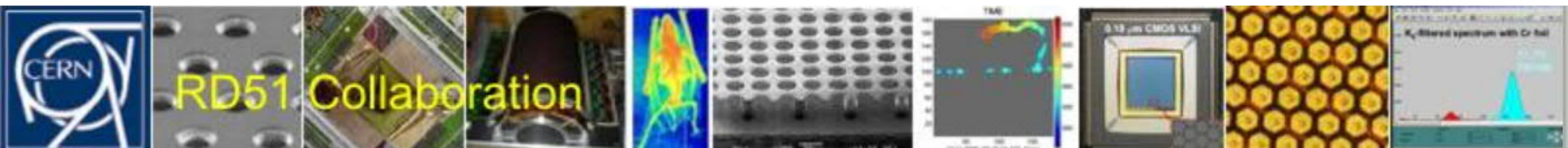




TOTEM SINGLE DIAMOND DETECTORS - RD51 Test beam

F. García

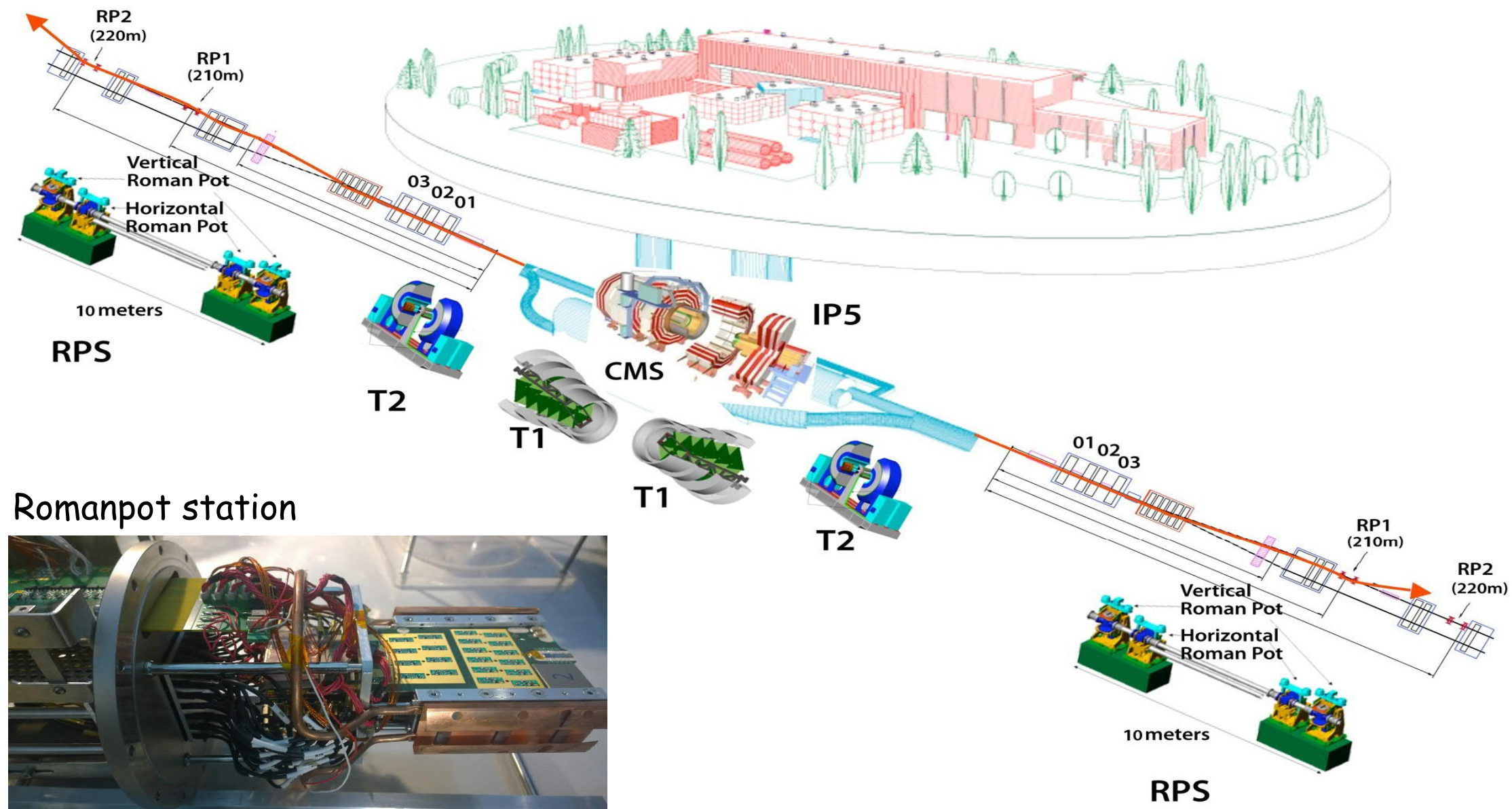
On behalf of TOTEM experiment



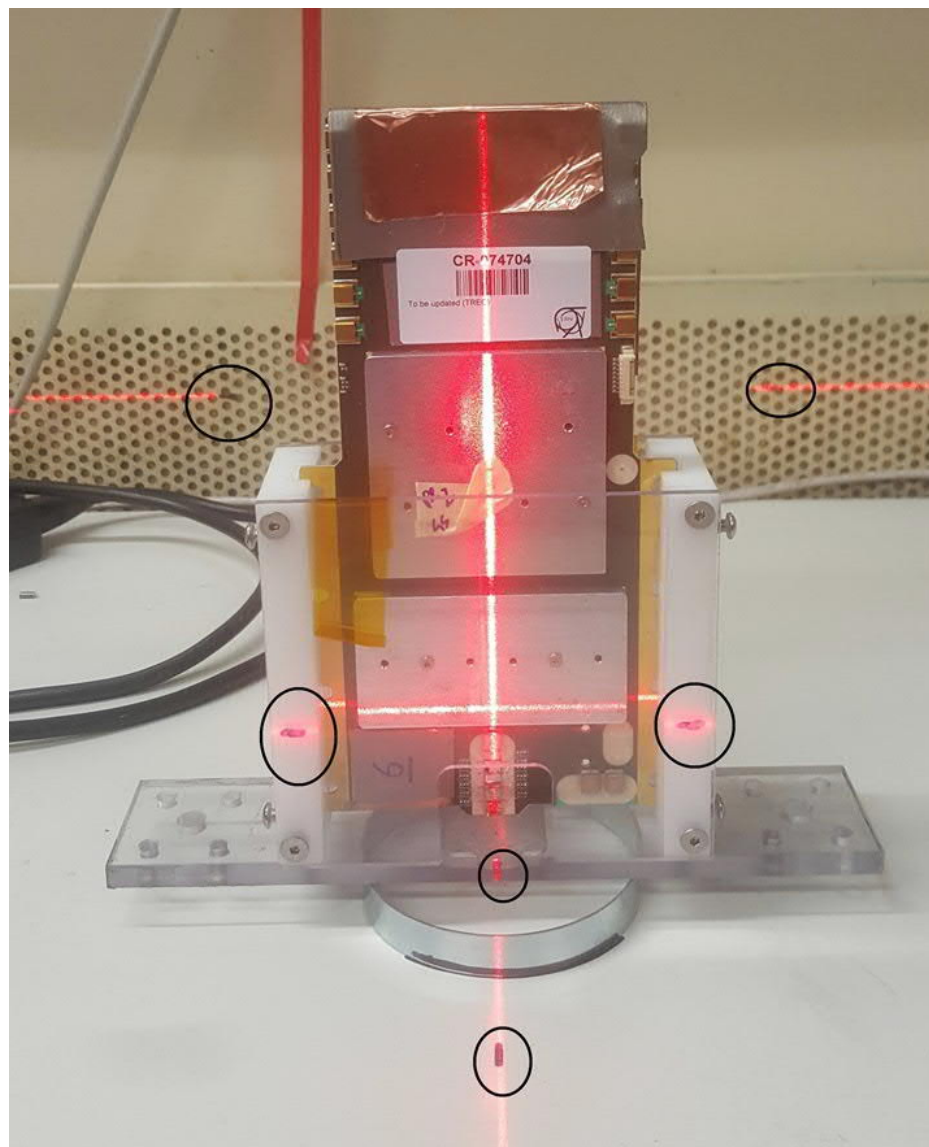
