Channel 3

Channel 1

Channel 2

Lisa Soubirou - Study of losses at ThomX

Signal when no beam is circulating : observation of dark current
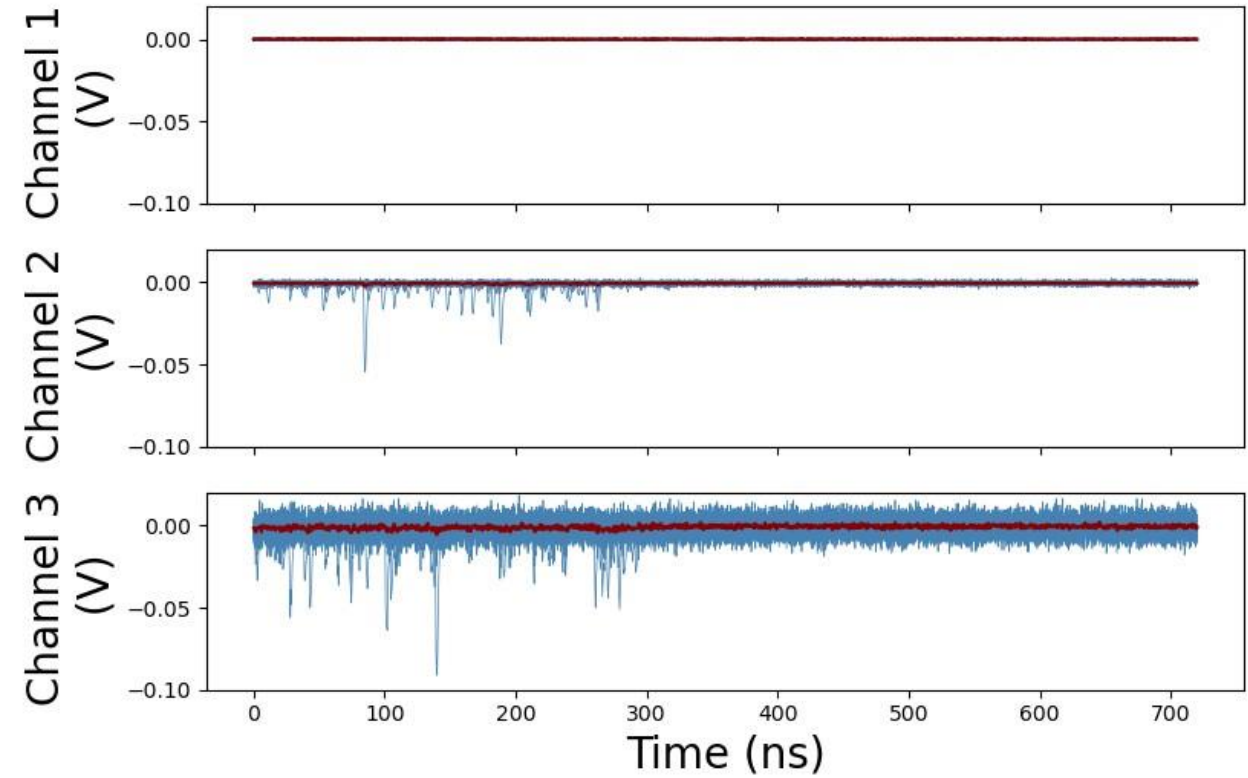
Machine on

