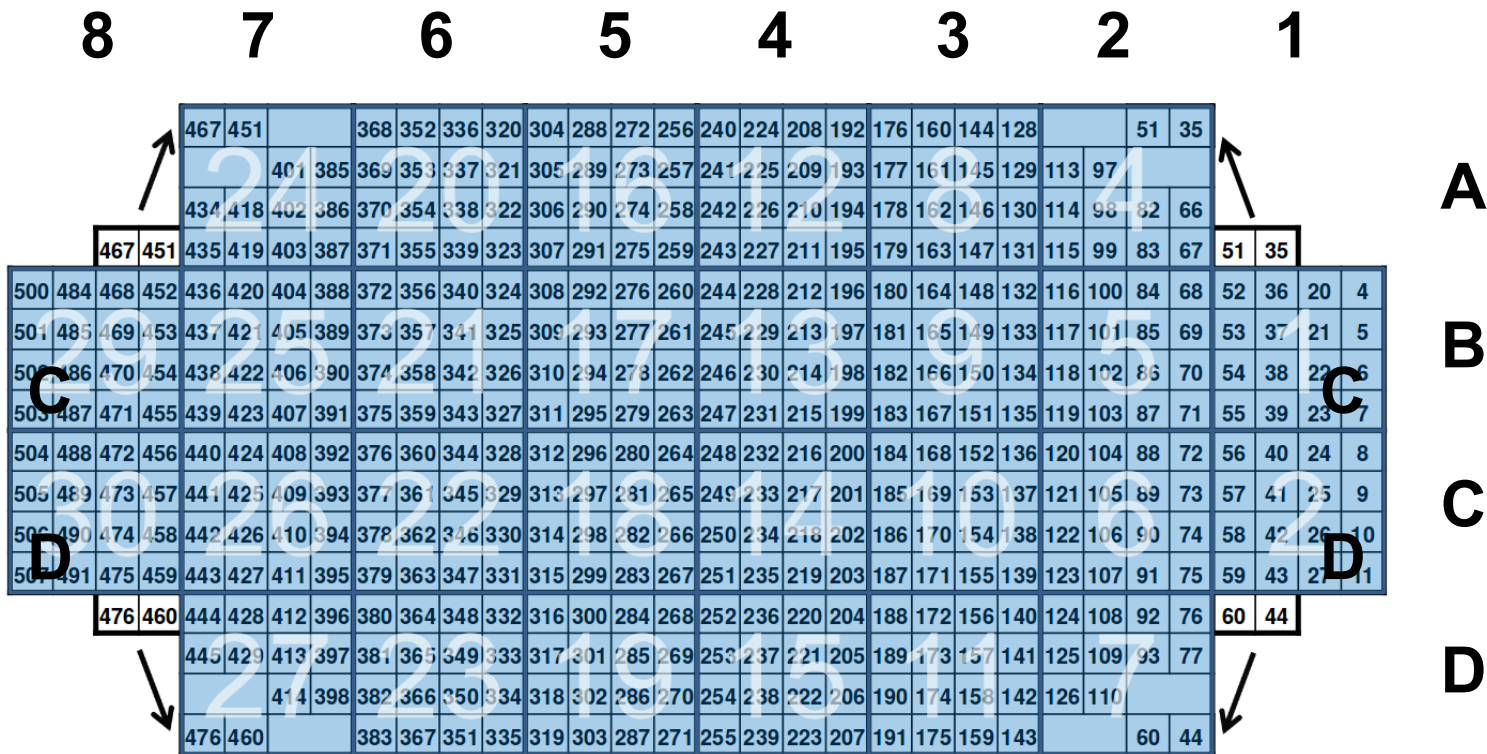


Status of the Lkr trigger

A. Salamon for the Lkr/L0 working group
(Roma, Perugia, CERN)

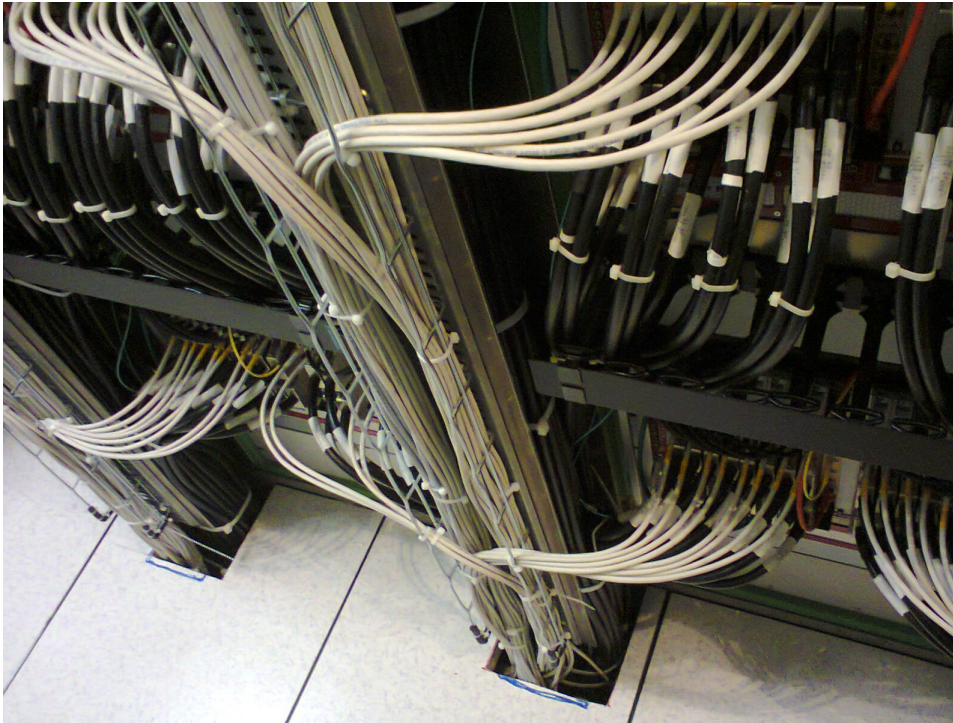


Installation

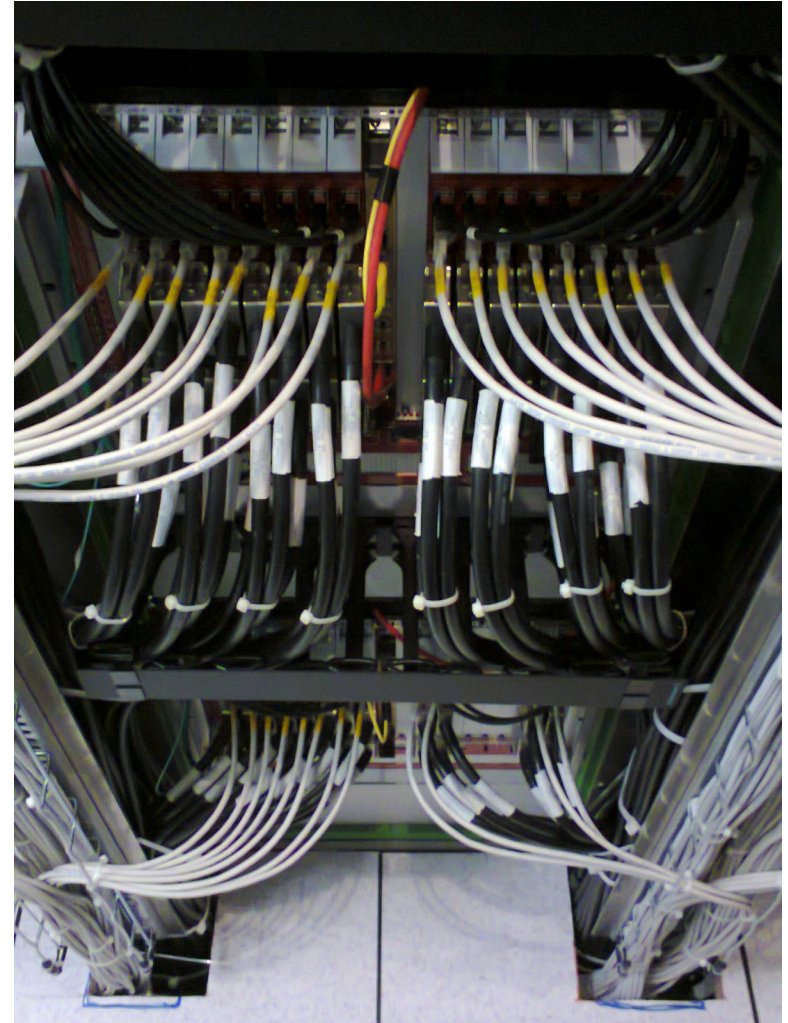


- CREAM racks 6, 7 and 8 cabled
- 3 trigger crates installed (2 for the FE card + 1 for the Concentrator cards)
- Trigger crates power supplies just arrived at the end of last week, to be installed

