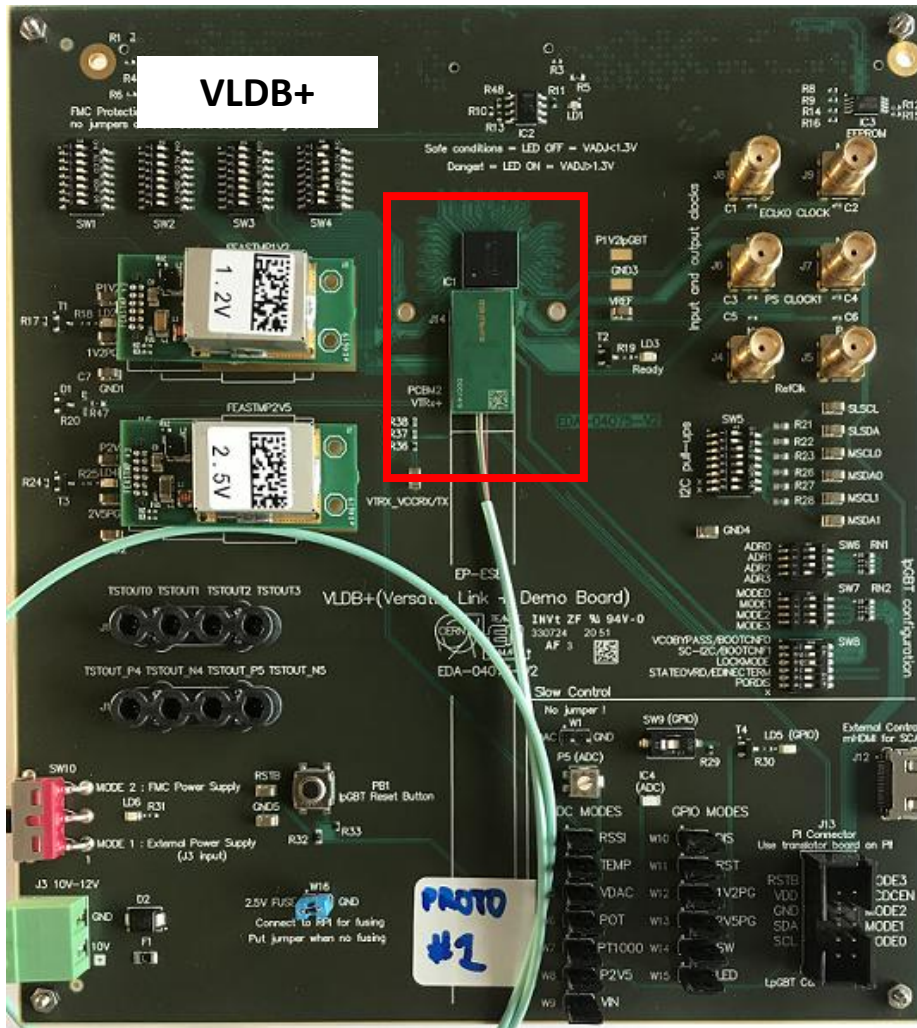