Before starting the machine
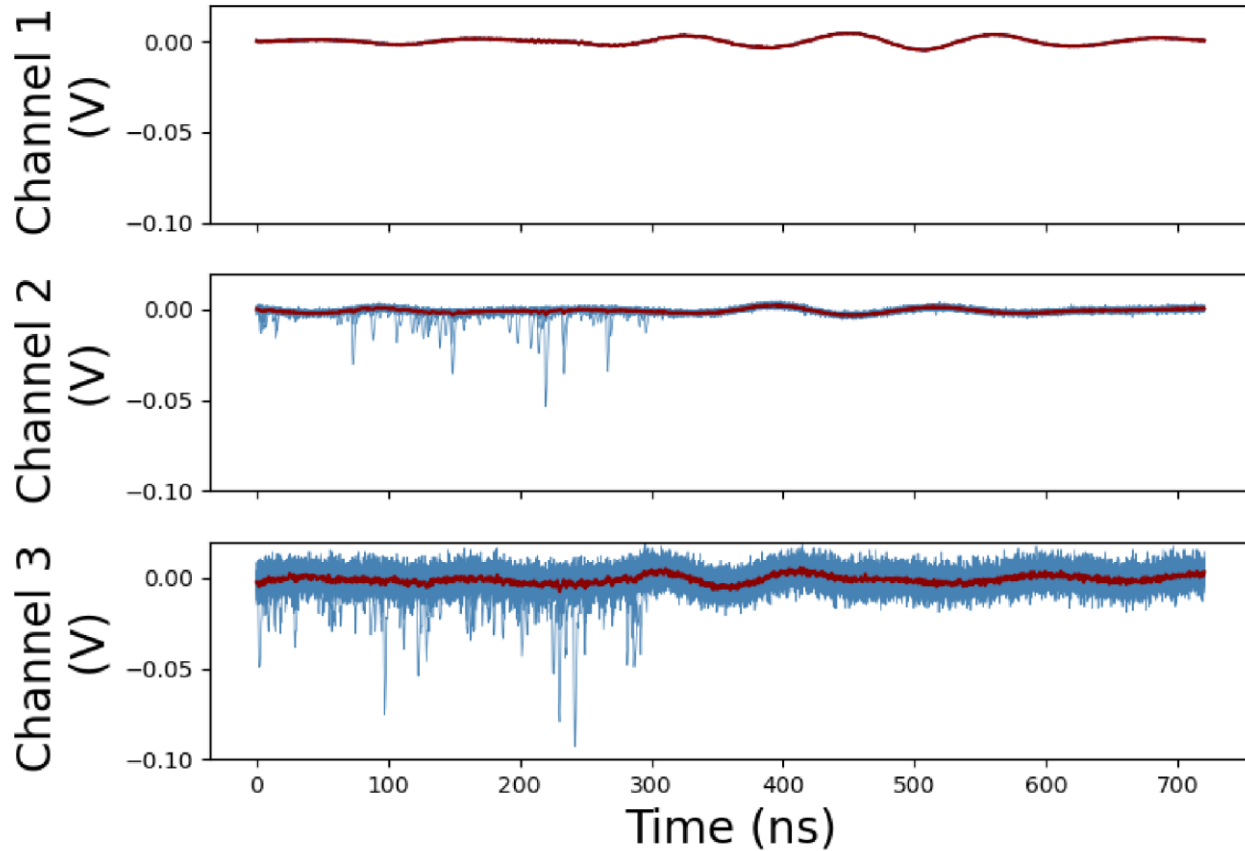
Laser shutter closed, **HV trigged**: no beam
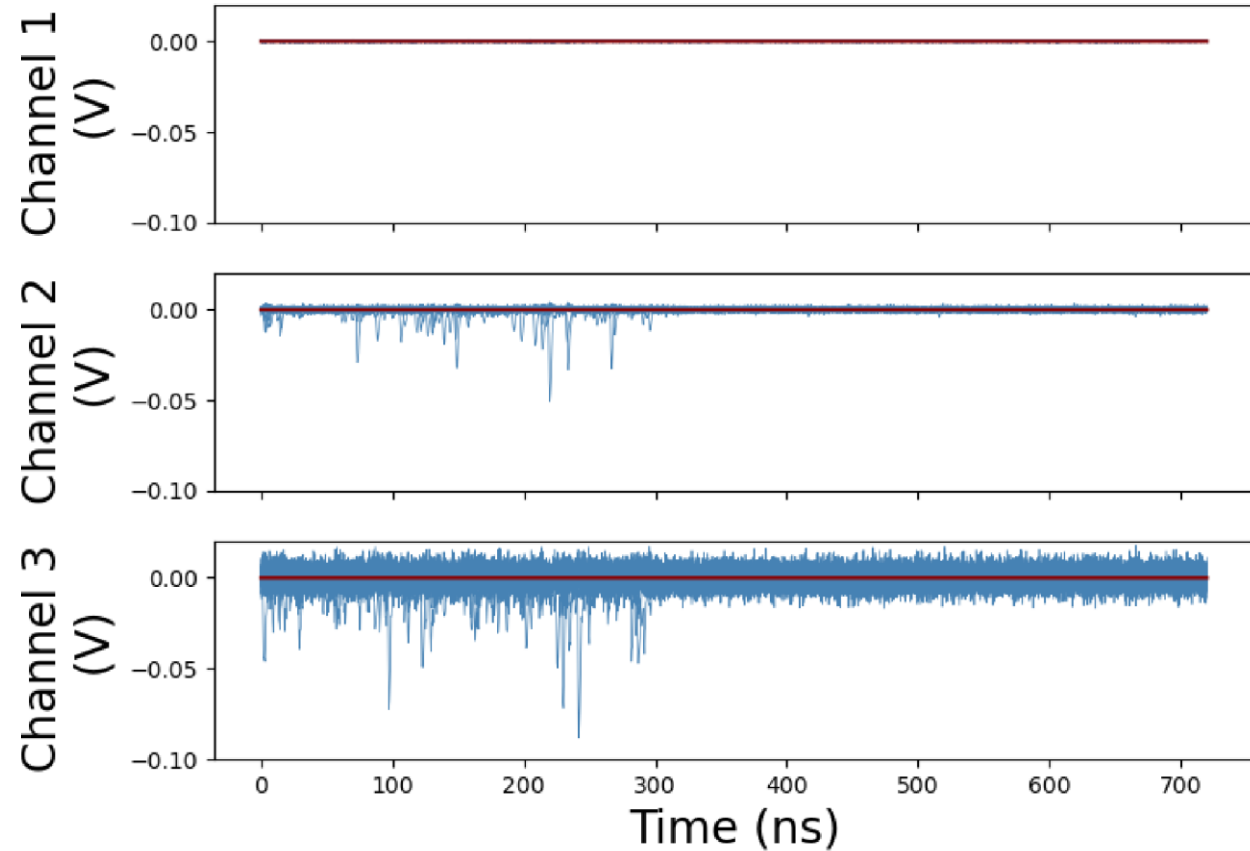
Laser shutter closed, **HV off** : no beam