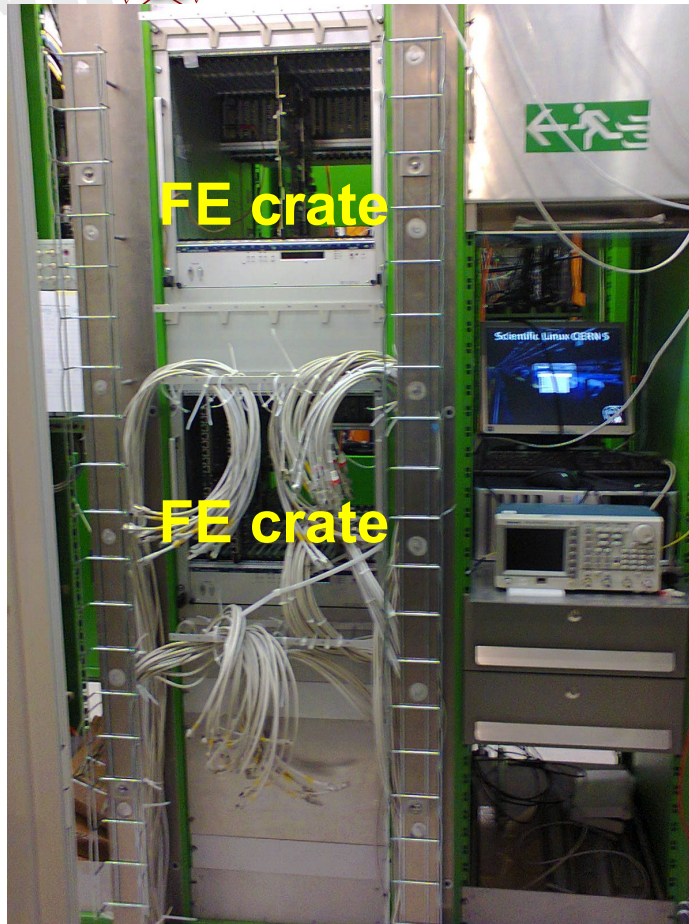
Installation (CREAM side)



- Trigger cables coming from CREAMs
- CAT6 and CAT6A SFTP from Roline, Lindy and Dexlan
- Cables from different firms due to delivery times



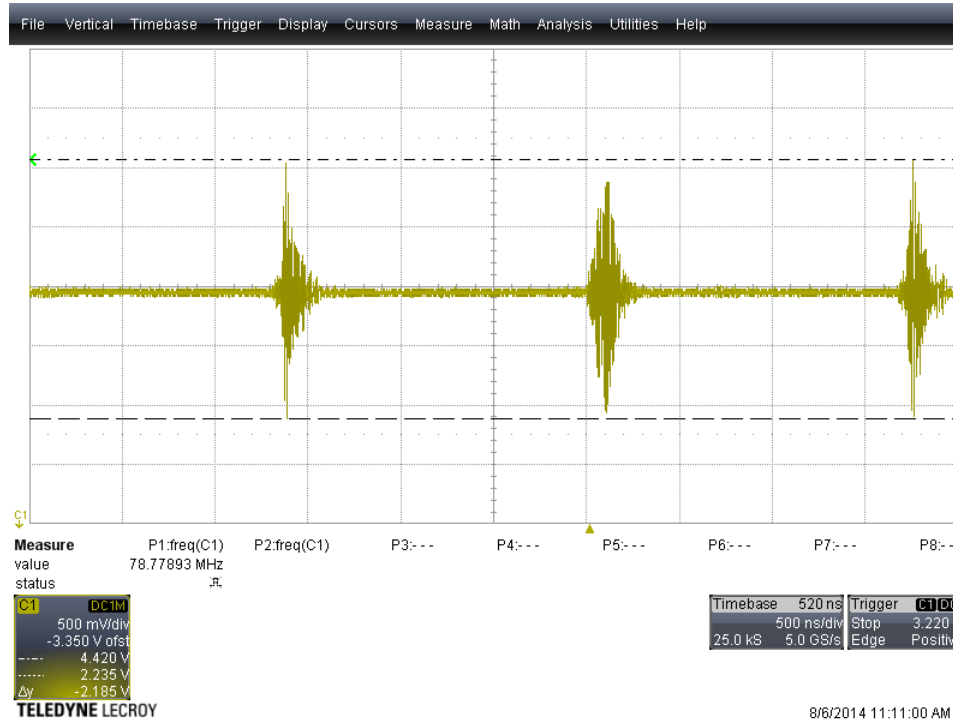
Installation (trigger side)



- Concentrator crate installed on the back of the crate to reduce FE-Concentrator cable length
- Power supply just arrived at the end of last week, to be installed
- Optical fanout and ethernet switch on the back



Installation (problems)



- One power supply very noisy
- One power supply broken
- EPROM not working on one TEL62 (configuration lost)
- One TEL62 that worked fine for a long time was broken with some kind of “mechanical” problem (one PP FPGA is not configured but if you press on it with your finger sometimes it configures)