OUTLINE

1. INTRODUCTION AND MOTIVATION
2. TEST SETUP
3. SYNCHRONIZATION OF SRS - SAMPIC
DAQs
4. SUMMARY

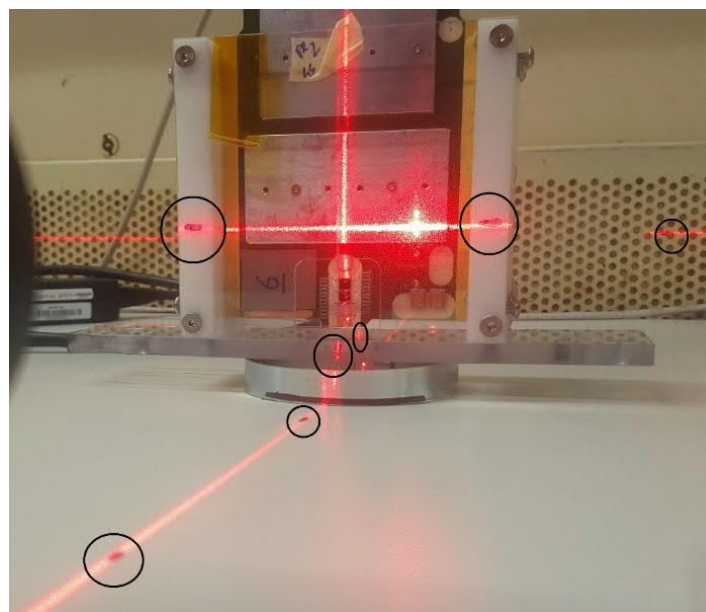
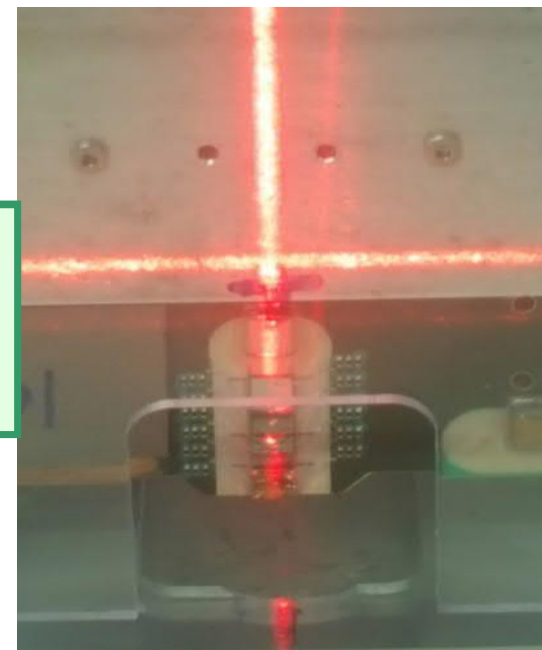
INTRODUCTION and MOTIVATION



