

**Rendez-vous  
a Careggi**

# Overview

We tested the electronics in four different configurations, using 8 MeV photons or electrons, on the detector or outside the detector.

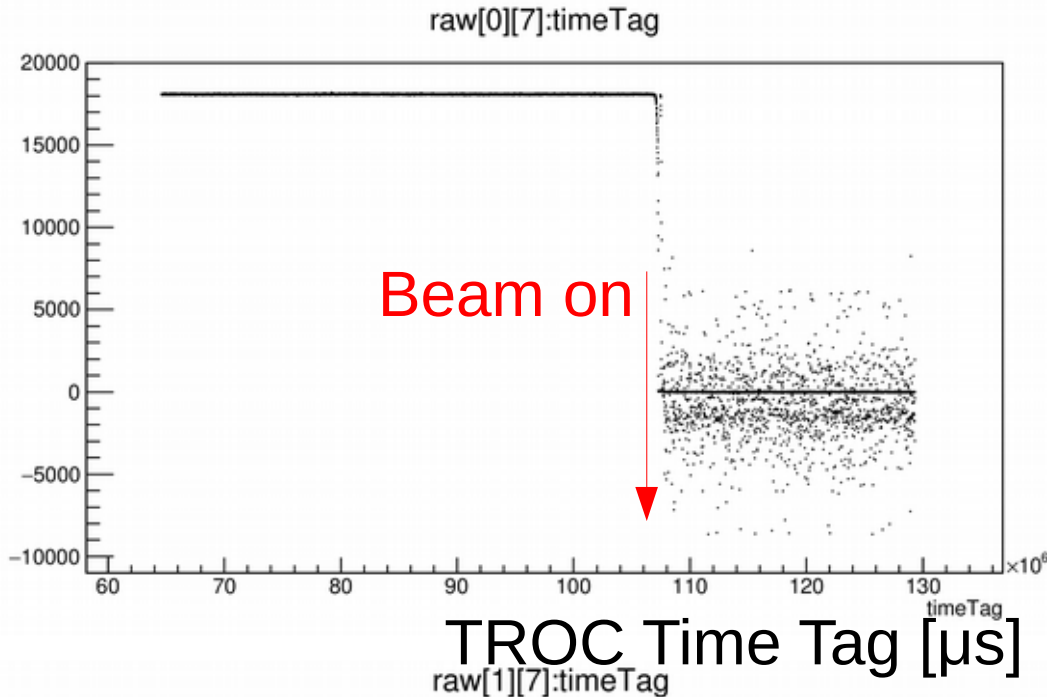
We launched a pedestal acquisition at 150 Hz, with several files of 10000 events each one.

Because we do not have a coincidence system, we do not know when (and if) the particles arrived on our detector for each acquired event.

The results discussed in the next pages are similar both for electrons and photons beams.