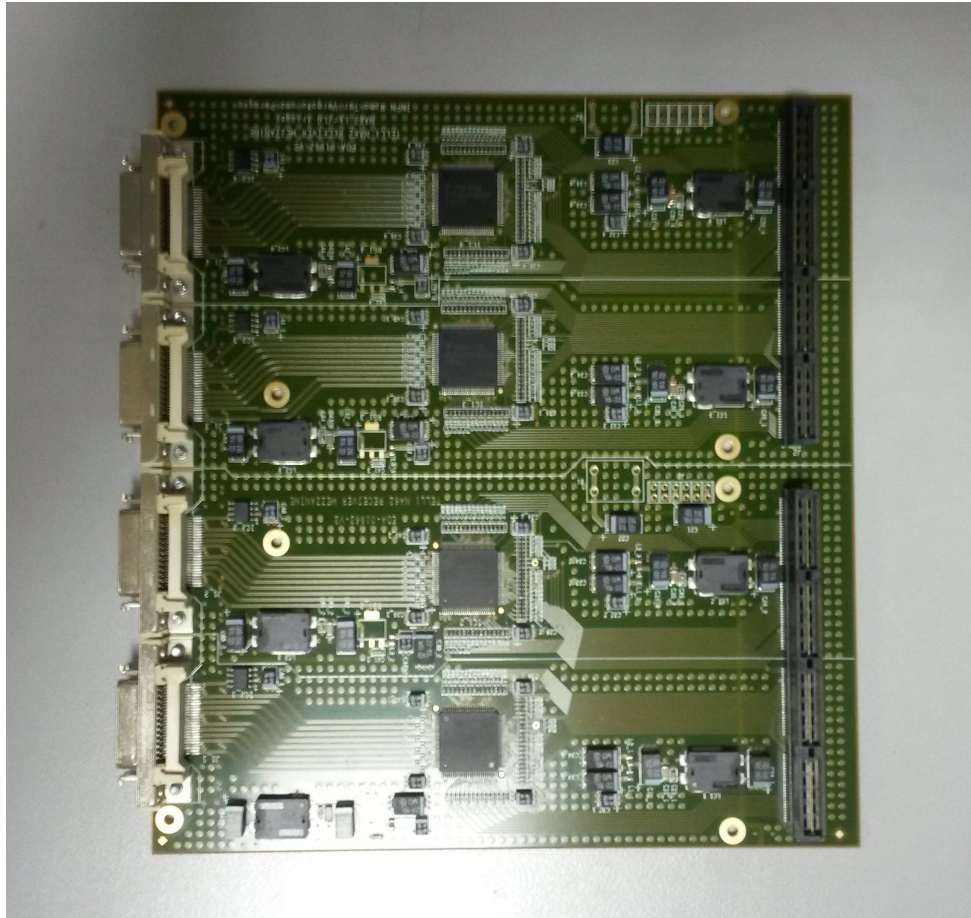
Installation (plans)

- 2 and ½ weeks to complete cabling

TELDES status

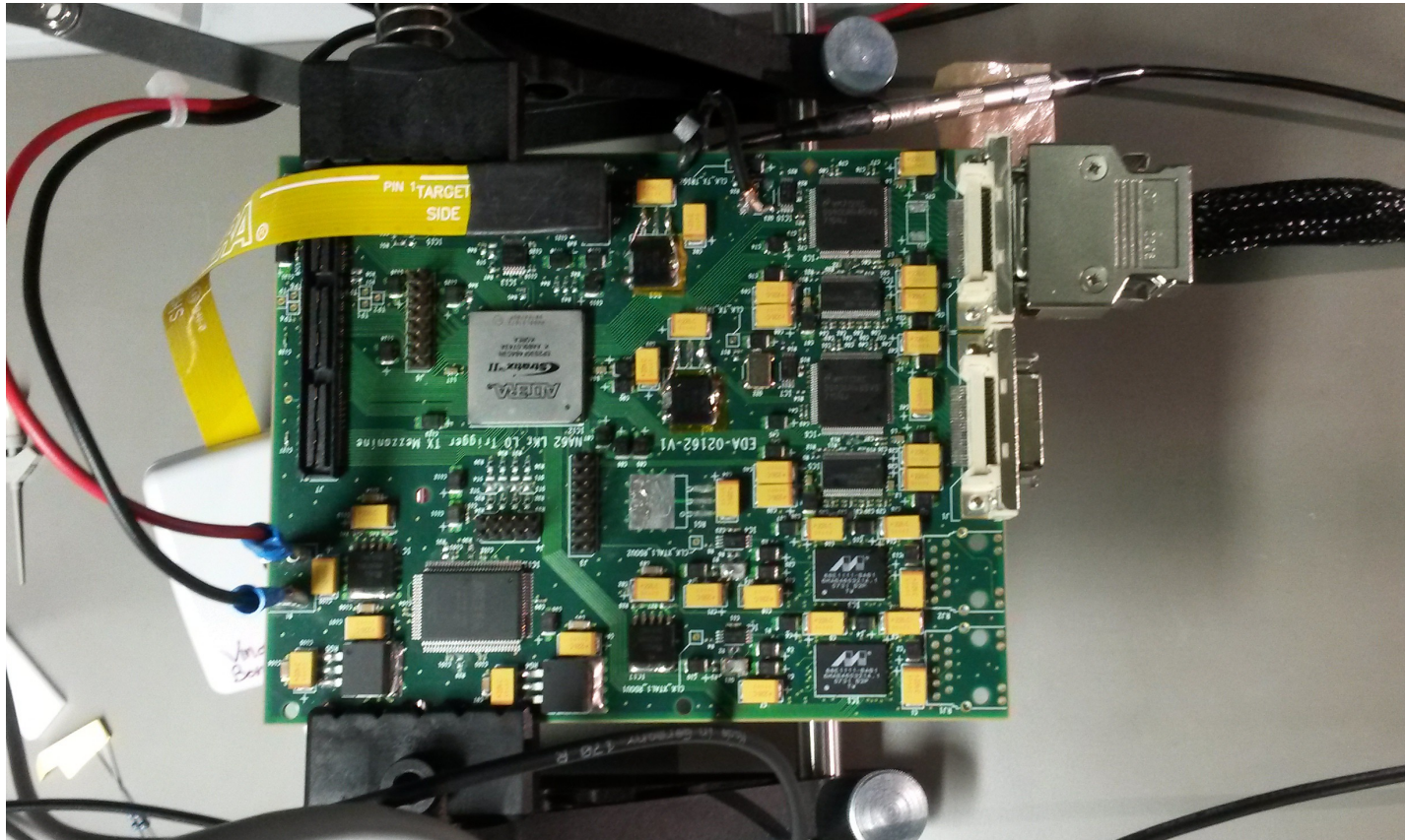
- Production TELDES being delivered now: see B. Checcucci's talk at the TDAQ WG