TEST SETUP



Laser local
Alignment for all
four cards

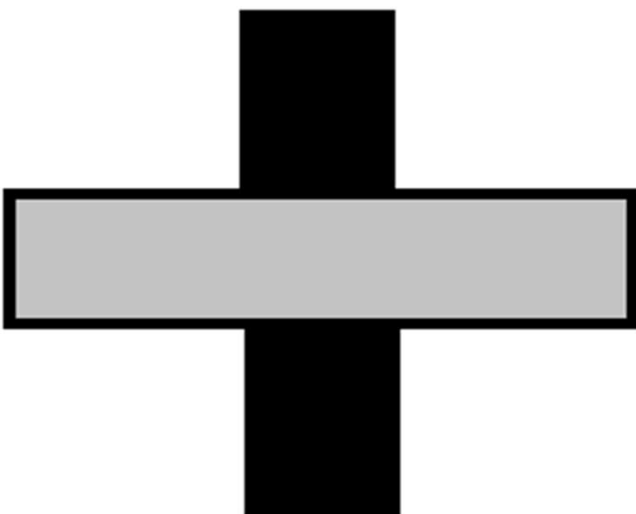


TEST SETUP (cont.)

Downstream direction



**Plastic Scint.
Horizontal &
Vertical**



Trk #1 Trk #2



**Plastic Scint.
Vertical**

Trk. #3