No beam

Electromagnetic noise induced by pulsed elements on the signal

=> We are able to remove it

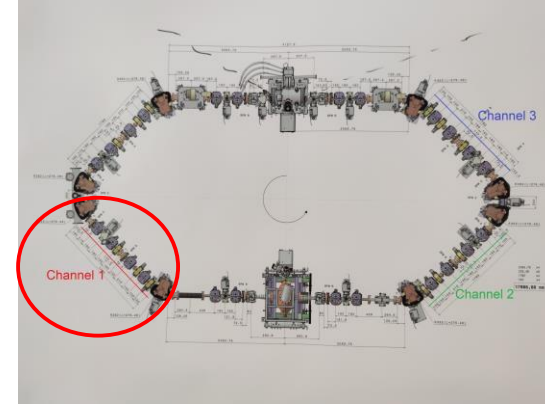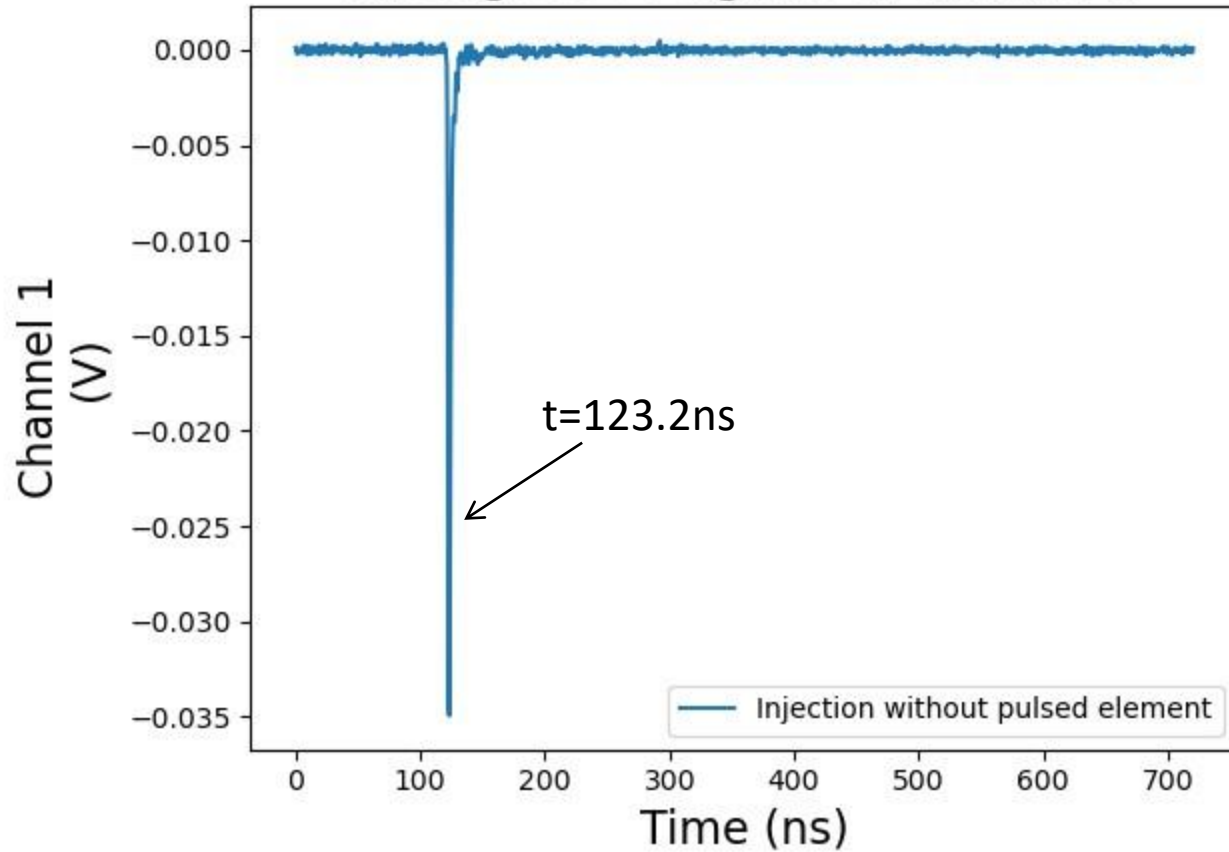Superposition of 30 signals and average