LKr/L0 RX (preproduction)



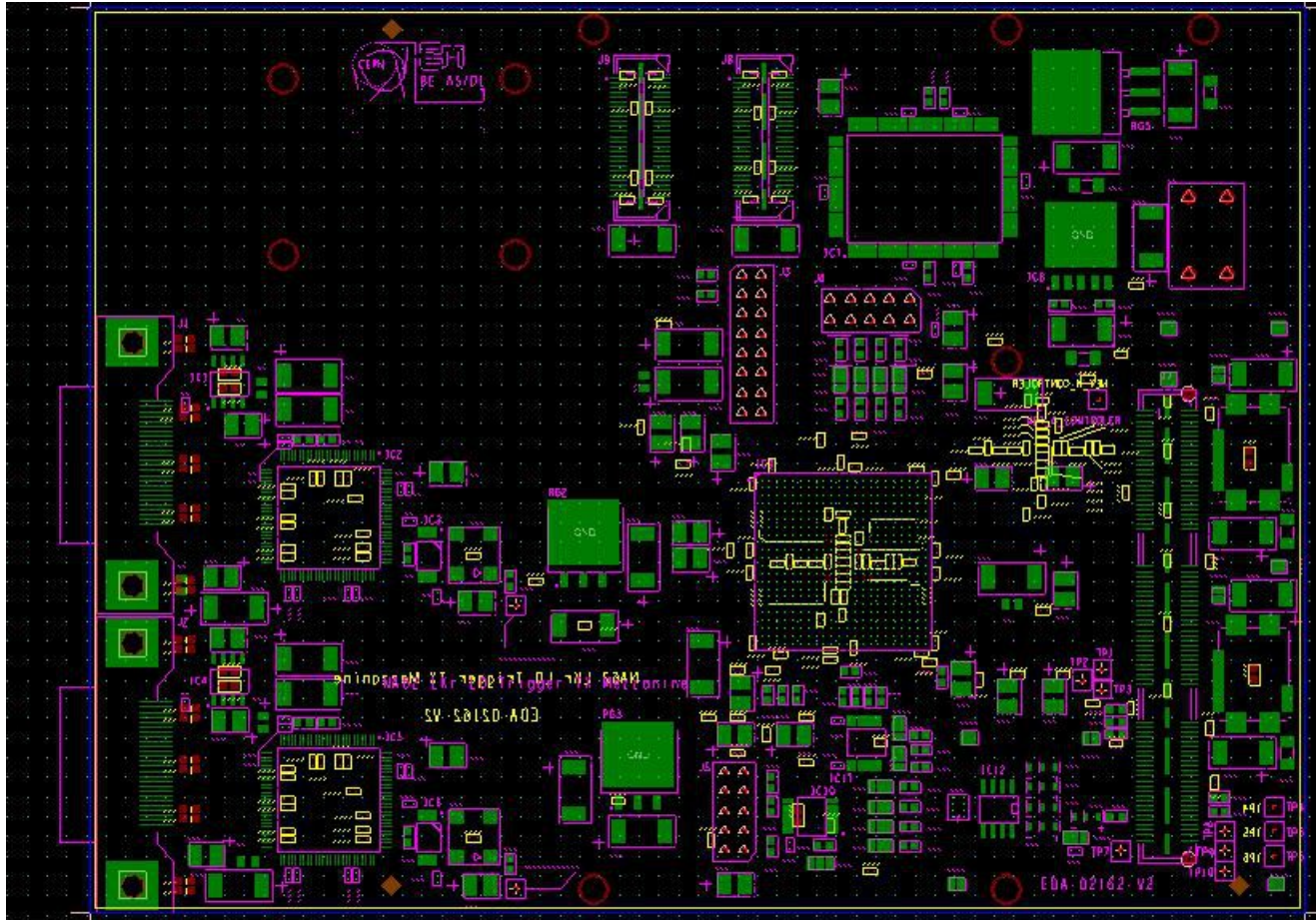
- 10 preproduction PCB delivered, 2 assemblies and tested in Rome