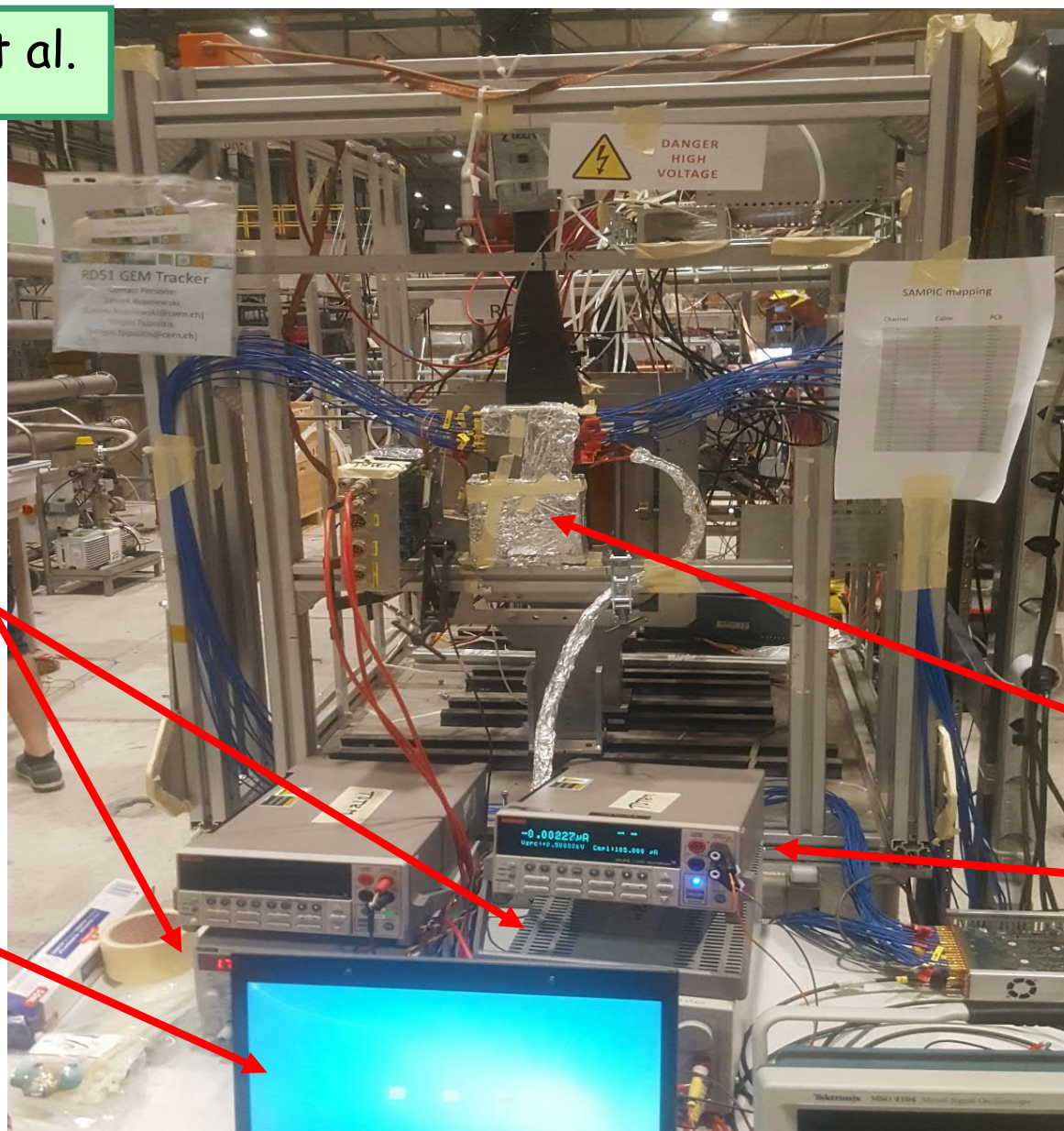
DUT



RD51 Reference Tracker

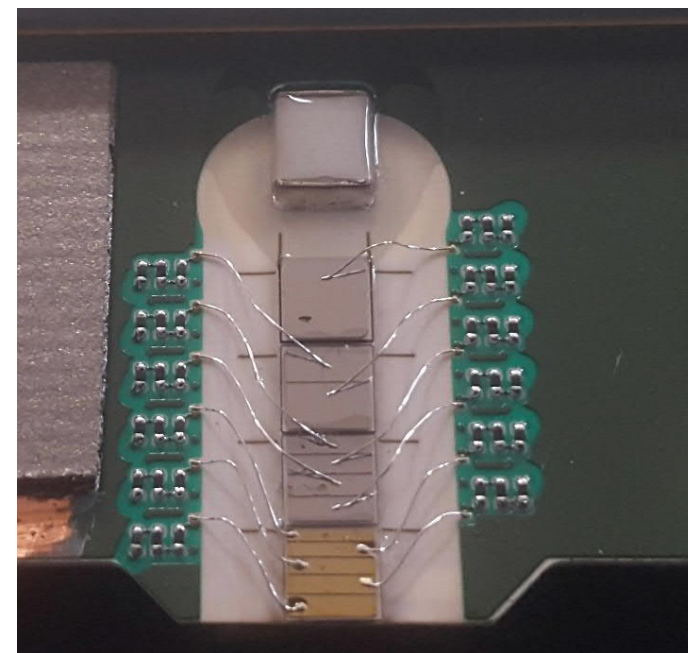
TEST SETUP (cont.)

E. Oliveri et al.



LV power supply

Running DAQ

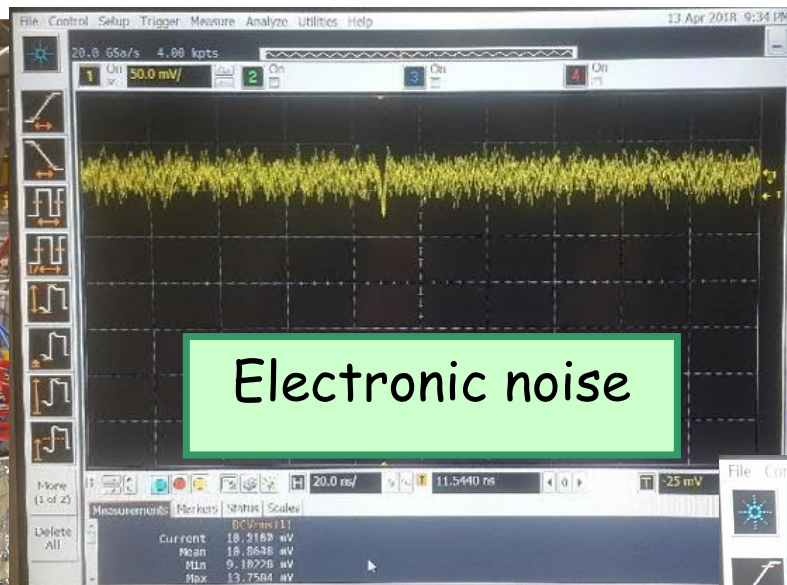
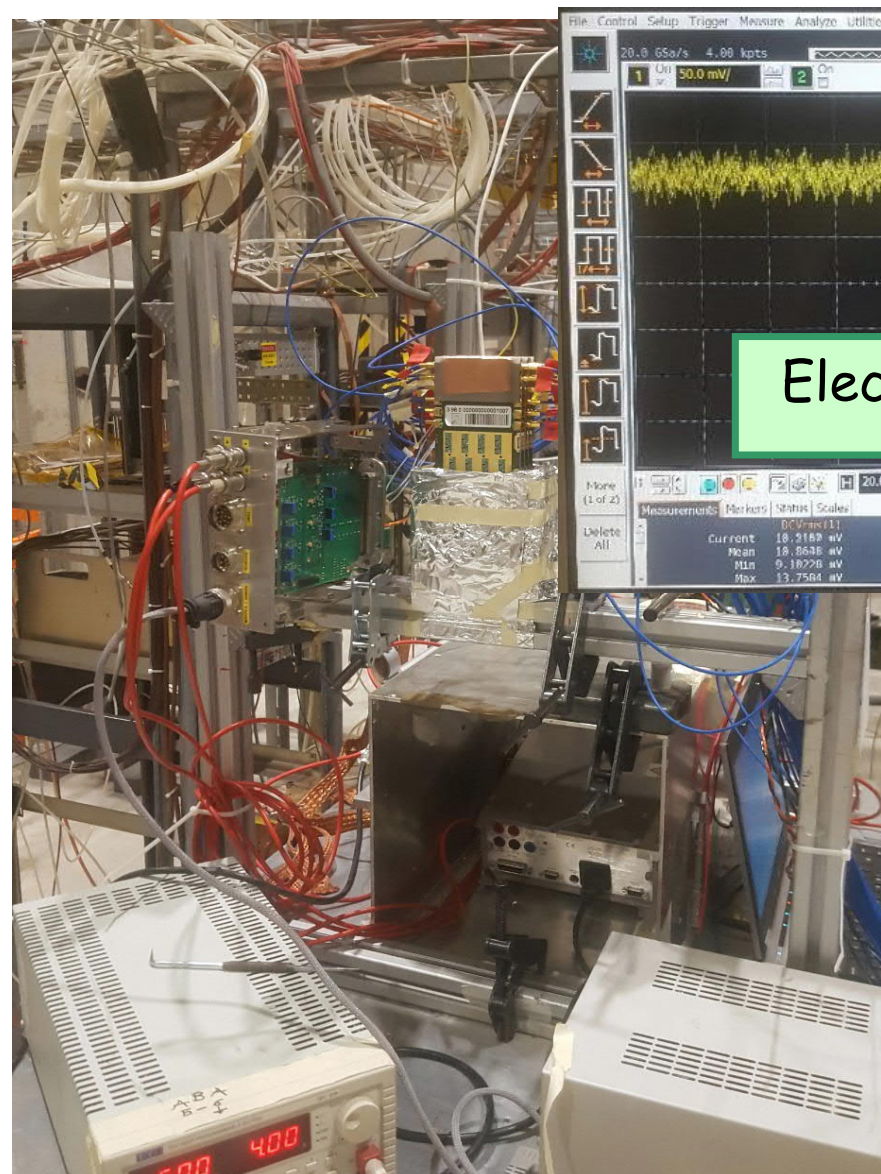


