

Firmware Updates

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ROD Firmware work-in-progress

1) Separate **data-taking** and **Calibration** firmwares



2) **Stabilize** firmware **generation**



3) **Cleaner merger** in PIXEL firmware



4) (Major) change in **git structure**

5) **Consolidate** new FW loading **procedures**

6) **Smart L1ID Forwarding** FW



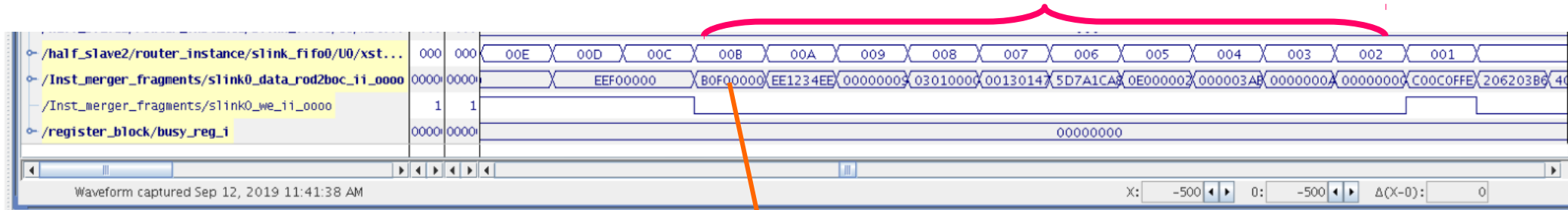
7) $\left(\text{Create a } \mathbf{ROD \text{ fw test-bench}} \right)$

Merger

“Standard” event

Merger ok, no word error count

SLINK Header
(10 words)



BOF

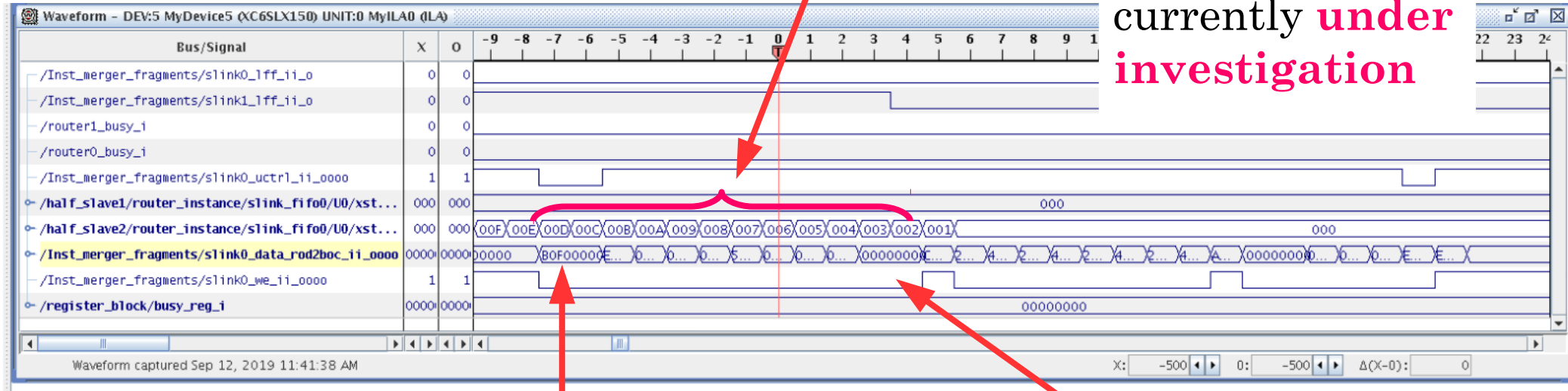
Merger

After ECR event

Not ok, word error count

SLINK Header
(12 words)

Error can be
simulated,
currently under
investigation



BOF duplicated

Last header word duplicated

Trigger generation in master

Working on request of creating a **user-defined trigger pattern** from master

Idea: set exactly trigger pattern for ~ 4000 bc $\rightarrow 32$ bits * 125 times

Adding 2 master registers to control it

Problem: all the other TIM signals (trigger type, ecc) \rightarrow **working on simulation** to solve it