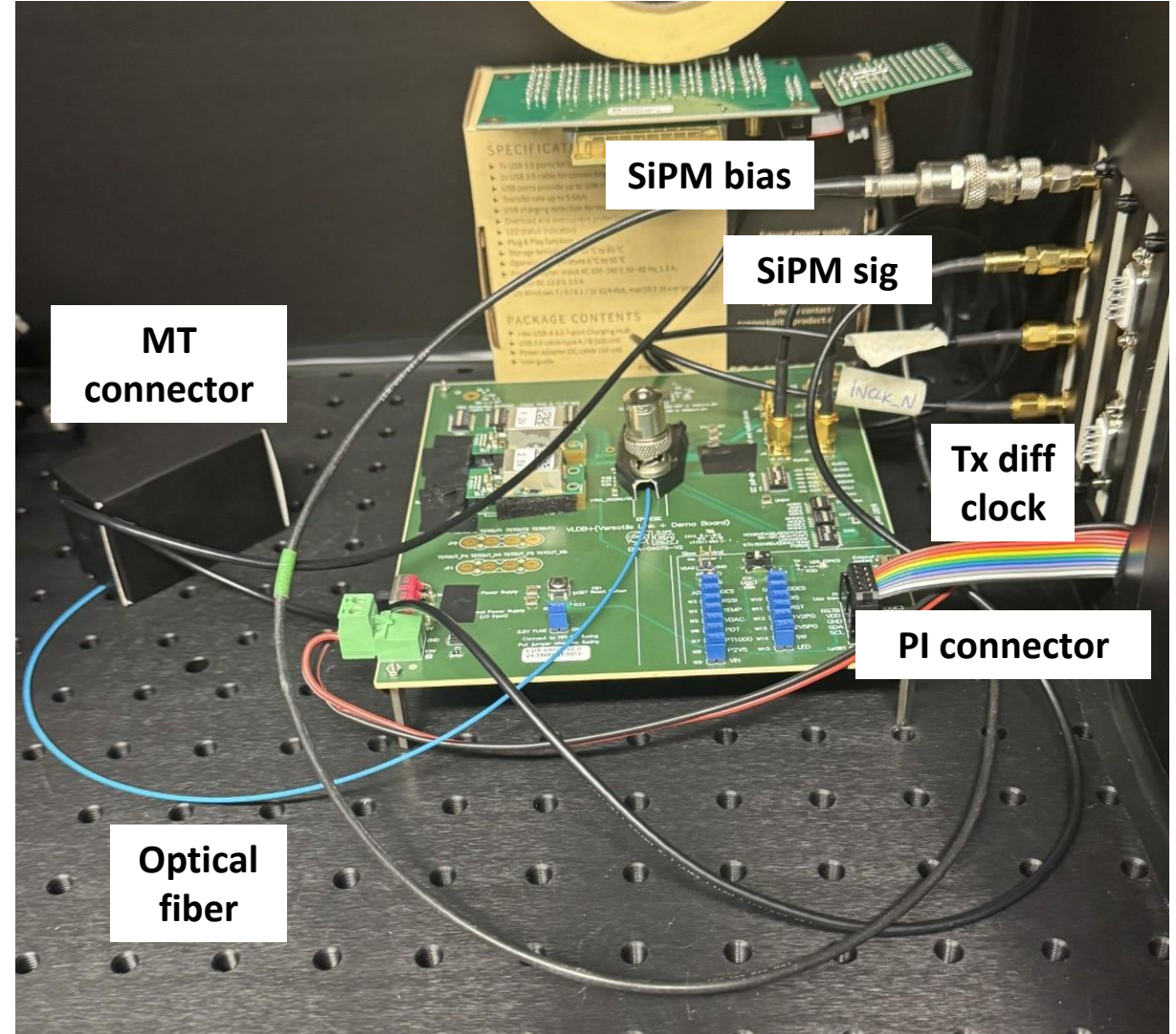