Diamond detectors

HV power supply

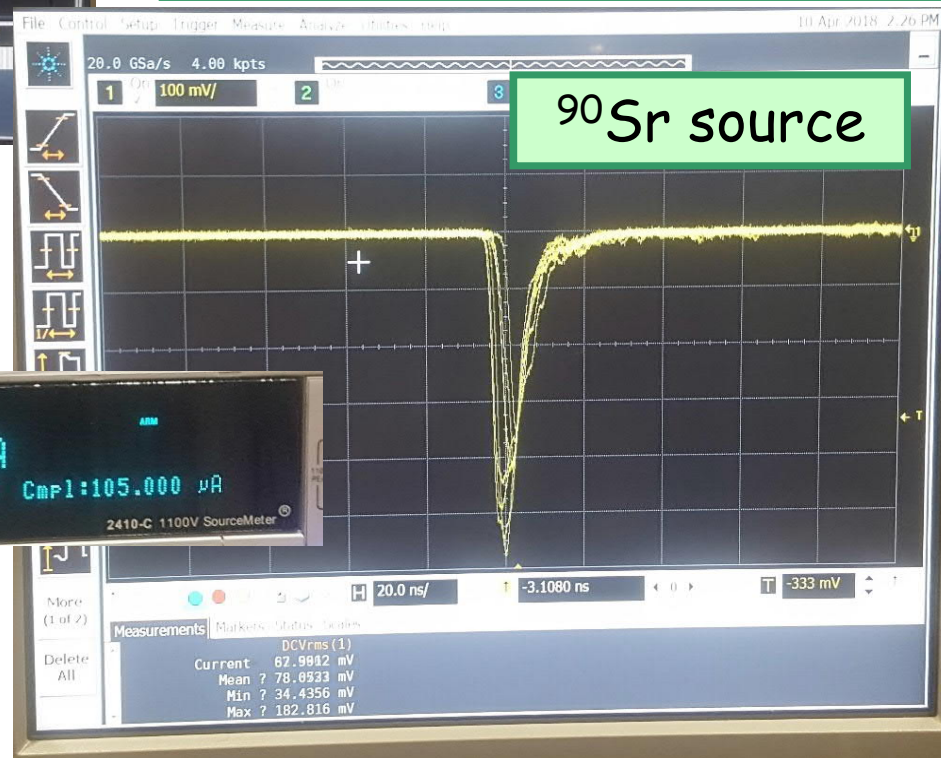
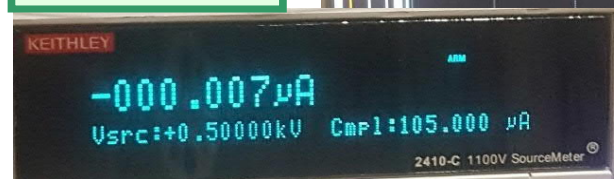
SAMPIC box

TEST SETUP (cont.)