Beam on
Losses at injection: losses related to each pulsed element
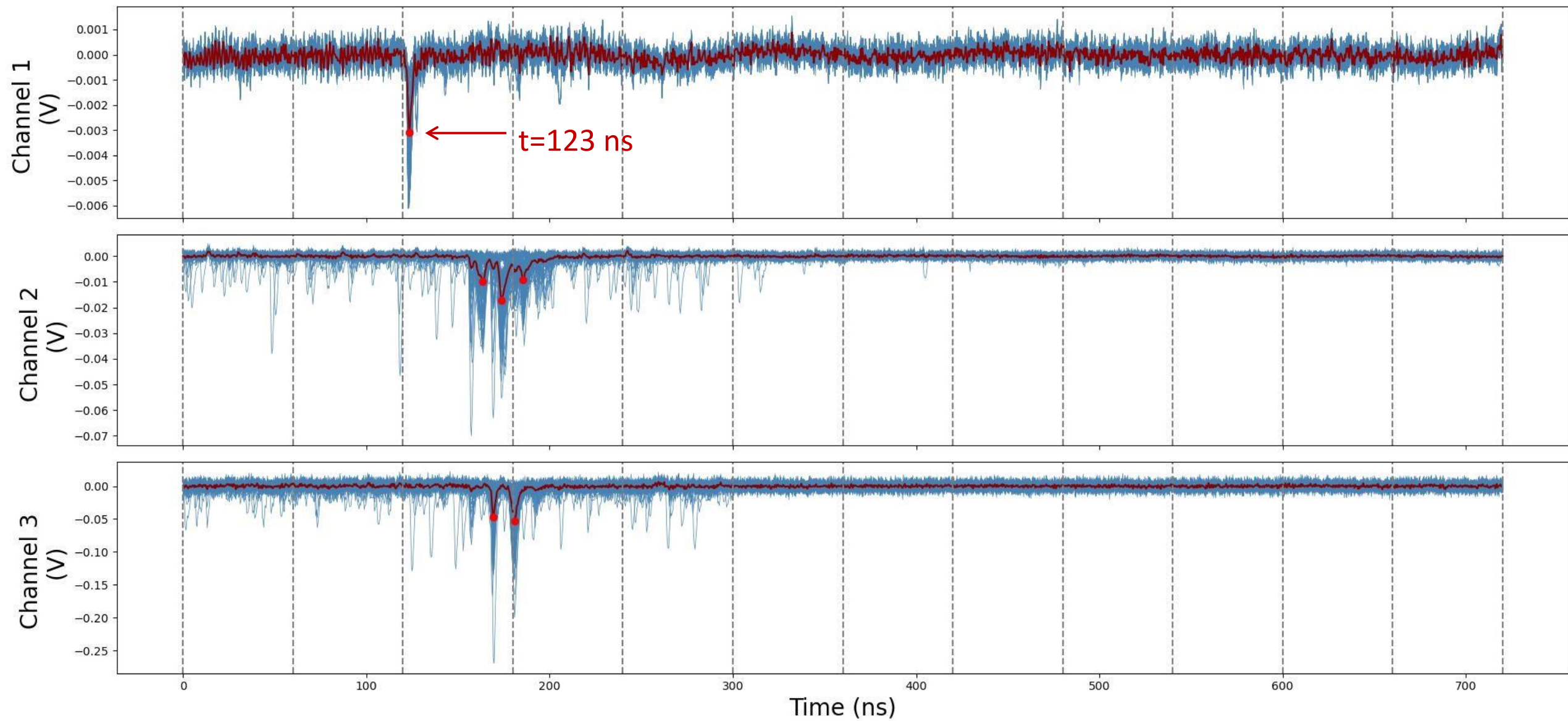Peak at 123.2ns => particles not catched by septum
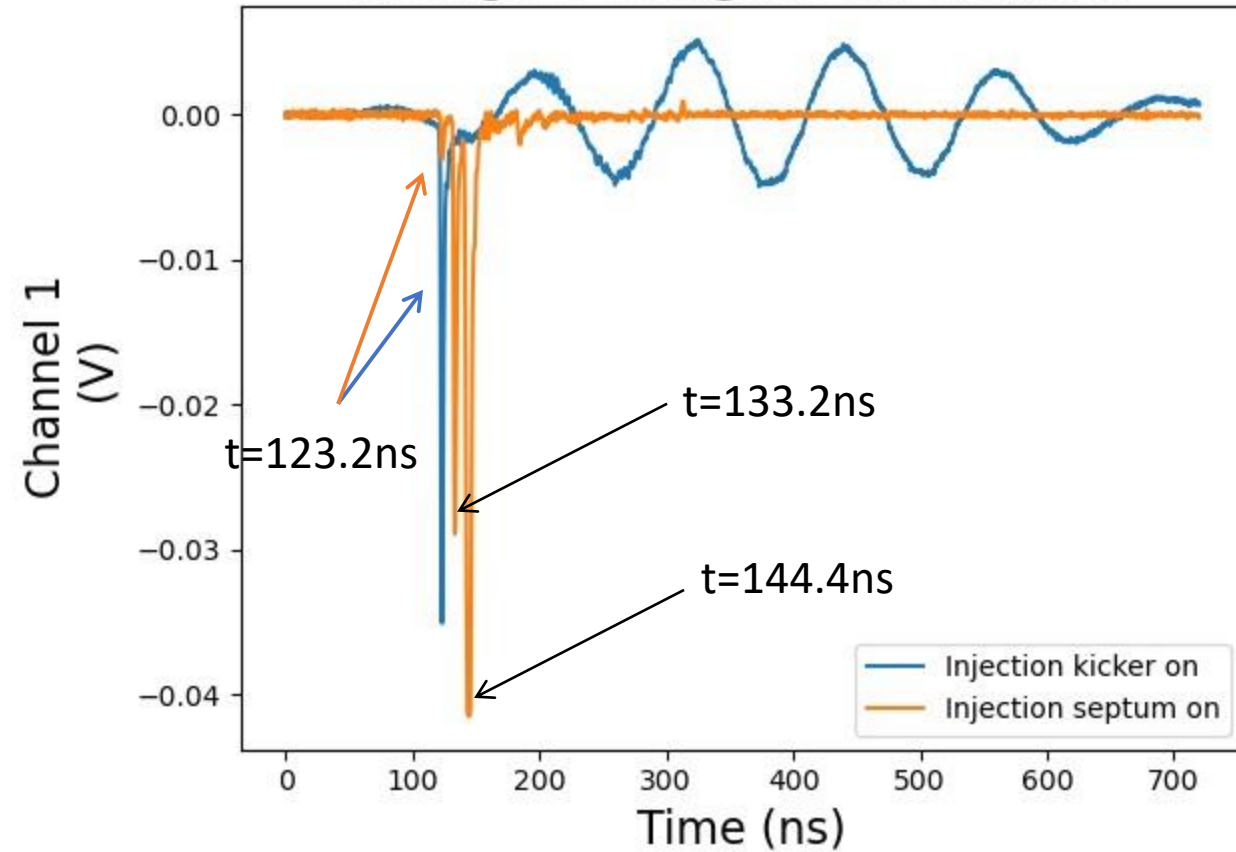
Beam on

Superposition of 100 signals and average

t=123 ns

Storage with RF cavity on

Conclusion

- Identification of particle lost in the ring because of the septum settings at injection (also present during storage)

- Observation of peaks when no beam is circulating : dark current

- Observation of electromagnetic noise induced by pulsed elements
    => can be removed during the analysis