# 8 MeV electron on central cube

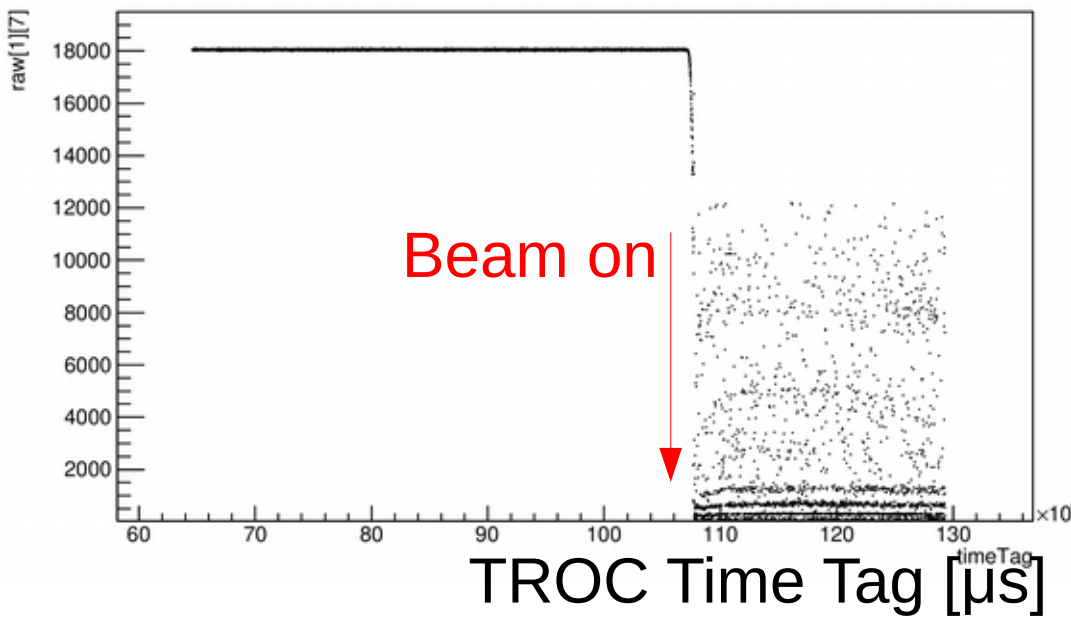
Large PD Central



When the beam is on, the electronics stops to work, independently if the chip is connected to large or small PDs.

This is due to the large signal and large rate of the beam (pile-up).

Small PD Central

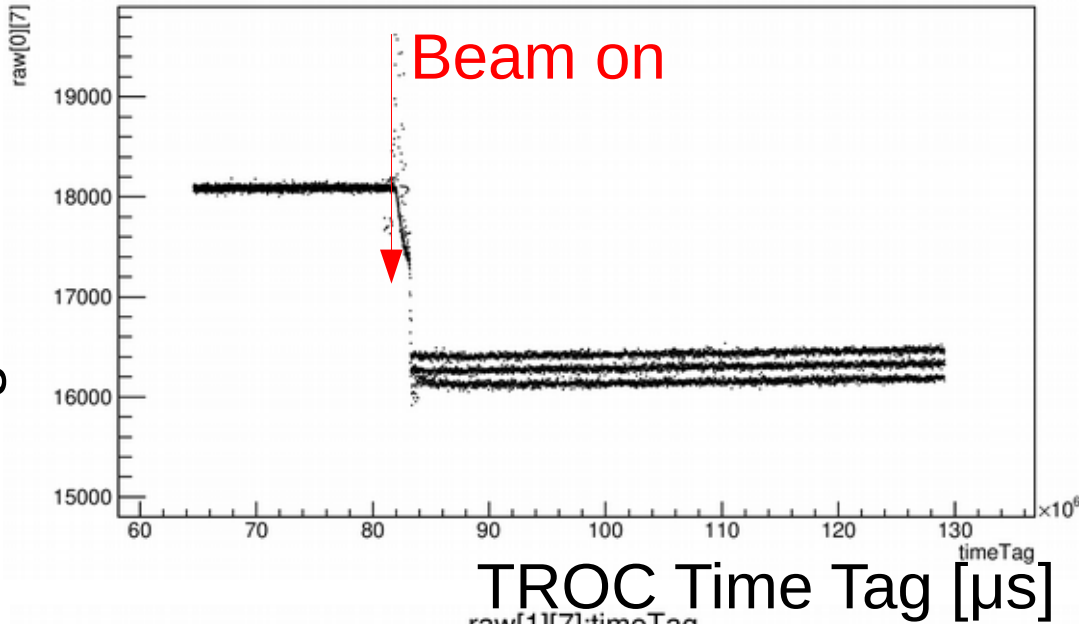


The situation is the same for all channels connected to the chip, independently if they have a sensor connected to them.