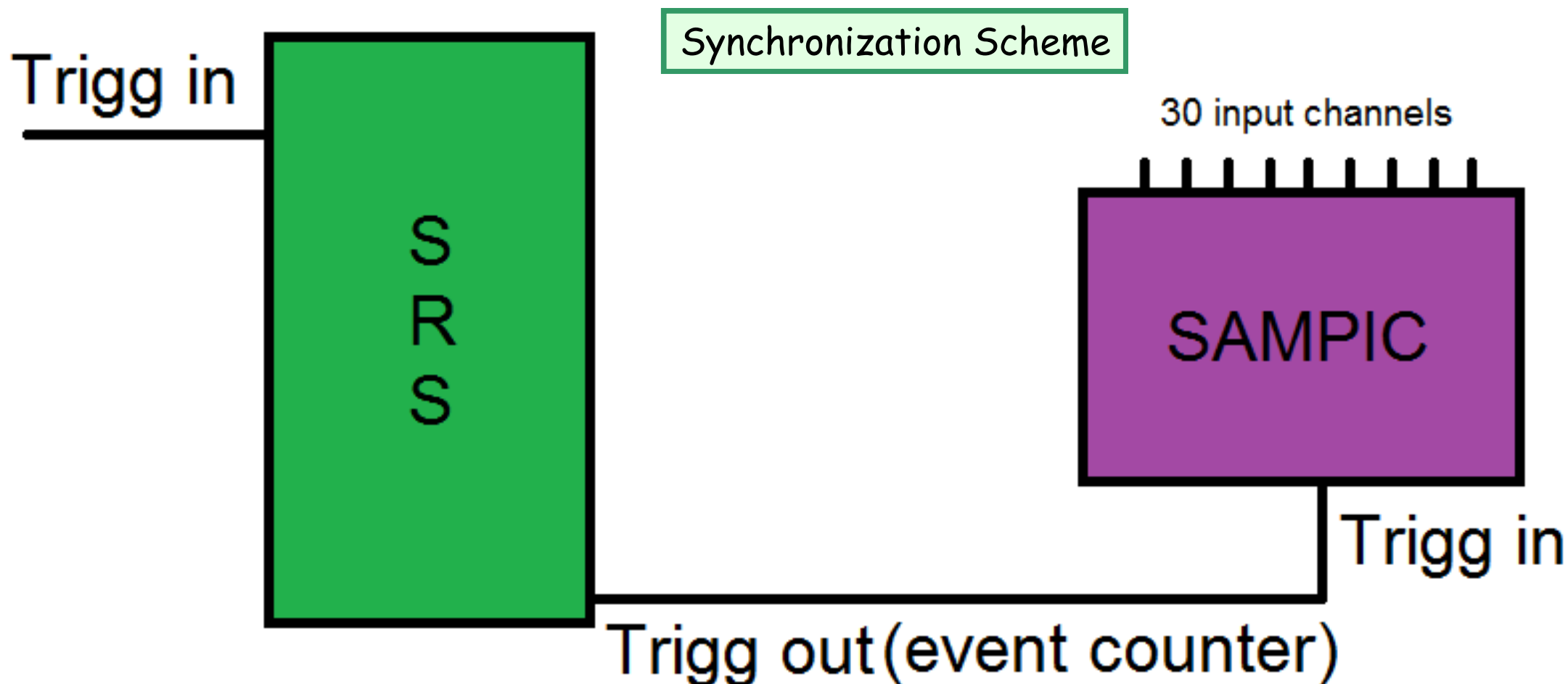


The noise performance was not same for all channels. However the threshold was selected in such a way that none of the channels was triggered by noise