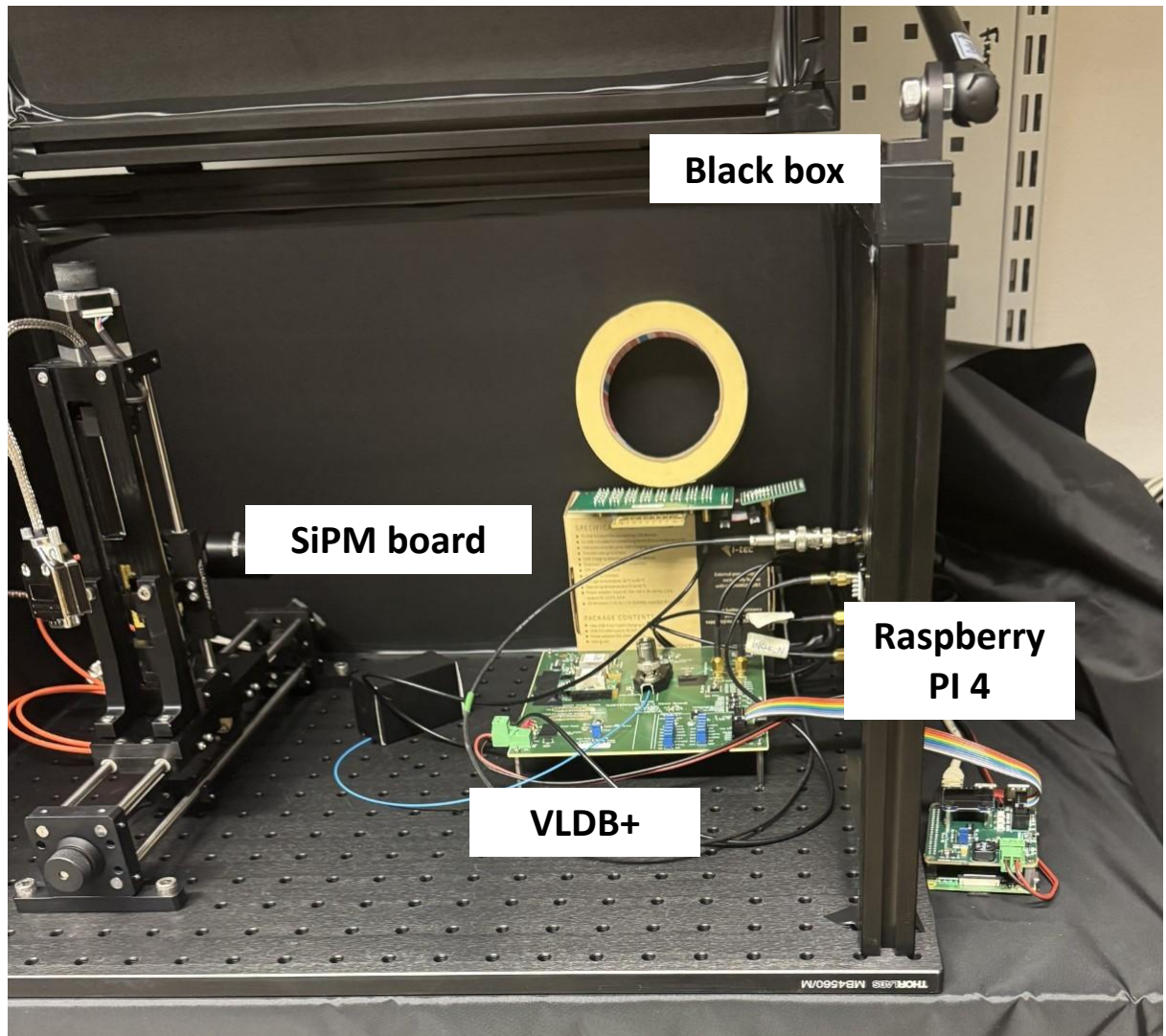