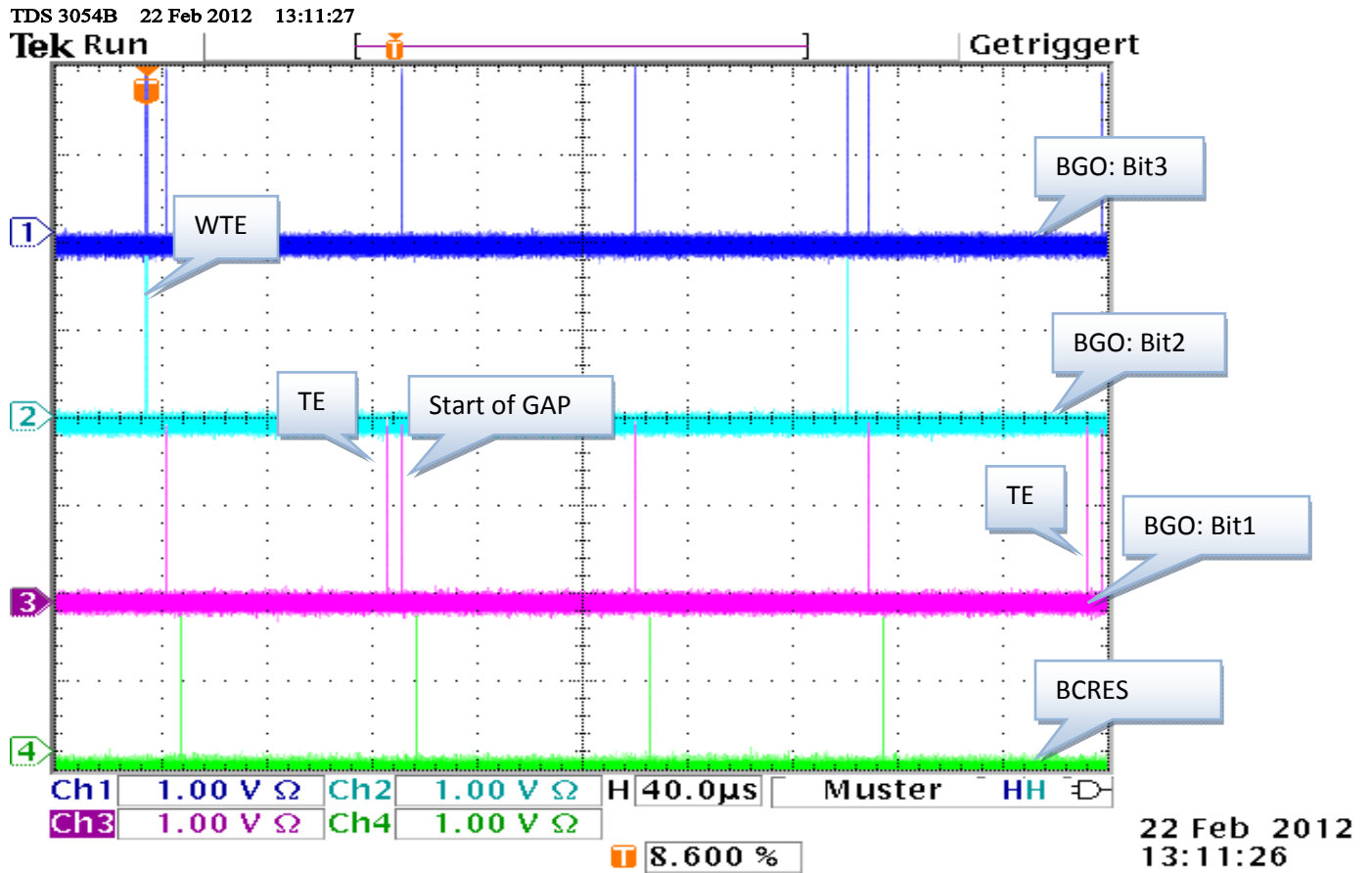
In order to test the new feature of TCS firmware V1033, the following steps should be done:

- 1) Configuration of the TCS with TS the key "gt_2012_ft_2"
- 2) In tcs command line the register "PTC_CMD_REG" should be set to the value, which the bit6 is set. Read the value: result → "1680", then write the register with "16c0"
- 3) In tcsgui GT und EVM in simu modus
- 4) The other registers should be set as in screenshot of tcsgui
- 5) Trigger at OSCI is as follow: **Bit2 AND Bit3**
- 6) **Alternativ:** you can configure the TCS with TS, then set just calbraiontrigger, then start run, then put l1a into CH1 of OSCI and Bit 2of CH2. If you change the value of PTC_CMD_REG from 1680 to 16c0, you see that WTE jump in other bunch crossing

This screenshot shows the behavior of TCS firmware (V1033), if CALTRIGGER is set to "-1" (in tcsgui).



This screenshot shows the behavior of TCS firmware (V1033), if CALTRIGGER is set value, which we get after configuration.



Applications Places System 6 °C Wed Feb 22, 12:17 testing

TCS_GUI

PTC 0 | PTC 1 | PTC 2 | PTC 3 | PTC 4 | PTC 5 | PTC 6 | PTC 7 | Master

Indicator

Time Slot: 2550 [Orbits]

PTC Input: Ready

PTC Output: Ready

FSM Status: READY

[Refresh](#)

Trigger Type ID

Physics: 0x1 | Traced Phy: 0x5

Calibration: 0x2 | Test: 0x6

Random: 0x3 | Error: 0x7

Emulator: 0x0

Emulator Delays

Resync: 2

BCReset: 2

Emulator Trigger

Delay: 0 BC

Signal: IGNORE

Random Trigger

Frequ ~600 x: 1

Prescale Factor: 1

[Start Random Trigger](#)

[Stop Random Trigger](#)

Configure BC Table and set Run Settings

RESYNC at 1901 | RESET_ORBIT at 1901 | START at 1901 | END_OF_CALCYC at 3560

HARD_RESET at 1901 | START_OF_GAP at 3318 | STOP at 1901 | RESET_EVNR at 1901

[clear BC Table](#)

CALIBRATION TRIGGER Sequence

Periodic every 89.1us | [Send a Caltrig Sequence](#)

WARN_TEST_EN	TEST_EN	CALTRIG
3000	5100	-1
-1	-1	-1
-1	-1	-1

Attention: Take care of ascending order! Caltrig inhibits others.

PRIVATE BGo

[Send a Priv BGo](#)

Periodic every 89.1us

PRIV_BGO_P at 0

0001/BC0

901_1111

[Add](#)

[Del](#)

VALID BC

VALID_BC at 0

0
1
2
3
4
5
6
7
8

[Add](#)

[Del](#)

[Del All](#)

[Use All Bunch Crosses](#)

[Bunch Pattern for 25ns](#)

[Bunch Pattern for 75ns](#)

Use Source to define active BCs

Use Valid BC from BC Table

Use Beam Counter

TEST TRIGGER

Allow Test Trig | [Send Test Trig](#)

Periodic every 89.1us

TEST_TRIG at 0

100

[Add](#)

[Del](#)

PRIV ORBIT

[Send a Priv Orbit](#)

Periodic every 89.1us

PRIV_ORBIT at 0

Run Options

Ignore Status...

Disconnected

Bad Codes

Do not send Event Records to the EVM of the GTFE

Disable FINOR

Enable AutoResync

Run Number: 0

auto increment

Start clears Orbit Number

[Start Run](#)

[Stop Run](#)

[Resynchronize](#)

[Hard Reset](#)

[show Monitor Counters](#)

Enable Error Trigger

Status Monitor

[Quit](#)