Bias Voltage

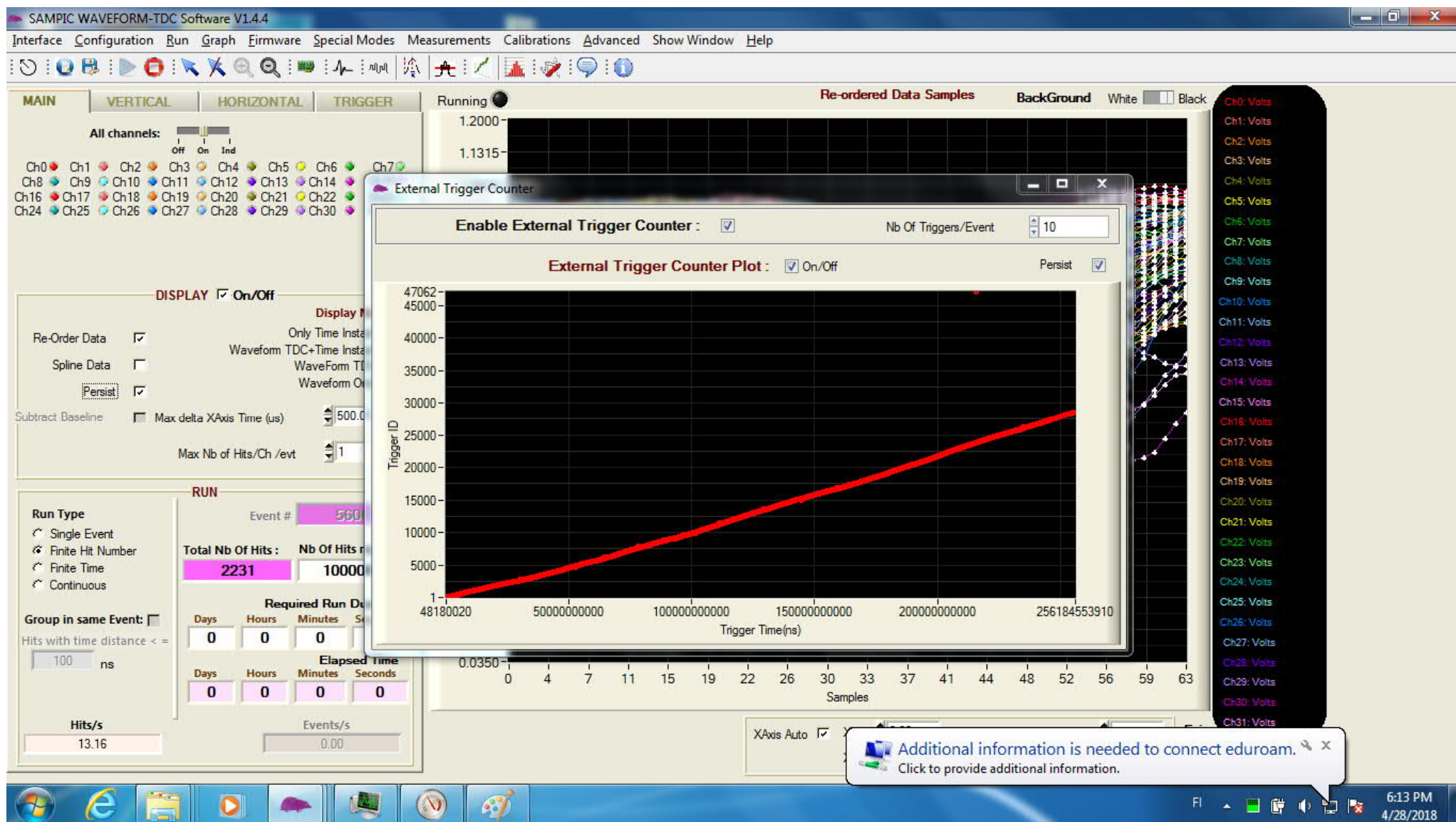


SYNCHRONIZATION OF SRS - SAMPIC DAQs (cont.)



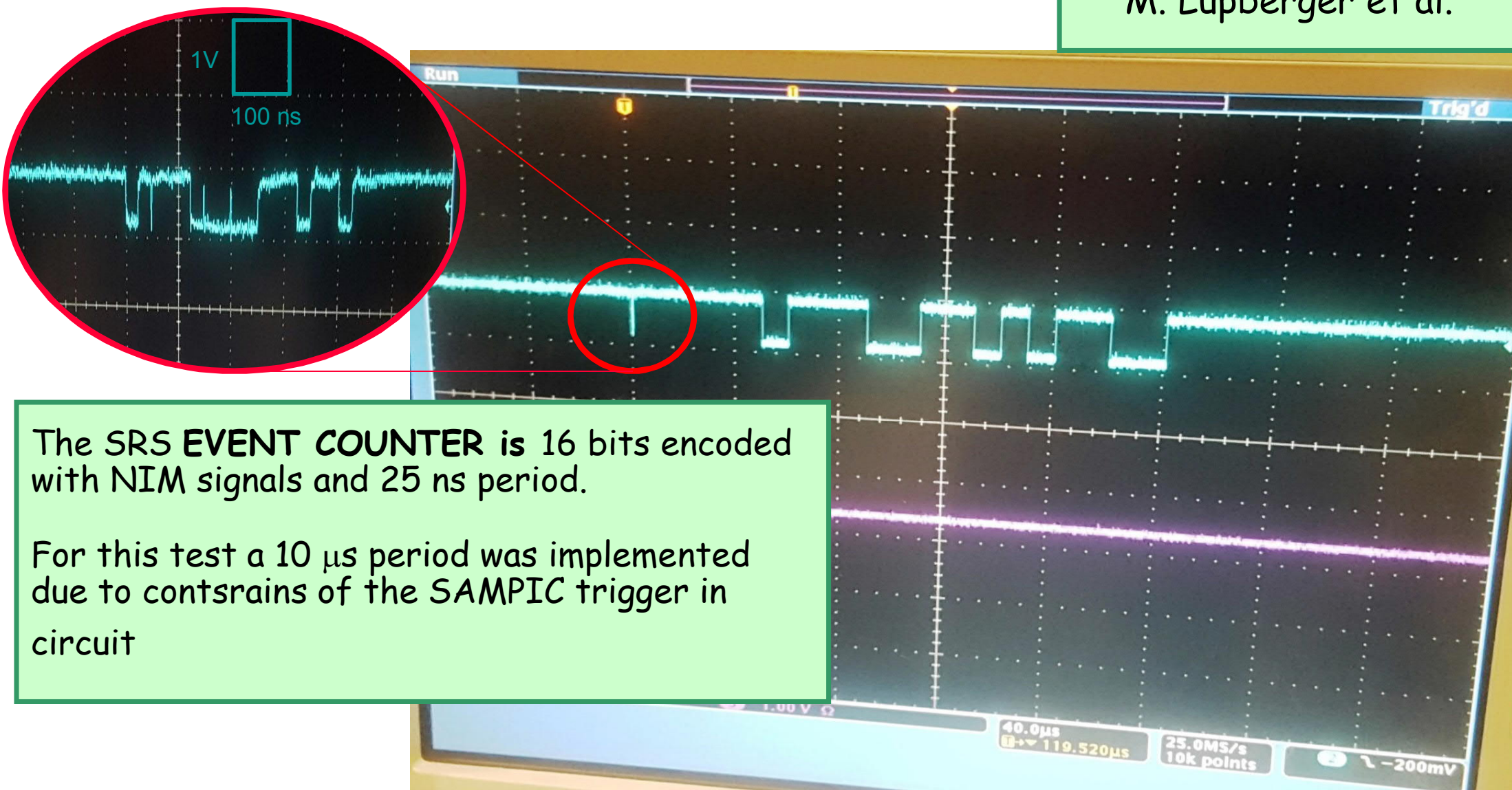
Very important remark the data is align later off line

SYNCHRONIZATION OF SRS - SAMPIC DAQs (cont.)