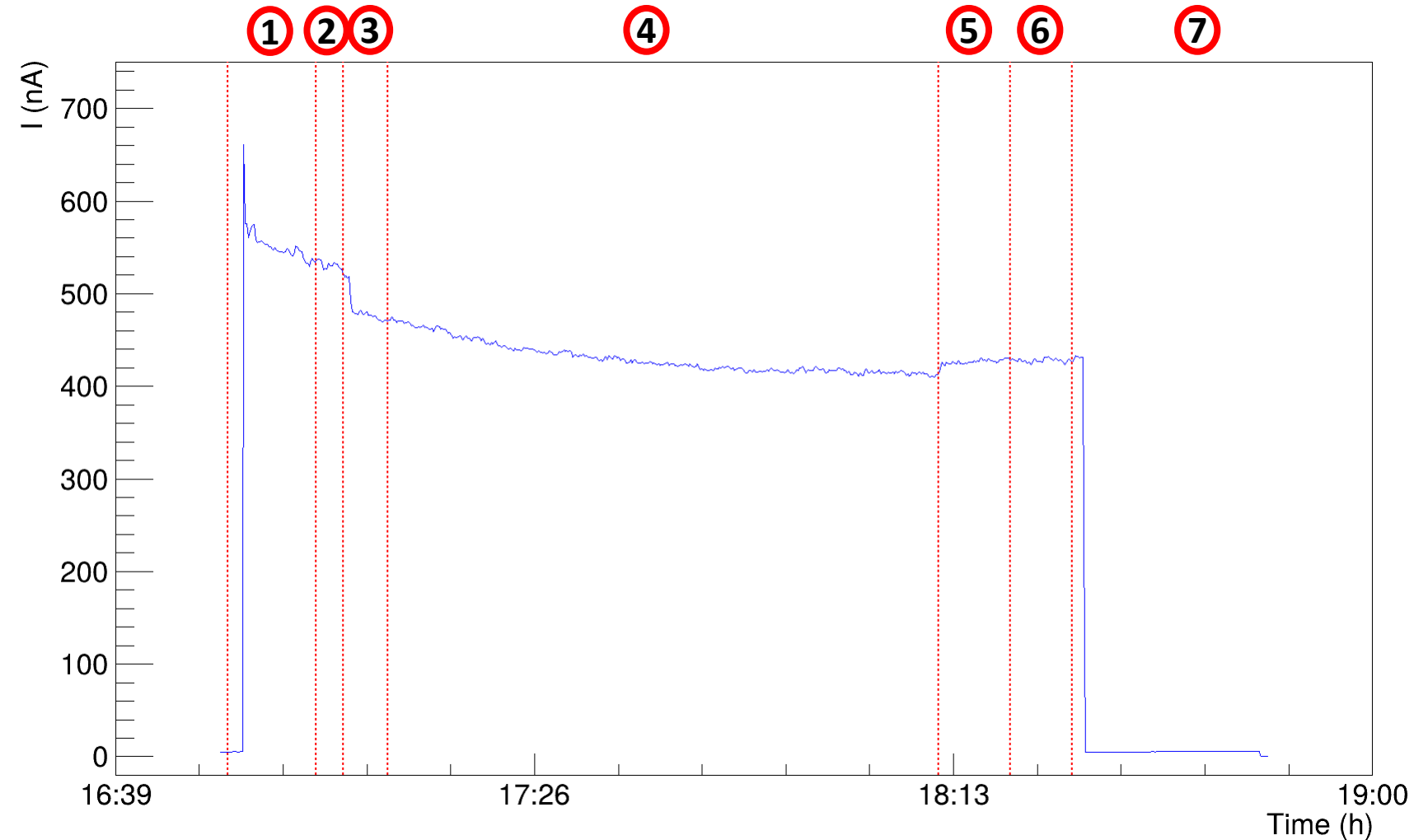# The VTRx+ loss of light