# 8 MeV photon outside detector

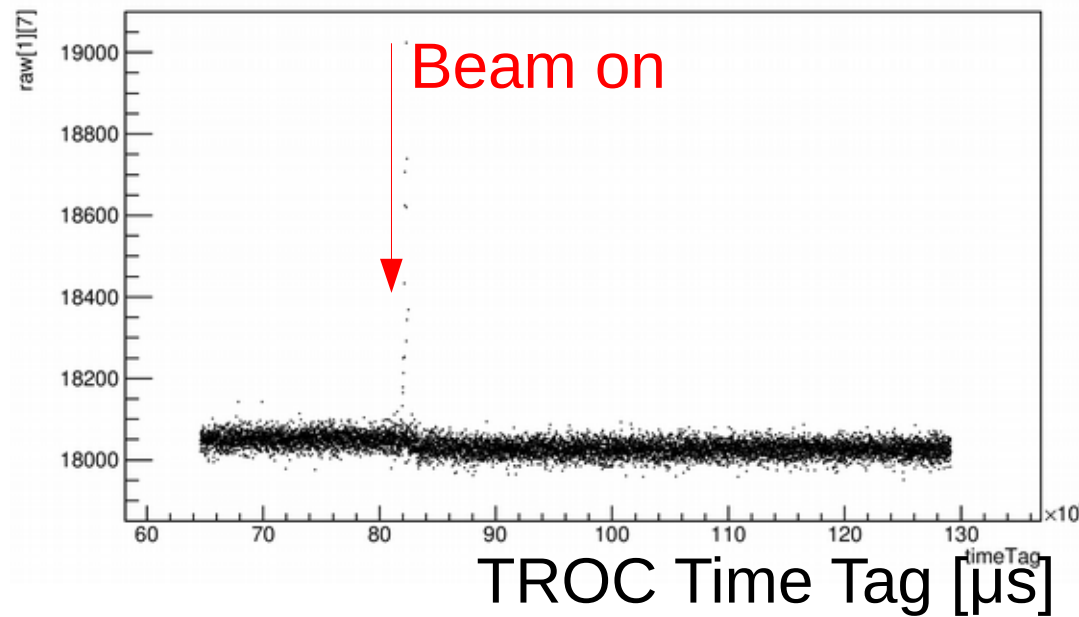
raw[0][7]:timeTag

Large PD Central



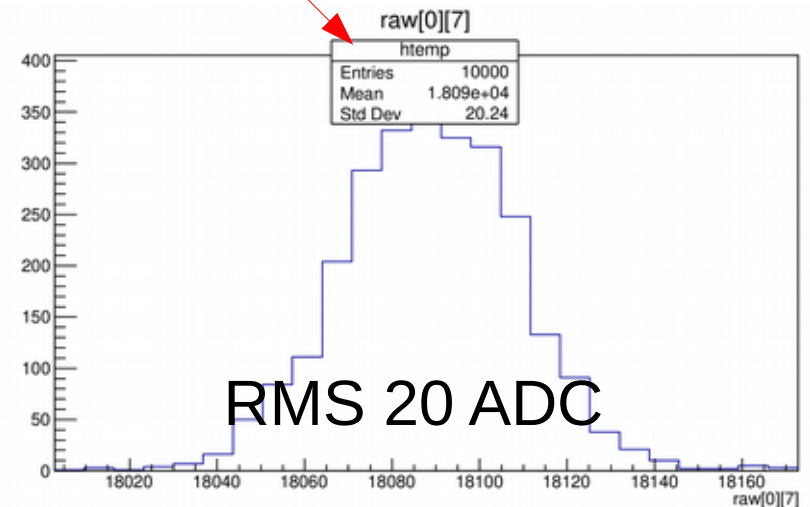
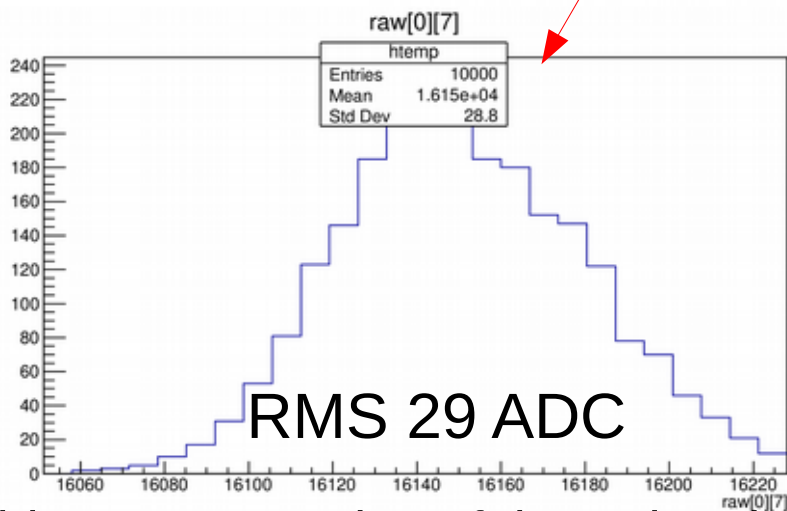
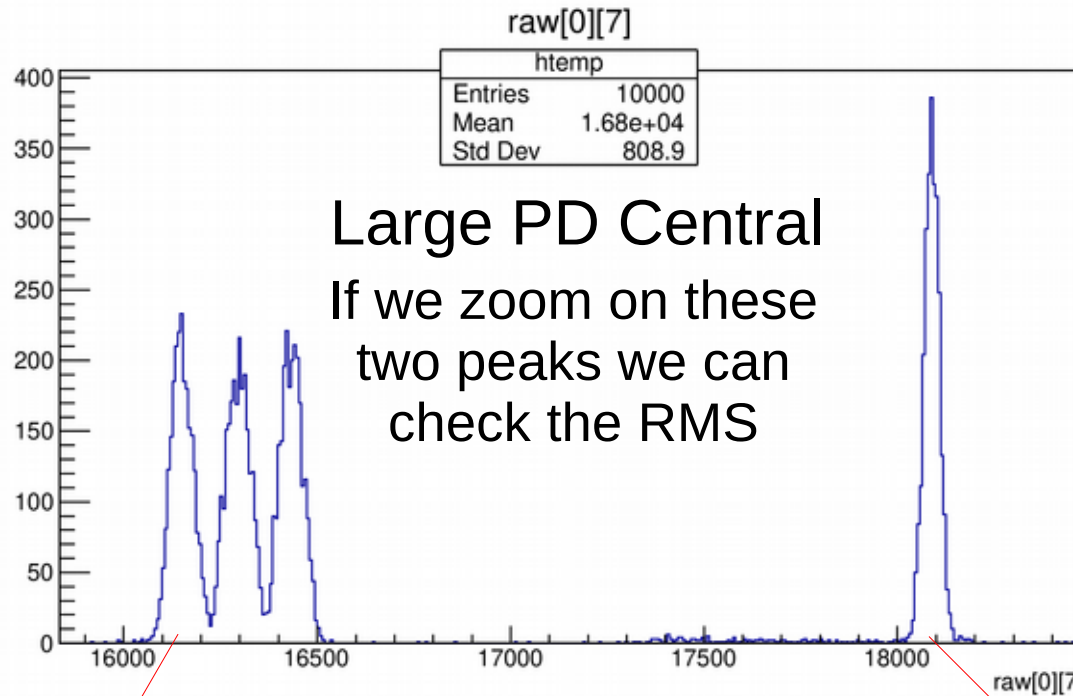
A similar situation is observed also in this case and there are three strange peaks in the large PD distributions (!?).

Small PD Central



It seems strange that the beam was so broad that a large amount of particles reach the detector at least 10 cm away...

# 8 MeV photon outside detector



Is this representative of the noise that we would have with a working electronics?