LKR/L0 TX (prototype)



- 2 prototype tested, 4 preproduction PCB being produced this week

LKR/L0 TX (preproduction)



- 4 preproduction PCB being produced in 1 week and then to be assembled



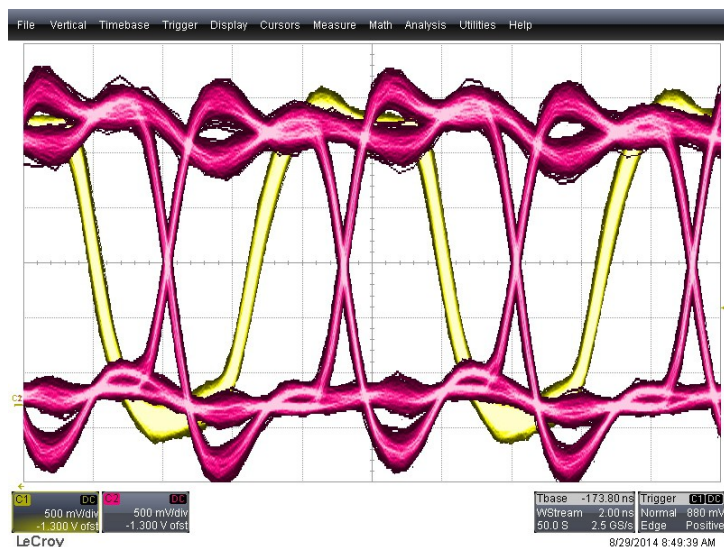
LKr/L0 TX – RX cables



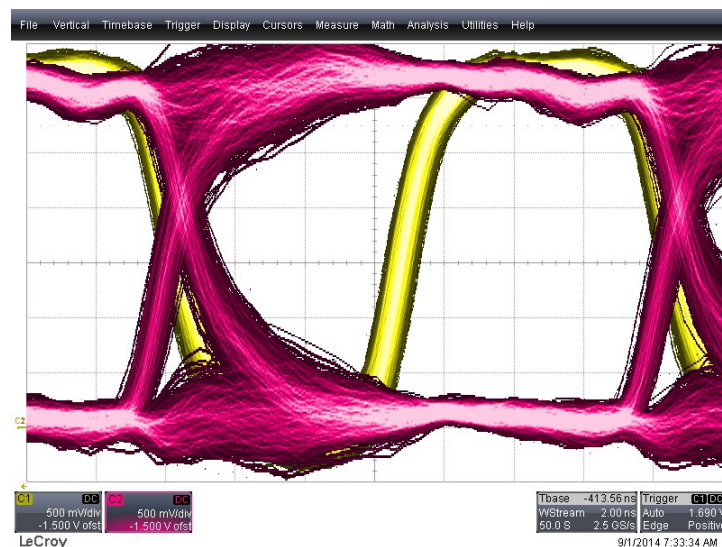
- 10 production cables assembled (2m, 11 LVDS shielded pairs, halogen-free)
- 70 production cables to be assembled soon
- Special cables needed to connect the prototype TX to the preproduction RX (prototype and preproduction have different pinout)