Sandro Geminiani
SiPM4electronics meeting - 11/02/2025

# Experimental Setup

Loss of light

Given a SiPM bias of 38.7 V (0V overvoltage), different modes were tested:

1. VLDB+ power on.
2. Raspberry PI power on.
3. lpGBT configured for 10 Gb/s of bandwidth using only one group.
4. lpGBT configured for 5 Gb/s of bandwidth using only one group (other configurations were tested).
5. Chip reset.
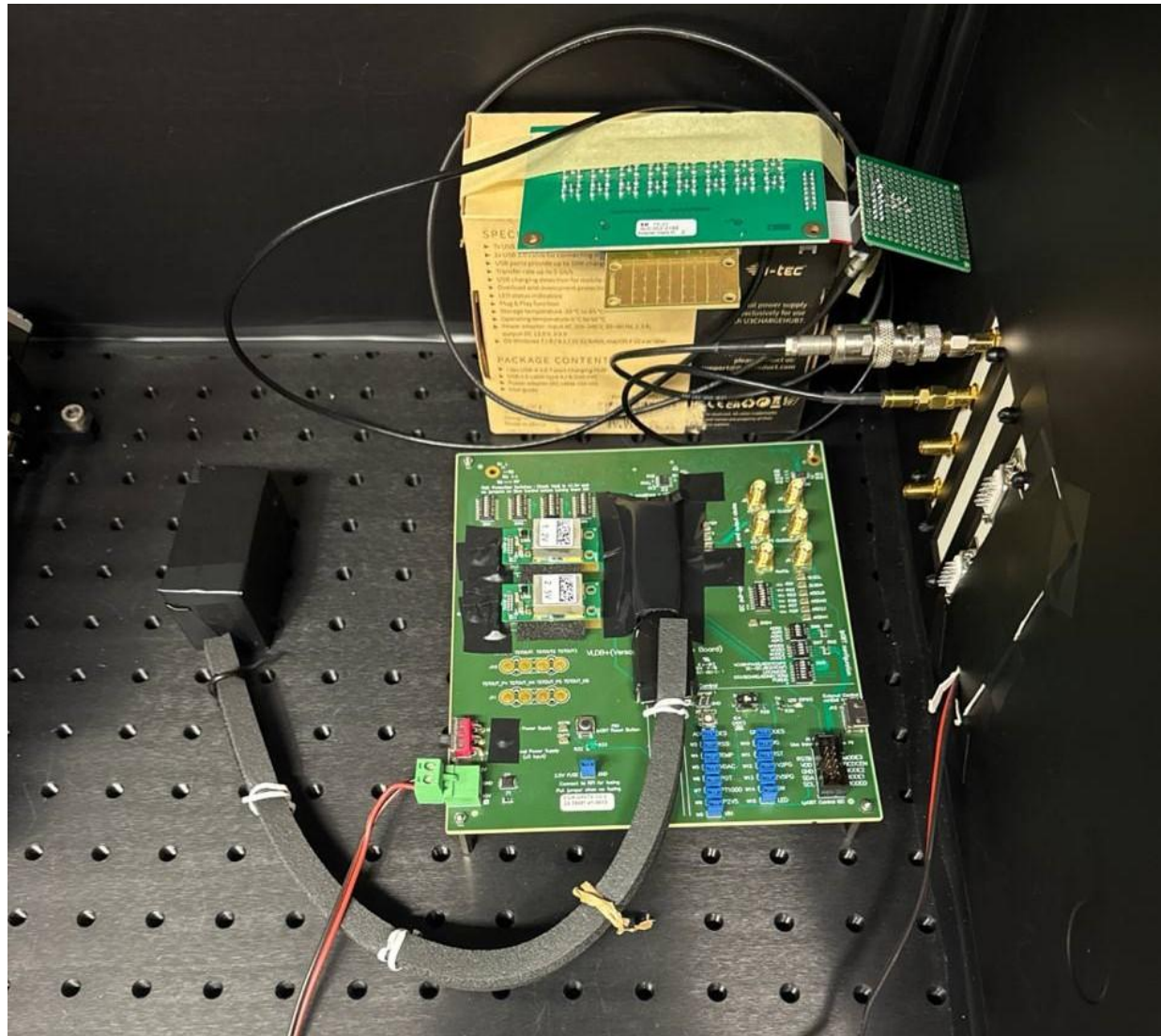6. Raspberry PI power off.
7. VLDB+ power off.

Using this naive VTRx+ covering we achieved a SiPM signal of $\sim 430\ nA$!

Considering different covering

Using a different box to cover the VTRx+ a maximum SiPM signal of **2.6 μA** was found!

2.6 μA!!