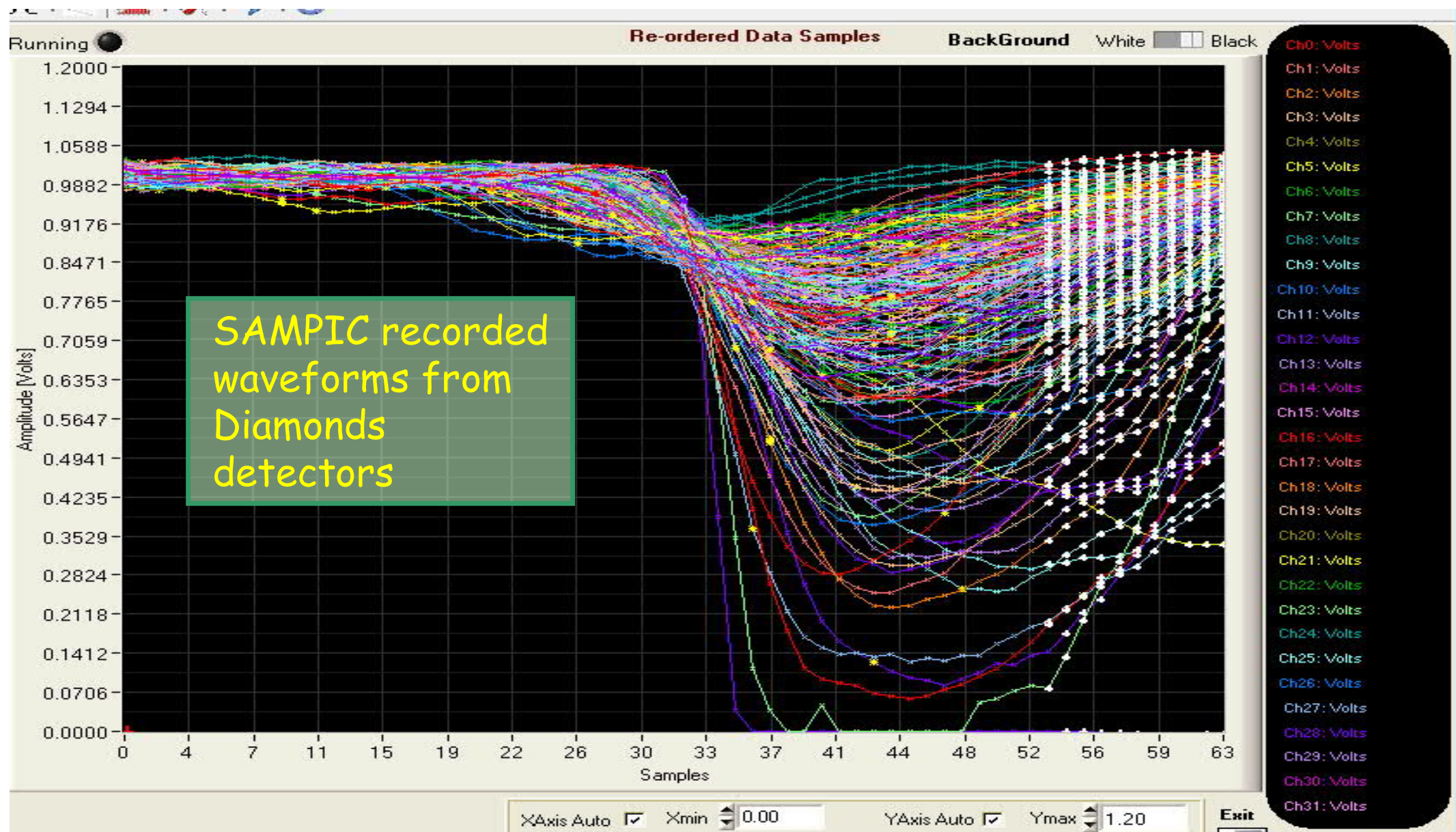


SYNCHRONIZATION of SRS - SAMPIC DAQs

M. Lupberger et al.



SYNCHRONIZATION OF SRS - SAMPIC DAQs (cont.)



SUMMARY

1. The Diamond detectors worked very well
2. The Noise was relatively low 10 mV RMS
3. The RD51 reference tracker performs very well
4. The attempt to synchronize two DAQs **failed**
5. A bug in the SAMPIC trigger in circuite was found and a new firmware is on the way (Thanks to D. Breton et al.)
6. Thanks to all RD51 test beam crew. I see Leszek and Eraldo are Spiritually linked to TOTEM forever and this is a good thing.....