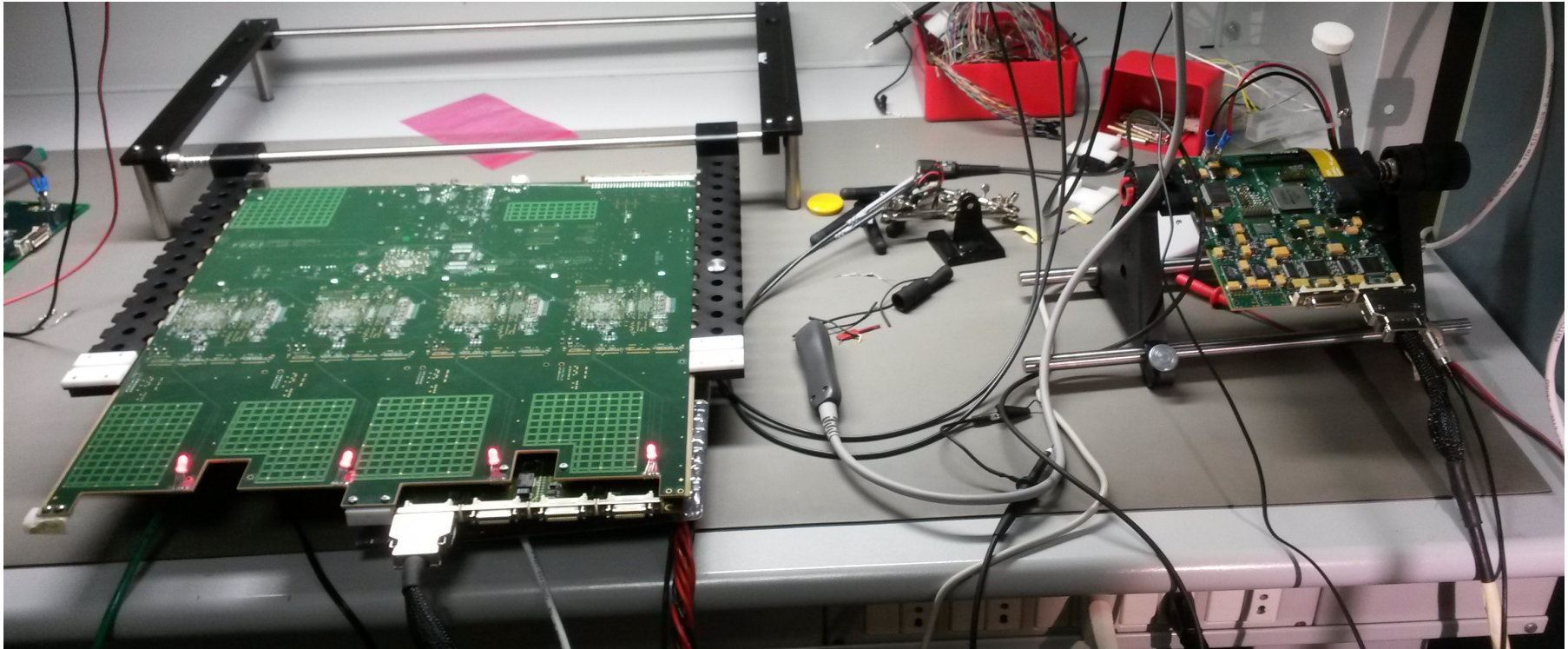
LKr/L0 TX-RX tests



Lkr/L0 TX serializer:
PRBS23 @ 100 MHz



Lkr/L0 RX deserializer:
PRBS23 @ 70 MHz

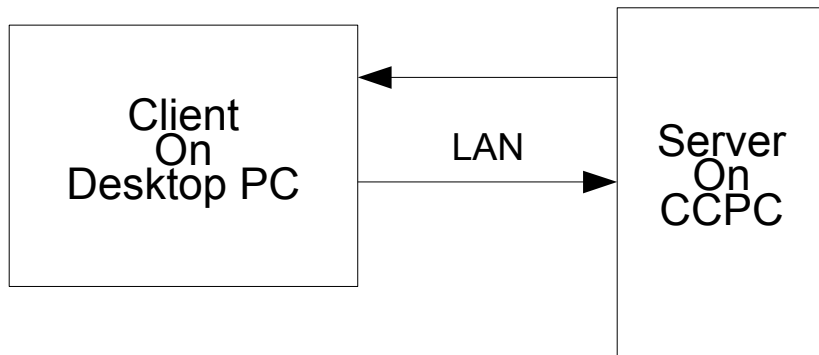


- Preproduction RX + prototype TX tested in Rome and at CERN
- PRBS23 working fine with clock frequency between 70 and 85 MHz
- BER < $1 \cdot 10^{-15}$ (we didn't see errors in overnight runs at CERN)
- 48 bit @ 85 MHz = 4.1 Gbps from LKr/L0 TX to LKr/L0 RX
- Waiting for 3 special cables (being assembled at CERN) to connect the prototype TX to the preproduction RX to test a full input RX (4 cables needed)

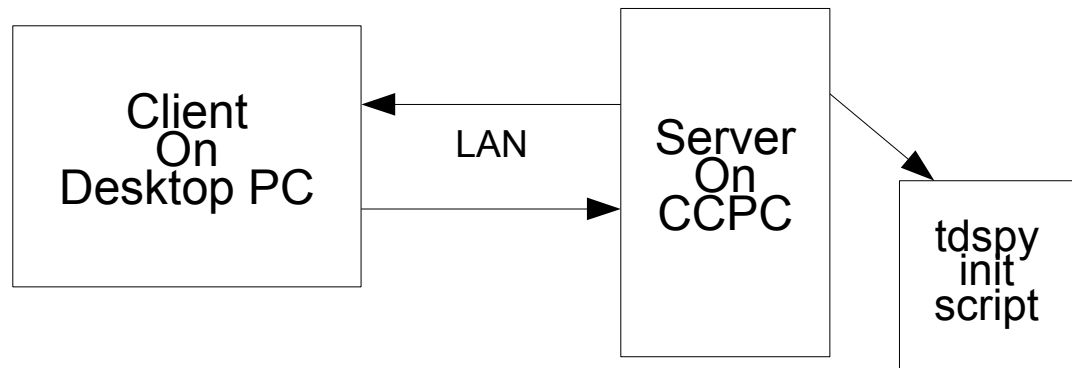


LKr L0 Run Control (Done)