5 nA!!
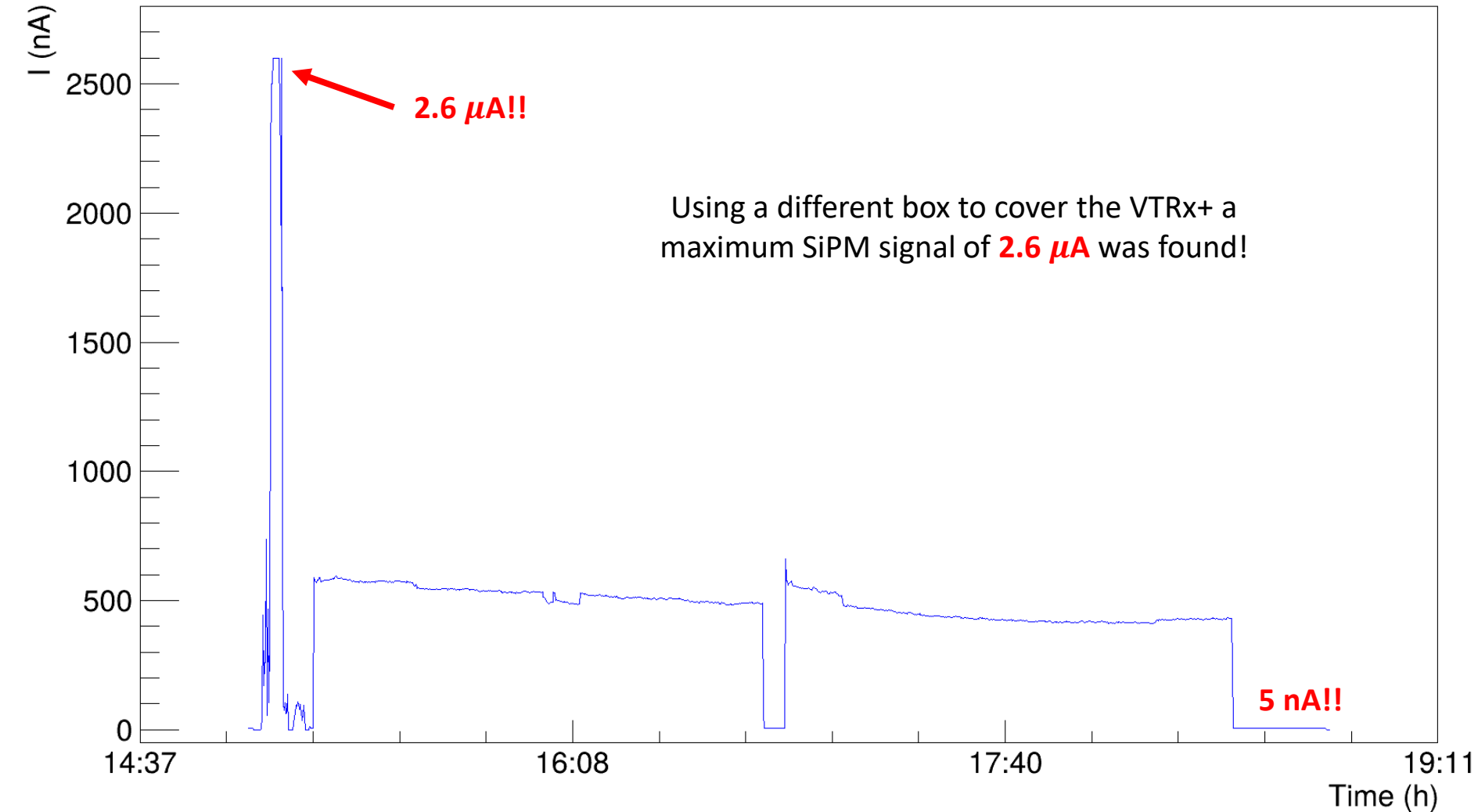
Without covering:
Maximum SiPM sig = 65 μA !

New Setup

Covering the VTRx+ and almost all the fiber :
Maximum SiPM sig = 8 nA !