Client – Server simple network communication



Client – Server one-side communication for TEL62 board initialization





LKr L0 Run Control (To Do)

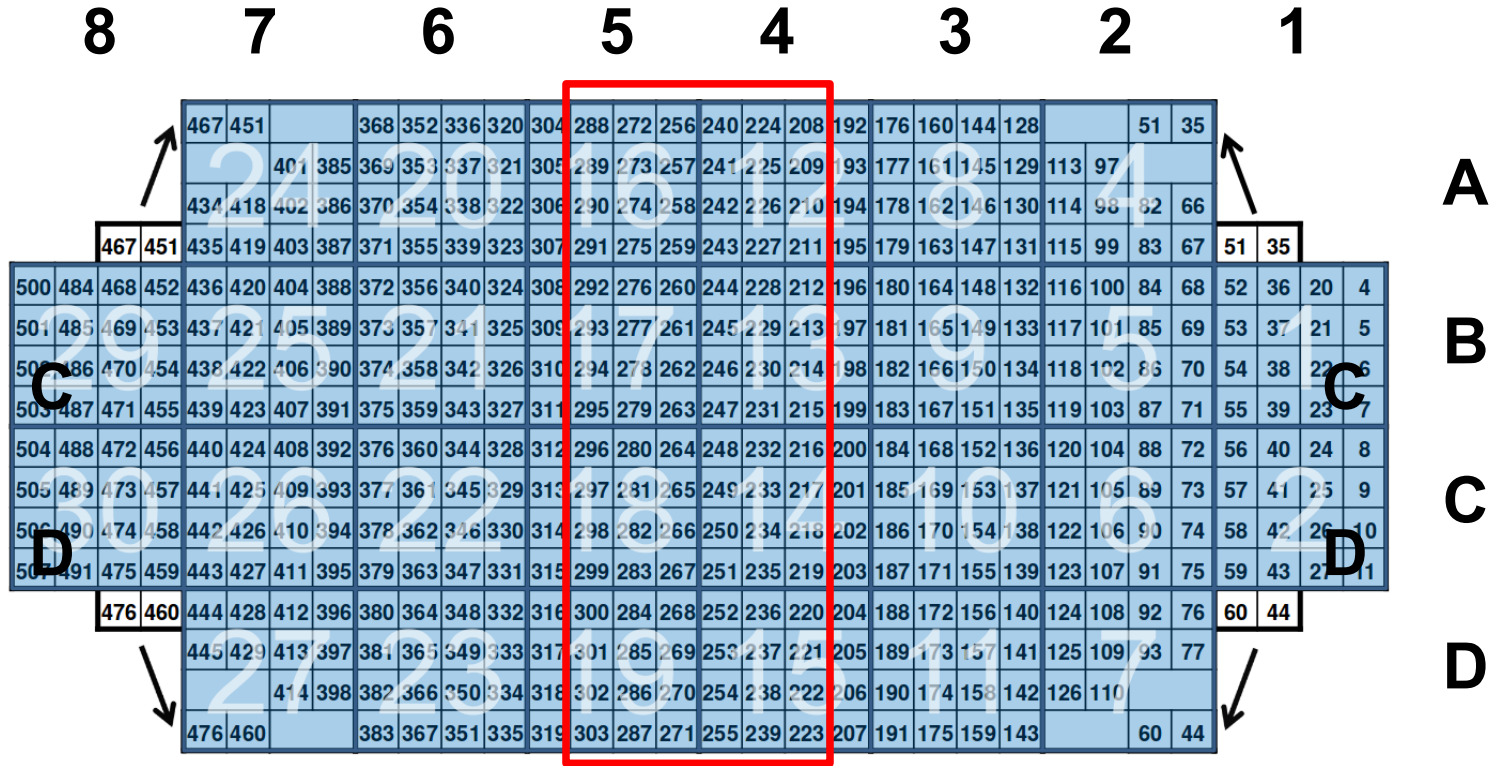
- Write the configuration file for the Lkr L0 Tel62
- generate configuration the scripts from the configuration file
- Tests

} ~ 2 weeks
(from 09/08/2014)

- Run Control integration and tests from the Control Room

} ~ 1 week
(from 09/22/2014 ?)

Plans for the (start of the) run



- 6 x (FE TEL62 + TELDES + LKr/L0 TX)
- 1 (Concentrator TEL62 + LKr/L0 RX + QGBE)
- More TEL62 and mezzanines to be added during the run